The impact of credit reforms on bank loans and firm leverage around the world

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Abstract

This study examines the effects of credit reforms on corporate loans of commercial banks as well as total debt of non-financial firms. Using two separate international samples for commercial banks and non-financial firms for the period of 2004–2019, we find that information sharing reforms drive the willingness of banks to increase corporate loans, while legal rights are important for firms to increase debt financing. We further analyze potential differences in the effects of the reforms across countries and find several differences in the impact of both types of reforms between developed and emerging countries as well as between countries with strong and weak creditor rights. Moreover, the two types of credit reforms stimulate debt financing in small, medium and large public firms differently across countries. These findings indicate that credit reforms are effective measures to stimulate economies around the world, but the type of reforms works differently in the supply and demand of debt financing.

Keywords: Corporate governance reforms, getting credit, leverage, legal rights, sharing credit information, emerging countries, creditor rights

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1. Introduction

We investigate the effects of regulatory changes in credit transactions, as we called credit reforms, on both the proportion of corporate loans in the portfolio of commercial banks' total loans and firms' level of total debt ratio. We focus on the reforms with improvements in both the legal rights and sharing credit information for the availability and use of credits from a perspective whether credit reforms strengthen supply or demand or both sides of debt financing. We aim to identify the relative importance between two types of reforms in improvements of bank loans and firm level debt, and whether the relative importance changes between developed and emerging countries as well as between strong and weak creditors protection.

Every year, the World bank offers indices to measure country level conditions of access to credit in its report Doing Business. Credit reforms are classified into two types: secured transactions regulations and credit information sharing. Both are implemented with the specific purpose of strengthening firms' access to debt financing. Secured transactions regulations ensure that both borrowers and lenders receive sufficient legal support with respect to collateral and bankruptcy laws. Credit information sharing systems aim to reduce the information asymmetry between borrowers and lenders, providing lenders with the ability to assess the creditworthiness of borrowers effectively. Existing literature shows that secured transactions regulations (de la Campa, 2011; Haselmann et al., 2010) and the establishment of credit bureaus and registries (Bennardo et al., 2015; Peria and Singh, 2014; Brown et al., 2009) strengthen firms' access to credit.

The outcome of the reforms can be observed by either demand or supply or both sides of debt financing. The improvement in the supply side posits that better conditions for lenders increase their willingness to provide finance, thus, credit reforms should increase bank loans. When the protection of creditors' rights for movable collateral improves, following credit reforms, banks lend more for a given level of collateral (Calomiris et al., 2017). Moreover, the

ability of creditors to accurately identify the risks associated with borrowers (through improved credit information sharing systems) leads to a decrease in default rates and larger loan portfolios (Doblas et al., 2017). Lenders will also be more willing to extend large amounts of loans on more favorable terms because of the enhanced legal support and security in the debt collection process. This mechanism could work differently between developed and emerging markets because of institutional differences. Moreover, these reforms can make creditors stronger in countries with already existing strong creditor rights, and credit reforms in turn result more powerful lenders and make non-financial firms to be willing to less dependent on powerful creditors. This could cause corporate loans decrease with the reforms.

With respect to the demand side, the reforms may not create new investment opportunities for firms in need of external financing, but firms can enjoy more favorable debt market conditions following the reforms, and thus invest in existing positive net present value opportunities. Weak secured transactions regulations and limited credit information sharing are major constraints to the development of well-functioning credit markets. Therefore, expanding the use of movable assets as collateral and improving creditors rights relative to secure transactions on the one hand, and reducing information asymmetry between borrowers and lenders on the other, should increase firms' access to credit.

Previous studies have examined the importance of either legal rights or information sharing in explaining the level of debt generally from supply side effects. Our objective is to disentangle these two approaches by focusing on both the supply as well as demand side factors. Moreover, to the best of our knowledge, there is no empirical evidence covering both legal rights and information sharing factors together. The World Bank Doing Business credit data allows us to examine both the joint and relative effects of legal rights and information systems on debt financing.

It is important for firms to get adequate access to credit at reasonable rates to be able to take optimal risks and invest in positive net present value projects. Credit reforms can encourage firms to take on debt, and thus timely access to credit will help firms to exploit available business opportunities and to further invest in positive net present value projects. Both secured transactions regulations and credit information matter for firms to get access to credit, but there are differences in their respective effectiveness across firm sizes and countries. Since secured transactions could be equally important for firms in both developed and emerging markets, legal rights reforms are particularly relevant across countries to increase firms access to debt financing. On the other hand, credit information sharing allows creditors to have better information about firms, especially in emerging countries where there are higher information asymmetry problems than developed countries. When the legal systems for movable assets are weak, the scope of the movable assets that can be used as collateral is limited, firms that typically exhibit the highest amounts of movable assets have difficulties raising debt financing. For example, small and medium size firms typically face collateral issues while large firms are more concerned with information asymmetry. By considering such issues, this study examines the differential impact of legal rights and credit information reforms on both banks' loans and firms' debt financing by taking into account heterogeneities across nations and differences in size across firms. Thus, this study extends previous empirical research that has either focused on single-country analysis or the separate effects of credit information and legal rights on access of firms to credit.

We identify 68 countries in Moody's Analytics BankFocus by Bureau van Dijk and 73 countries from the World Bank Doing Business Getting Credit score data. We construct 77,337 commercial bank-year and 299,382 firm-year observations from these to data sources during the period 2004 – 2019. We use difference-in-differences estimations to compare the ratio of corporate bank loans to total loans for banks and the ratio of total debt to total assets for non-

financial firms before and after the reform year. We also include countries without any reforms during the sample period as a benchmark to compare changes before and after the reforms were implemented.

The results of our analysis of the sample of commercial banks show that the ratio of corporate loans to total loans is not affected by credit reforms in general, and the reason for this neutral result is that there are differences in the effects of two types of reforms between developed and emerging countries. While bank loans decrease (increase) with legal rights reforms and increase (decrease) with information sharing reforms in developed (emerging) countries. Moreover, legal rights reforms are more effective on the supply side when creditors protection is weak because corporate loans increase in countries with weak creditor rights and increase less in countries with strong creditor rights. Thus, we find evidence suggesting that changes in the relative importance between legal rights and information sharing reforms can explain the supply side of debt financing across countries.

We find a significant and positive relationship between credit reforms and firm leverage for legal rights reforms only. Furthermore, reforms on legal rights, increase firm leverage similarly in both developed and emerging countries, while information sharing reforms do not have any impact on firm leverage in either type of country. On the other hand, reforms on information sharing become important with the level of creditors protection. Firm leverage increases in countries with both weak and strong creditor rights, but it increases less when creditor protection is strong.

We also provide some differences for the role of these reforms on firm leverage based for firms with different sizes. Medium size firms benefit from both types of reforms in developed countries and from legal rights reforms in countries with strong creditors protection. Large size firms increase their leverage following legal rights reforms in developed countries and following information sharing reforms in emerging countries. Firm leverage increases with

information sharing reforms for large firms in countries with both weak and strong creditors protection, but this increase is lower when creditors rights are high. Small size firms have the same benefits with legal rights reforms in both developed and emerging countries.

The rest of the study is structured as follows: section 2 provides a review of the literature the development of our hypotheses; section 3 offers summary statistics of the dataset and variables of interest and presents the research methodology; section 4 outlines the regression results; section 5 provides the robustness analysis and section 6 concludes.

2. Theoretical framework and hypotheses

2.1 Credit reforms

The World Bank getting credit scores consist of two main types of reforms: reforms concerning legal rights on collateral and bankruptcy measured by the legal rights index, and reforms regarding sharing credit information measured by the credit information index. *Legal rights index* refers to regulations to secure transactions for lenders and borrowers to facilitate broader credit facilities within a country. The aim of enhancing secured transaction systems is to increase firms' access to credit by focusing on the importance of the ability to pledge collateral in credit markets. According to the World Bank, borrowers with collateral obtain almost nine times as much credit as borrowers without collateral. Moreover, borrowers with collateral have repayment periods up to 11 times longer and interest rates almost 50% lower than borrowers without collateral (World Bank, 2020). Secured transactions systems, facilitated by effective collateral and bankruptcy laws, enhance the ability of firms to use their movable assets as collateral.

In addition to the implementation of collateral and bankruptcy laws, credit reforms involve the establishment of geographically centralized collateral registries. These collateral registries consolidate all types of movable assets and their functional equivalents within a

country. Another advantage is that the registry allows for simplicity in registration and broad categorization of assets. Thus, centralized collateral registries increase the effectiveness of secured transactions systems and enhance the willingness of creditors to extend loans (World Bank, 2020). Haselmann et al. (2010) examine the effect of legal reforms on the lending behavior of banks in 12 developing countries. They provide evidence showing that banks increase the loan supply following the adoption of reforms on secured transactions. De la Campa (2011) provides evidence suggesting that secured transaction systems increase the level of credit. In countries with secured transactions systems, credit to the private sector as a percentage of GDP is approximately 60%, while in countries with weak secured transactions systems this averages 30% to 32%.

Credit information index is the second form of Getting Credit score. Economies worldwide have implemented reforms to stimulate and facilitate sharing credit information. Credit information is important for reducing information asymmetries between borrowers and lenders. Credit information discloses the ability of a borrower to pay its debt. According to the World Bank (2020), improvements in credit sharing information systems increases firms' access to credit, leads to lower interest rates, improves borrower discipline, and reinforces credit risk monitoring. The establishment of credit bureaus and registries enhances the level and preciseness of the credit information shared in a country. These bureaus and registries collect and share data on essential aspects of credit information, including past borrower behavior of firms. Aside from providing credit information, credit bureaus and registries offer fraud detection, debt collection, marketing services, credit scoring and other services to lenders and borrowers. Increased access to credit information results in an increase in firms' access to credit. This is because credit providers are more willing to extend credit when the availability of information about potential borrowers is higher.

A study with firm-level survey by Peria and Singh (2014) in 63 economies shows that the introduction of credit bureaus improves access to finance regarding long-term loans; it establishes lower interest rates and creates a higher share of working capital financed by banks. Brown et al. (2009) examine whether information sharing among banks affects credit performance. The empirical analysis covering 24 economies in Eastern-Europe and the former Soviet-Union shows that implementing credit reporting systems is associated with an increase in dependency of firms to banks' credits by 4.2%. A study by Kusi et al. (2017) examines the effect of sharing credit information on bank risk in Africa and finds that public and credit registries reduce the overall loan risk of banks and increase the willingness of banks to provide credit. Grajzl and Laptieva (2016) provide evidence that backs the positive effect of information sharing on the volume of bank lending in Ukraine. Bennardo et al. (2015) show that accurate credit sharing information can reduce over-borrowing, decrease interest rates, and improve the access of firms to credit.

2.2 Credit reforms, bank loans and firm debt financing

Rice and Strahan (2010) examine whether the permission of banks to expand across states in the US affects lending behavior of firms. The authors find that the relaxation of geographical lending restrictions leads to an increase in access to finance for firms due to the increased availability of banks in the different states. Calomiris et al. (2017) examine the effect of improvements in the protection of creditors for movable collateral on bank lending in 12 emerging countries. The authors find that banks in strong-law countries provide more loans than banks in weak-law countries with respect to the value of collateralized with movable assets relative to collateralized immovable assets. Doblas et al. (2017) demonstrate that the ability of creditors to accurately identify the risks associated with borrowers (through improved credit information sharing systems), leads to a decrease in default rates and larger loan portfolios.

Rice and Strahan (2010) do not detect any effect of the legal reforms on the level of debt. Garvey and Hanka (2002) empirically prove that policy implications of anti-takeover laws protecting firms can substantially reduce their use of debt. Vig (2013) examines the level of debt of firms following a securitization reform in India. The reform strengthens the judicial process surrounding collateral and bankruptcy. Vig (2013) also examines the role of legal reforms on the debt structure of firms and finds that firm leverage decreases following the implementation of this reform. The main reason for this decline is the increased creditor protection set up by the reform since an increase in creditor protection leads to higher costs of debt and a lower trust of firms in secured debt.

Agca et al. (2007) examine the effect of credit market deregulation and increased financial openness on corporate borrowing for publicly traded firms in 38 countries for the period of 1998 – 2002. The financial reforms comprise credit controls and reserve requirements, interest rate controls, bank entry barriers, bank privatization, securities markets, and bank supervision. The authors find that financial reforms and financial openness increase firm leverage and lengthen the debt maturity in advanced economies. However, in emerging economies, international openness leads to an increase in firms' leverage, but financial sector reforms cause a decrease in leverage.

The findings from previous empirical studies indicate that credit reforms can affect availability of debt financing positively. Therefore, our fist hypothesis as follows:

H1: Bank loans as well as firm leverage increase following credit reforms on legal rights and information sharing.

2.3 Emerging versus developed countries

We expect the impact of credit reforms to be different between emerging and developed countries because of the fundamental institutional settings. Emerging countries have weak law

and contract enforcement, vague property rights, poor accounting standards, high information asymmetry, and less developed market infrastructure (Agca et al., 2007). More importantly, firms in emerging countries are more dependent on debt financing, as the stock markets are not fully developed. Thus, improvements in legal aspects especially for collateral and bankruptcy laws increase debt financing more in emerging markets than developed markets.

On the other hand, credit reforms strengthen the position of lenders through the implementation of collateral and bankruptcy laws as well as better access to information about borrowers since credit reforms reduce information asymmetry between borrowers and lenders, which also reinforces the position of lenders. Therefore, we may observe stronger effects of lenders to be selective among firms after the reforms in emerging countries. Then, credit reforms would decrease debt financing in emerging countries and increase debt financing in developed countries. Our second hypothesis tests how the effects of the two types of credit reforms, legal rights and information sharing, produce relative effects between the two groups of countries, emerging and developed.

H2a: Following credit reforms on legal rights and information sharing, bank loans and firm leverage increase more in emerging countries than in developed countries.

H2b: Following credit reforms on legal rights and information sharing, bank loans and firm leverage increase more in developed countries than in emerging countries.

2.4 Credit reforms, firm leverage, and creditor rights

From this section on, we would like to focus on firm leverage only. Previous literature has examined the effects of creditor rights on firm leverage. Strong creditor rights could either increase firm leverage, as the willingness of lenders increases to provide credit (Houston et al. 2010; Qian and Strahan 2007; Benmelech and Bergman 2011), or decrease firm leverage, as

strong creditor rights results in more powerful lenders and so firms become less willing to be dependent on these lenders (Cho et al. 2014; Acharya et al. 2011).

Creditor rights, on one hand, can have a positive effect on firms' access to credit. Houston et al. (2010) examine the effect of creditor rights on the lending behavior of banks and find that strong creditor rights increase the willingness of banks to issue credit. Qian and Strahan (2007) examine the effect of creditor rights on bank loans in 43 countries and find that strong creditor rights are associated with greater concentration of loan ownership, increased participation of foreign banks, longer-term lending and lower interest rates. Therefore, firms can borrow under more favorable terms when creditor rights are strong. Creditor rights, on the other hand, can negatively affect firms' access to credit. Cho et al. (2014) show that substantial creditor rights have a negative effect on the use of long-term debt. This is mainly caused by the concerns of managers and shareholders that creditors gain too much power. Managers and shareholders fear losing control over their business when creditors are well-protected. Therefore, when creditor rights are strong, firms are less willing to engage in debt financing. This finding is supported by Acharya et al. (2011), who examine the relationship between creditor rights and corporate leverage as well as risk-taking. The authors show that strong creditor rights in a country reduce corporate risk-taking, which in turn makes firms reluctant to borrow.

Credit reforms and creditor rights could jointly affect firm leverage. This makes creditor rights an important moderator in our analysis. Credit reforms that enhance creditor legal rights through the implementation of effective and enforceable collateral and bankruptcy laws, also lead to increased powers for lenders. However, if the legal rights of creditors are already strong in a country, the effect of legal rights reforms is expected to be weaker. On the other hand, the reforms improving bankruptcy and collateral laws increase the trust of lenders in the credit

system and could thus encourage lenders to provide credit. Therefore, under strong creditor legal rights, we advance the following alternative hypotheses:

H3a: Creditor rights amplify the effect of credit reforms on firm leverage: we expect a positive (negative) coefficient of the interaction between reform and creditor rights when the effect of the reforms is positive (negative).

H3b: Creditor rights weaken the effect of credit reforms on firm leverage: we expect a negative (positive) coefficient of the interaction between reform and creditor rights when the effect of reforms is positive (negative).

2.6 Credit reforms, firm leverage and firm size

The main objective of credit reforms is to provide all firms with an increased access to credit. The supply of loans could rise, the loan terms could become more favorable and the lending systems could become increasingly secured. This would lead to lenders becoming more willing to extend credit and therefore firms obtaining credit in sufficient amounts and in a timely manner (World Bank, 2020). However, the individual effect of the two types of credit reforms on firm leverage may vary across small, medium, and large firms. Legal rights reforms implement strong secured transactions systems. These reforms will likely be more important for small and medium size firms (SMF) that generally do not possess substantial levels of tangible assets to post as collateral to obtain new funds from credit markets. Secured transaction systems are expected to provide lenders with the certainty that movable assets can be safely used as collateral, increasing thus the availability and accessibility of firms to debt.

Credit information reforms provide lenders with relevant and accurate information on the financial standing of firms. Moreover, credit information reforms can enhance borrowers' discipline, support bank supervision and assist in credit risk monitoring. The pecking order theory of the capital structure depicts the hierarchy of the potential financial choices that firms

have. According to this hypothesis, firms prefer to use debt over equity to finance their activities when information asymmetry is high between managers and outside investors. Even though small firms are subject to higher levels of information asymmetry than large firms, the empirical evidence on the pecking order implies that information asymmetry is more important for large firms (Frank and Goyal, 2003; Seifert and Gonenc, 2008). Moreover, large firms often have sufficient amounts of tangible assets that can serve as collateral (Love et al., 2016). Therefore, the implementation of credit reforms on information sharing systems will further encourage large firms to increase their leverage.

According to de la Campa (2011), 78% of capital stock of SMF in the developing world is typically movable assets, such as equipment, receivables, and machinery. As a result, SMF in emerging countries have a lower access to credit, due to the lack of secured transactions systems. The secured transactions systems and credit information in developed countries are already substantially developed (World Bank, 2020). In addition, SMF are more financially constrained in emerging countries than in developed countries. Therefore, we expect SMF in emerging countries to be most affected by credit reforms.

Following the implementation of the reforms, the individual effects of creditor rights on firm leverage could also vary across small, medium size and large firms. Highly dependent on credit providers, small and medium size firms are financially constrained and have lower access to different external sources of finance (Beck & Demirguc-Kunt, 2006). Large firms have better access to a wider variety of external sources of finance than SMF. Therefore, when the power of creditors increases, especially due to a combination of strong creditor rights and legal rights reforms, small firms would be less willing to use debt financing (Cho et al., 2014; Archaya et al., 2011) specially in countries with strong creditor rights.

3. Data and methodology

We gather our data from several sources. All the data regarding Getting credit scores is collected from the World Bank (2020) Doing Business dataset. The data on the firm-level financial variables is gathered from Compustat Global and North America. The data on the country-level variables is obtained from datasets of World Development Indicators as well as Governance Indicators of the World Bank. The data on the categorization of emerging and developing countries is retrieved from the International Monetary Fund. The data on creditor rights is obtained from the study by Djankov et al. (2007). An overview of the definitions and sources of all variables is presented in the appendix. Our final sample includes 299,382 firm-year observations in 73 countries during the period 2004 – 2019.

3.1 Credit reforms data

Getting credit reforms have the main goal to strengthen access to credit, which is measured by getting credit scores. We identify getting credit reforms by looking at the annual increase in the scores[1]. There are two main forms of getting credit score; the legal rights index and the credit information index. Thus, the getting credit score is the sum of these two indices. The legal rights index represents the strength of the secured transactions system within a country through ten features related to collateral law and two features related to bankruptcy law. Every individual feature that a country abides by results in an increase of the legal rights index score by one. The credit information index is measured as the depth of sharing credit information, which is determined by measuring and evaluating rules and practices that affect the coverage, scope and accessibility of credit information within a country. These features are enhanced and supported by reporting service providers; credit bureaus and credit registries[2]. The range of the credit

[1] The World Bank changed the research methodology of determining the getting credit score in 2015. However, the score is calculated with both methodologies in that year. This gives us the opportunity to calculate the changes in annual scores to identify reforms. Thus, we are able to combine the pre – 2015 and post – 2015 research methodology of the World Bank in our empirical analysis.

[2] In the pre-2015 methodology of the World Bank, the credit information index score ranged from 0 – 6. In 2015, the credit information index score expanded with 2 additional features and currently ranges from 0 - 8.

information index is based on eight features that define a well-functioning sharing credit information system. Every feature that a country complies with results in an increase of the credit information index score by one.

We exploit the annual increase in getting credit scores as a temporal shock to the economy. This temporal shock is accepted as exogenous to all individual banks and firms in a country to change the conditions of the access to credit in a country. In this manner, we analyze how an increase of access to credit in a country affects firm leverage. We measure getting credit reforms through three dummy variables. This allows us to examine the global effect of credit reforms and the individual effects of legal rights and credit information reforms, respectively. The dummy variable *Credit Reform* takes the value of 1 in the years during and after the implementation of the first credit reform in a country. The dummy variable *Legal Rights (LR) Reform* takes the value of 1 in the years during and after the implementation of the first credit reform related to secured transactions systems in a country. The dummy variable *Credit Information (CI) Reform* takes the value of 1 in the years during and after the implementation of the first credit reform related to credit information in a country[3].

3.2 Bank-level and firm-level financial variables

The dependent variables in our analysis is bank loans and firm leverage. We measure bank loans with the ratio of corporate loans to total loans portfolio in commercial banks to capture a potential change in debt financing to non-financial firms. Firm leverage is measured by the ratio of total debt divided by total assets. Bank-level and firm-level characteristics are relevant factors that can affect bank loans and firm leverage. Çolak and Öztekin (2021) include banks'

[3] We also investigate the effects of the second reforms, which exhibit the change in the score following the first increase. Even though there have been changes in the score more than twice in some countries, we restrict our investigation to the first two. Moreover, we also carefully analyze the highest changes in the score across all changes. All these different approaches to the reforms yield the same effects of the first reforms. Therefore, we report the first reform results only.

size, the level of equity in the capital, profitability, and liquidity as the main determinants of bank loans. Frank and Goyal (2009) examine data on all publicly traded American firms between 1950 and 2003. Firms in industries where the median firm has high leverage tend to have higher leverage. Increases in asset tangibility of firms often leads to higher firm leverage, as firms can post more collateral. Higher profitability of firms leads to lower leverage since profitable firms have an increased ability to use their retained earnings, instead of debt, to finance investment opportunities. Finally, larger firms tend to have higher leverage. Several research works using varying samples confirm the findings of Frank and Goyal (2009), such as Agca et al. (2007); de Jong et al. (2008); Gungoraydinoglu and Öztekin (2011) and Onofrei et al. (2015). We take all these variables into account when examining the effect of credit reforms on firm leverage.

Frank and Goyal (2009) find that capital expenditures and R&D expenses also affect firm leverage. Capital expenditures increase the need for financial resources, such as debt or equity. The empirical analysis of Gungoraydinoglu and Öztekin (2011) examine additional factors that should be considered when examining firm leverage. These variables are liquidity and depreciation expenses. According to all the studies cited in this section, growth opportunities of firms are also expected to affect firm leverage. On the one hand, growing firms place a greater value on stakeholder co-investment, which decreases firm leverage. On the other hand, growing firms accumulate more debt over time, which increase firm leverage. We use Tobin's Q as a proxy of growth opportunities.

3.3 Country-level variables

When analyzing firm leverage, we control for the economic development of a country, which is measured by the natural logarithm of gross domestic product (GDP). In addition, we also control for country-level economic stability, as it affects the choice of firms to engage in either

debt or equity financing. Economic stability in Agca et al. (2007) is measured by annual inflation. Furthermore, Öztekin (2015) empirically shows that annual inflation affects capital structure decisions of firms. Maremilola et al. (2019) examine the effect of institutional quality on the capital structure of firms in 23 developing countries. The authors used the World Bank Governance Indicators to assess the effect of institutional quality on firm leverage. The study finds that the World Bank Governance Indicators significantly affect the debt ratio of firms. The authors argue that institutional quality increases debt because it encourages creditors to lend money and lowers bankruptcy costs. Consequently, firms become more willing to capitalize on debt due to these beneficial implications. We calculate the average institutional quality score per country that consists of the six World Bank Governance Indicators (Maremilola et al., 2019).

In order to examine the second hypotheses, we include an emerging-country dummy variable to capture the differences between emerging and developed countries. According to the IMF classification, our sample consists of 32 developed and 41 emerging countries. Djankov et al. (2007); Cho et al (2014); Archaya et al (2011); Houston et al. (2010); Qian and Strahan (2007); Benmelech and Bergman (2011) all proved that creditor rights affect firm leverage. Therefore, we also analyze the moderating effect of creditor rights on the association between credit reforms and firm leverage. In order to test the third hypothesis, we add the creditor rights index of Djankov et al. (2007) in our empirical analysis[4].

[4] Djankov et al. (2007) used the creditor rights index of La Porta et al. (1997) as a basis for the development of their own creditor rights index. The creditor rights index covers four powers of secured lenders in bankruptcy: whether there are restrictions when a debtor files for reorganization; whether secured creditors are able to retrieve their collateral after the petition for reorganization is approved, whether the court has not imposed any asset freeze; whether secured creditors are paid first during the proceeds of liquidating a bankrupt company and finally, whether an administrator is responsible for running the reorganization, and not management. A value of one is added for each power granted by the laws and regulations of a country. The scores are aggregated in the creditor rights index that ranges from 0, which implies poor creditor rights, to 4, which reflects strong creditor rights.

We argue that small, meduim and large firms are impacted differently by getting credit reforms. Thus, we separated all firm sizes into 10 deciles, and defined firms in 1 – 3 deciles as small, and those in 4-7 and 8 – 10 as medium and large firms, respectively.

3.4 Regression specification

Our empirical analysis follows a difference-in-differences empirical design in which credit reforms function as a temporal shock to the economy. We perform OLS regressions with several fixed effects included. The regression equations we perform are given below:

$$Bank\ loan\ Ratio_{i,t} = a + \beta_1\, Credit\ Reform_{c,t} + \beta_2\, LogGDP_{c,t} + \beta_3\, GDP\ Growth_{c,t} + \beta_4\, StkMktCap_{c,t} + \beta_5\, Institutional\ Quality_{c,t} + \beta_6\, Bank\ Size_{i,t-1} + \beta_7\, Bank\ Equity_{i,t-1} + \beta_8\, Bank\ ROA_{i,t-1} + \beta_9\, Bank\ Liquidity_{i,t-1} + \sum Country\ (or\ Bank)\ fixed\ effects + \sum Year\ fixed\ effects + \varepsilon_{it} \quad (1)$$

$$Leverage_{i,t} = a + \beta_1\, Credit\ Reform_{c,t} + \beta_2\, LogGDP_{c,t} + \beta_3\, GDP\ Growth_{c,t} + \beta_4\, StkMktCap_{c,t} + \beta_5\, Institutional\ Quality_{c,t} + \beta_6\, Capex_{i,t-1} + \beta_7\, Firm\ Size_{i,t-1} + \beta_8\, Asset\ Tangibility_{i,t-1} + \beta_9\, Tobin's\ Q_{i,t-1} + \beta_{10}\, Profitability_{i,t-1} + \beta_{11}\, Median\ Industry\ Leverage_{i,t-1} + \beta_{12}\, Liquidity_{i,t-1} + \beta_{13}\, Depreciation_{i,t-1} + \sum Country)or\ Firm)\ fixed\ effects + \sum Year\ fixed\ effects + \varepsilon_{it} \quad (2)$$

In regressions we include ban k and firm fixed effects, we exclude country fixed effects. To control for outliers in our analysis, we winsorize all continuous firm and country-level control variables at the 1% level. Definitions of all variables are given in the appendix.

3.5 Sample description

Panels A and B Table 1 provide descriptive statistics of all variables included in the empirical analysis. In Panel A, we report summary statistics of variables included in regressions on bank loans. Corporate loans captures 17.5% of total loan portfolio in commercial banks. Bank profitability ratio shows that, on average, net income relative to their assets at a lower rate of less than 1%. Bank Equity and liquid assets are 11.7% and 29.7% of total assets, respectively.

Panel B presents summary statistics of variables in regressions on firm leverage. The mean leverage shows that, on average, debt represents 30.7% of total assets. However, typical firms in each industry, on average, have 17.3% total debt ratio. Firm/year observations

capturing post-reforms, legal rights and information sharing cover 50.4%, 30.5%, and 39.7% of all observations, respectively. The main reason for the smaller percentages of both types of reforms relative to the overall getting credit reforms is that getting credit reform comprises one of these two reforms only. The mean of Tobin's *q* (3.02) indicates high market values of sample firms relative to their book value of assets. Tangible assets and capital expenditures capture 32% and 6.8% of total assets, respectively. Mean profitability is less than 1%, and the mean liquidity of 2.85 shows that for most firms, current assets are almost triple as large as liabilities.

Panels A and B of Table 2 present the bank- and firm-levels sample distribution by country. The complete samples consist of 68 and 73 countries in the sample of banks and firms, respectively. For bank sample, the majority of banks are located in the US. To control the effect of this very high representations on our results, we repeat our analysis by excluding US banks from the sample. In Panel A, the percentage of corporate loans in total loans for commercial banks are being lower than 1% in Austria, Germany, India, and Switzerland and higher than 80% in Greece, Ukraine, and Malaysia. According to statistics in Panel B, 59 of which have implemented a credit reform during the period of 2004 – 2019. Denmark has the highest institutional quality, as proxied by a world governance index value of 1.784, while Venezuela has the lowest, as proxied by an index value of -1.199.

Table 3 reports the correlation matrix of all firm- and country-level variables. As expected, we observe high correlations between pairs of capital expenditures, tangibility, and depreciation. Inflation and Institutional Quality display a negative correlation coefficient of -0.587, which is the strongest correlation of the matrix.

4. Regressions results

4.1 Credit reforms and bank loans

We report the regression results regarding the impact of credit reforms on bank loans in Table 4. For each reform group; credit reforms (Models 1 and 2), legal rights (LR) reforms (Models 3 and 4), credit information sharing (CI) reforms (Models 5 and 6), and both LR and CI reforms together (Models 7 and 8), we run our regression equation 1 by including country and year fixed effects in the first set, and by bank and year fixed effects in the second set regressions in each reform group. We find that bank loans increase with credit reforms only with the improvement in information sharing system with Models from 5 to 8. The estimated coefficients of CI Reform are positive and statistically significant at the 5% level, implying that CI reforms are important, not LR reforms, for an increase in corporate loans provided by commercial banks. Among bank level control variables, size and liquidity significantly increases the proportion of corporate loans. Stock market capitalization at the country level decreases the loans.

A possible reason for the ratio of corporate loans to total loans not being affected by credit reforms in general could be potential differences in the effects of LR and CI reforms between developed and emerging countries, which we investigate next. In Table 5, we investigate possible differences in the impact of reforms between developed and emerging countries, and perform regressions by interacting reforms dummy variables with Emerging dummy that takes 1 for emerging countries and 0 for developed countries. Our results in Models 4 where bank fixed effects are included show that LR reform dummy has a negative and statistically significant coefficient at 10% level, and the interaction with emerging market dummy has positive and statistically significant coefficient at 5% level. These findings indicate that after LR reforms average bank loans decrease 6.1% in developed countries. The change in bank loans 7.8% higher in emerging countries, which implies 1.7% increase in bank loans (-0.061+0.078 =0.017). We have an opposite result with CI reforms to LR reforms between

developed and emerging countries. According to the results in Model 6, average bank loans increase 14.5% with LR reforms in developed countries, and the changes in bank loans 14.7% lower in emerging countries, which implies 0.2% decrease in bank loans (0.145-0.147 =0.002). The results with both reforms stay similar in Model 8. The results, reported with Table 5A in the appendix, are robust after excluding U.S. banks from the sample.

Table 6 is for the role of exiting strange of creditor rights along with the reforms. We find that LR reforms are more effective on the supply side when creditors protection is weak as LR reform dummy is positive and significant at 1% level in Model 4. The coefficient indicates 10.4 increase in bank loans in countries with low creditors protection. The interaction variable together with CR in Model 4 indicates that bank loans is 4.4 less increase, which corresponds to 6% increase in bank loans, in countries with strong creditors protection. We don't detect any significant changes in bank loans after CI reforms with respect to countries with weak or strong creditors protection. The results the same when we consider the impact of two reforms together (Model 8) as well as we exclude US banks form sample (Table 6A).

Overall, we find evidence that supports changing the relative importance between legal rights and information sharing reforms in explaining the supply side of debt financing across countries.

4.2 Credit reforms and firm leverage

As in banks loans, we perform the regression analysis regarding the impact of credit reforms on firm leverage of non-financial firms for each reform group; credit reforms (Models 1 and 2), legal rights (LR) reforms (Models 3 and 4), credit information sharing (CI) reforms (Models 5 and 6), and both LR and CI reforms together (Models 7 and 8). We run our regression equation 2 by including country and year fixed effects in the first set, and by bank and year fixed effects in the second set regressions in each reform group.

Table 7 presents the regression results regarding the effect of credit reforms on firm leverage. The positive and statistically significant at the 1% level regression coefficient of Models 1 and 2 indicates that after reforms average debt ratio increases 1.6% with including country and year fixed effects and 2.4% with including firm and year fixed effects. Models from 3 to 8 illustrate that the implementation of LR reforms increase firm leverage not CI reforms. The estimated coefficients of LR reforms' variables are positive and significant at the 1% level in Models 4 and 8. These results indicate that, as outlined by the World Bank (2020), creditors gain more certainty in successfully collecting debts when secured transactions systems are in place relative to credit information reforms allowing creditors to make better judgements on the extension of credit to firms.

The firm-level controls in all models significantly affect firm leverage. As expected, the variables *Size, Asset Tangibility, Capex, Depreciation* and *Median industry Leverage* increase firm leverage, and *Profitability*, *Tobin's Q, and Liquidity* reduce firm leverage. In Models 3 and 4, the country-level control variables *Inflation, Creditor Rights* increase firm leverage. The regression coefficients of all three variables are positive and significant at the 1% level. *Institutional Quality* and economic development, measured by *LogGDP* (significant in Model 4 only), decrease firm leverage

4.2.1 Firm leverage in emerging countries versus developed countries

Table 8 reports the results from regression examining the differences in the effects of credit reforms on firm leverage between emerging and developed countries. Model 2 shows that the effect of credit reforms on firm leverage is stronger in emerging countries than in developed countries. Following credit reforms in developed countries, average firm leverage increases by 1.6% with a significance level of 5%. On the other hand, in emerging countries, firm leverage increased 1.8% more than developed countries, with a statistically significant difference at the

1% level. This implies 3.4% increase in average debt ratio firms in emerging countries. This effect suggests that the underdevelopment of financial and credit systems in emerging countries makes the introduction of credit reforms more valuable than in countries where institutions and credit information are already sufficiently developed.

The results with two separate reforms do not hold. In Models 3 and 4, LR reforms significantly increase average firm leverage by 2.6% in developed countries. Even though the coefficient of the interaction between LR reform and emerging countries dummy is negative, it is statistically insignificant, which indicates that average firm leverage increase similarly between developed and emerging countries. We have not detected any significant effects of CI reforms in Models 5 and 6, and the results in Model 7 and 8 reflect the same results in other models.

Taking all the results into account from Table 8, we conclude that overall, credit reforms and the form of LR reforms increase the leverage of firms more in both developed and emerging economies, and therefore LR reforms are more important than CI reforms for both economies. We present similar findings, except CI reforms decrease firm leverage in both countries similarly and the role of LR reforms disappear, when we exclude the US firms from the sample (Table 8A). However, these results do not change overall interpretation of main findings.

4.2.2 The roles of creditor rights

Table 9 presents the regression results for the effects of country level creditor rights on the relationship between credit reforms and firm leverage. Models 3 and 4 show that no effect as well as no difference in the effect of LR reforms on firm leverage between countries with weak and strong creditors protection. However, the estimated coefficients of CI reforms in especially Models 6 and 8 with firms and year fixed effects included, the coefficients of CI reforms are positive and the coefficients of the interaction between CI reforms and creditor rights are

negative with being statistically significant at the 1% levels. These findings imply that, in countries with weak creditor rights, firm leverage increases following the reforms and the increase in leverage is lower in countries with strong creditor rights. The main results stay the same with excluding the US firms form the sample (Table 9A).

A likely explanation for these findings can be found in Cho et al. (2014) and Acharya et al. (2011). When implementing credit reforms in a country where creditor rights are already strong, the power of creditors increases even further. Therefore, firms will be less willing to use debt financing, as they become more dependent on powerful lenders. More important, the creditors' role changes whit CI reforms only.

4.3 Credit reforms, firm leverage and firm size analysis

We report the results for the effects of credit reforms on firm leverage for different firm sizes in Table 10. All regressions are performed by including firm and year fixed effects. We summarize our findings below:

Small firms: LR reforms only increase average firm leverage, and this seems to be the case for firms in both developed and emerging countries as the interaction with LR reforms and Emerging dummy is not significant. There seems to be no role of CI reforms. Moreover, there is no change in leverage for both types of reforms when countries are categorized based on low and high creditor rights.

Medium size firms: Overall, LR reforms increase the leverage of medium size firms after reforms. We find positive and significant coefficients in developed countries, but negative and significant coefficients with interaction variables for both LR and CI reforms. Thus, medium size firms are benefited by both types of reforms in developed countries. In terms of creditors protection, average firm leverage increases by LR reforms in countries with strong creditor rights.

Large firms: Average firm leverage of large firms increases with LR reforms similarly in developed and emerging countries, while it increases with CI reforms in emerging countries only. Firm leverage increases with information sharing reforms for large firms in countries with both weak and strong creditors protection, but this increase is less when creditors rights are high.

LR reforms allowing firms to safely use movable assets as collateral provide benefits to both small and medium size firms, but they give more advantageous to medium size firms when they are located in developed and strong creditors protection countries. However, large firms often have sufficient tangible assets and high information asymmetry, which makes CI reforms more relevant for them. The substantial amounts of assets and financial resources of large firms imply positive firm financial standing information. Therefore, when credit information reforms allow creditors to obtain more financial data, they become more willing to extend loans on more favorable terms to large firms in emerging and weak creditors protection countries (Love et al., 2016).

5. Conclusion

This study examines the impact of credit reforms on corporate loans provided by commercial banks to non-financial firms as well as firm leverage determining the level of debt financing in the capital structure of non-financial firms. We aim to identify the differential roles of legal rights and credit information reforms, which are the two dimensions of getting credit, in explaining potential increase in supply and demand of debt financing. Legal rights reforms establish and improve secured transactions systems that, on the one hand, provide lenders with a higher certainty of debt repayment through the acquisition of a security interest in collateral owned by the borrower and, on the other hand, enable firms to use their movable assets as collateral, which is crucial for obtaining debt. Credit information reforms reduce the

information asymmetry between lenders and borrowers. Therefore, lenders are more willing to extend credit.

The main finding of this study is that reforms improving credit sharing information increase bank loans and reforms improving legal rights increase firm leverage. However, the relative importance of these two types of reforms changes based on country level characteristics. While bank loans decrease (increase) with legal rights reforms and increase (decrease) with information sharing reforms in developed (emerging) countries. Moreover, legal rights reforms are more effective on the supply side when creditors protection is weak. We also find that legal rights reforms increase firm leverage similarly in both developed and emerging countries, and information sharing reforms become important with the level of creditors protection. When we extend our analysis to the impact of credit reforms on firm leverage across different firm sizes, we find that the overall effects of legal rights reforms are stronger for small and medium size firms and credit information sharing reforms for large firms.

Access to credit is one of the most important elements of economic growth. Firms use credit to finance their activities and to invest in positive net present value opportunities. The absence of credit limits economic development and the ability of firms to create wealth. Therefore, the impact of credit reforms is relevant for firms worldwide. Managers should take into account the implementation of credit reforms, as they could have a significant impact on capital structure decisions. Credit reforms result in more favorable loan terms. Therefore, firms could significantly reduce the costs of debt after the implementation of credit reforms.

Appendix: Definitions of variables

Variables	Definitions	Source
Main variables		
Credit reform	The dummy variable takes the value of 1 in the years during and after the implementation of the first credit reform in a country.	World Bank
Legal Rights (LR) reform	The dummy variable takes the value of 1 in the years during and after the implementation of the first credit reform regarding secured transactions systems in a country.	World Bank
Credit Information (CI) reform	The dummy variable takes the value of 1 in the years during and after the implementation of the first credit reform regarding credit information in a country.	World Bank
Loan Ratio	The ratio of corporate bank loans to total loans	BankFocus
Firm leverage	The ratio of (book value of total long-term debt + short-term debt) to book value of total assets.	Compustat
Bank-level controls		BankFocus
Bank Size	The natural logarithm of bank total assets	BankFocus
Bank Equity	The ratio of bank equity to total assets	BankFocus
Bank ROA	Return on assets calculated as the ratio of bank's net income to total assets	BankFocus
Bank Liquidity	The ratio of bank liquid securities to total assets	BankFocus
Firm-level controls		
Tobin's Q	The ratio of (book value of total assets + market value of common equity − book value of common equity) to book value of total assets.	Compustat
Firm size	The natural logarithm of total assets.	Compustat
Asset tangibility	The ratio of net property, plant and equipment to total assets.	Compustat
Profitability	The ratio of earnings before interest and taxes to total assets.	Compustat
Median industry leverage	The median of total debt to market value of assets by 2-digit SIC code and year.	Compustat
Capex	The ratio of capital expenditures to total assets.	Compustat
Liquidity	The ratio of total current assets to total current liabilities.	Compustat
Depreciation expenses	The ratio of total depreciation and amortization to total assets.	Compustat
Macroeconomic controls		
Economic development	LogGDP: Natural logarithm of gross domestic product per capita in USD	World Bank
GDP Growth	Annual change in gross domestic product in USD	World Bank
Stock Market Capitalization	Stock market capitalization in percentage of GDP	World Bank
Institutional quality	Average score of the six World Bank Governance Indicators: Rule of law, Regulatory Quality, Governance Effectiveness, Political Stability, Voice and Accountability	World Bank
Emerging	Dummy variable with a value of 1 for emerging economies and 0 for advanced economies.	IMF
Creditor rights	The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights).	Djankov et al. (2007)

References

Agca, S., De Nicolò, G., & Detragiache, E. (2007). Financial reforms, financial openness, and corporate borrowing: international evidence. *IMF Working Papers*, 186.

Acharya, V. V., Amihud, Y., & Litov, L. (2011). Creditor rights and corporate risk-taking. *Journal of Financial Economics*, *102*, 150-166.

Beck, T., & Demirguc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & finance*, *30*, 2931-2943.

Benmelech, E., & Bergman, N. K. (2011). Vintage capital and creditor protection. *Journal of Financial Economics*, *99*, 308-332.

Bennardo, A., Pagano, M., & Piccolo, S. (2015). Multiple bank lending, creditor rights, and information sharing. *Review of Finance*, *19*, 519-570.

Bhama, V., Jain, P. K., & Yadav, S. S. (2015). Does firms' pecking order vary during large deficits and surpluses? An empirical study on emerging economies. *Procedia Economics and Finance*, *30*, 155-163.

Bilgin, R., & Dinc, Y. (2019). Factoring as a determinant of capital structure for large firms: Theoretical and empirical analysis. *Borsa Istanbul Review*, *19*, 273-281.

Brown, M, Jappelli, T., & Pagano, M. (2009). Information sharing and credit: Firm-level evidence from transition countries. *Journal of Financial Intermediation, 18*, 151–72.

Calomiris, C.W., Mauricio, L., Liberti, J. and Sturgess, J. (2017). How collateral laws shape lending and sectoral activity. *Journal of Financial Economics, 123*, 163–88.

Cho, S. S., El Ghoul, S., Guedhami, O., & Suh, J. (2014). Creditor rights and capital structure: Evidence from international data. *Journal of Corporate Finance*, *25*, 40-60.

Çolak, G. & Öztekin, Ö. (2021). The Impact of COVID-19 Pandemic on bank lending around the world. *Journal of Banking & Finance, 133*, 106207.

De Jong, A., Kabir, R., & Nguyen, T. T. (2008). Capital structure around the world: The roles of firm-and country-specific determinants. *Journal of Banking & Finance*, *32*, 1954-1969.

De la Campa, A. (2011). Increasing access to credit through reforming secured transactions in the MENA region. World Bank Policy Research Working Paper, (5613).

Delcoure, N. (2007). The determinants of capital structure in transitional economies. *International Review of Economics & Finance*, *16*, 400-415.

Djankov, S., McLiesh, C., & Shleifer, A. (2007). Private credit in 129 countries. *Journal of financial Economics*, *84*, 299-329.

Doblas-Madrid, A. and Minetti, R. (2013). "Sharing information in the credit market: contract-level evidence from U.S. firms." *Journal of Financial Economics, 109*, 198–223.

Frank, M. Z., & Goyal, V.K. (2003). Testing the pecking order theory of capital structure. *Journal of financial economics*, *67*, 217-248.

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: which factors are reliably important? *Financial Management*, *38*, 1-37.

Garvey, G. T., & Hanka, G. (1999). Capital structure and corporate control: The effect of antitakeover statutes on firm leverage. *Journal of Finance*, *54*, 519-546.

Grajzl, P., & Laptieva, N. (2016). Information sharing and the volume of private credit in transition: Evidence from Ukrainian bank-level panel data. *Journal of Comparative Economics*, *44*(2), 434-449.

Gungoraydinoglu, A., & Öztekin, Ö. (2011). Firm-and country-level determinants of corporate leverage: Some new international evidence. *Journal of Corporate Finance*, *17*, 1457-1474.

Haselmann, R., Pistor, K., & Vig, V. (2010). How law affects lending? *Review of Financial Studies,* 23, 549–80.

Houston, J. F., Lin, C., Lin, P., & Ma, Y. (2010). Creditor rights, information sharing, and bank risk taking. *Journal of financial Economics*, *96*, 485-512.

Houston, J.F., Itzkowitz, J., & Naranjo, A. (2017) Borrowing beyond borders: Foreign assets, lender choice, and loan pricing in the syndicated bank loan Market. *Journal of Corporate Finance*, *42*, 315–334.

Kusi, B. A., Agbloyor, E. K., Ansah-Adu, K., & Gyeke-Dako, A. (2017). Bank credit risk and credit information sharing in Africa: Does credit information sharing institutions and context matter?. *Research in International Business and Finance*, *42*, 1123-1136.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The journal of finance*, *52*, 1131-1150.

Love, I., Pería, M. S. M., & Singh, S. (2016). Collateral registries for movable assets: does their introduction spur firms' access to bank financing? *Journal of Financial Services Research*, *49*(1), 1-37.

Mitton, T. (2008). Why have debt ratios increased for firms in emerging markets?. *European Financial Management*, *14*, 127-151.

Onofrei, M., Tudose, M. B., Durdureanu, C., & Anton, S. G. (2015). Determinant factors of firm leverage: An empirical analysis at Iasi county level. *Procedia Economics and Finance*, *20*, 460-466.

Öztekin, Ö. (2015). Capital structure decisions around the world: which factors are reliably important?. *Journal of Financial and Quantitative Analysis*, *50*(3), 301-323.

Peria, M. S. M., & Singh, S. (2014). *The impact of credit information sharing reforms on firm financing*. The World Bank.

Qian, J., & Strahan., P.E. (2007). How laws and institutions shape financial contracts: The case of bank loans. *Journal of Finance,* 62: 2803–34.

Rice, T., & Strahan, P. E. (2010). Does credit competition affect small-firm finance? *Journal of Finance*, *65*, 861-889.

Seifert, B., & Gonenc, H. (2008). The international evidence on the pecking order hypothesis. *Journal of multinational financial management*, *18*, 244-260.

World Bank, the. 2020. Global Report, Doing Business 2020. Available online: https://www.doingbusiness.org/en/data/exploretopics/getting-credit/why-matters#notes

Vig, V. (2013). Access to collateral and corporate debt structure: Evidence from a natural experiment. *Journal of Finance*, *68*, 881-928.

Table 1: Descriptive statistics

This table reports the descriptive statistics of all variable included in the empirical analysis. Panel A is for the sample of commercial banks and Panel B is the leverage of non-financial firms. LR is the abbreviation of legal rights and CI is the abbreviation of credit information. The definitions of variables ae given in the appendix. All firm and country-level variables are lagged by 1 year, except for the time invariant variables *Emerging* and *Creditor rights*. Also, all variables are winsorized at the 1% level.

Panel A: Banks sample

	N	Mean	Median	Std. Dev.
Credit Reform	77,337	0.091	0.000	0.288
LR Reform	77,337	0.062	0.000	0.241
CI Reform	77,337	0.080	0.000	0.271
Loan Ratio	77,337	0.175	0.120	0.199
Bank Size	77,337	12.416	12.129	1.657
Bank Equity	77,337	0.117	0.103	0.071
Bank ROA	77,337	0.009	0.009	0.013
Bank Liquidity	77,337	0.297	0.267	0.169
GDP Growth	77,337	0.020	0.022	0.018
LogGDP	77,337	30.010	30.375	1.195
StkMktCap	77,337	1.260	1.374	0.706
Institutional Quality	77,337	1.133	1.250	0.457

Panel B: Firms sample

	N	Mean	Median	Std. Dev.
Leverage	287,598	0.307	0.164	0.551
Credit Reform	287,598	0.504	1.000	0.500
LR Reform	287,598	0.305	0.000	0.460
CI Reform	287,598	0.397	0.000	0.489
Size	287,598	7.228	7.140	3.140
Asset Tangibility	287,598	0.323	0.238	0.291
Profitability	287,598	0.007	0.036	0.303
Tobin's Q	287,598	3.016	2.311	2.555
Capex	287,598	0.068	0.029	0.130
Liquidity	287,598	2.849	1.624	4.658
Depreciation	287,598	0.042	0.028	0.059
Median Industry Leverage	287,598	0.173	0.143	0.139
GDP Growth	287,598	3.252	2.771	3.229
LogGDP	287,598	28.309	28.375	1.541
StkMktCap	287,598	1.278	0.946	1.833
Institutional Quality	287,598	0.816	1.232	0.789

Table 2: Sample distribution by country

This table reports reform years and mean values of selected variables by country. Panel A is for the sample of commercial banks and Panel B is the leverage of non-financial firms. The sample period is 2004-2019. The definitions of variables ae given in the appendix.

Panel A: Banks Sample

Country	*N*	*Credit Reform*	*First Data Year*	*Loan Ratio*	*Bank Size*	*Bank Equity*	*Bank ROA*	*Bank Liquidity*
Argentina	139	0.000	2015	0.375	12.310	0.206	0.044	0.425
Australia	18	1.000	2015	0.135	14.040	0.074	-0.001	0.090
Austria	207	0.000	2007	0.000	13.052	0.183	0.010	0.285
Bahrain	91	0.582	2007	0.588	15.612	0.186	0.016	0.427
Bangladesh	67	0.000	2015	0.097	13.210	0.206	0.014	0.234
Belgium	91	0.000	2007	0.417	14.560	0.110	0.009	0.409
Brazil	336	0.000	2007	0.512	13.757	0.221	0.011	0.319
Bulgaria	42	1.000	2010	0.756	13.085	0.174	0.005	0.412
Canada	653	0.000	2005	0.101	14.821	0.077	0.009	0.178
Chile	121	0.736	2007	0.590	16.227	0.112	0.013	0.244
China	1,196	1.000	2007	0.662	16.503	0.092	0.009	0.303
Colombia	26	0.962	2014	0.474	13.336	0.215	0.021	0.105
Croatia	81	1.000	2013	0.664	12.510	0.109	-0.006	0.308
Cyprus	96	1.000	2012	0.464	12.818	0.108	0.009	0.305
Czech Republic	67	0.597	2007	0.096	15.187	0.099	0.009	0.290
Denmark	88	1.000	2007	0.072	13.888	0.117	0.009	0.314
Egypt, Arab Rep.	128	0.883	2007	0.764	15.506	0.090	0.017	0.529
Finland	30	0.000	2015	0.097	12.744	0.126	0.005	0.281
France	429	1.000	2007	0.180	14.570	0.086	0.004	0.307
Germany	261	0.985	2007	0.000	13.406	0.152	0.005	0.350
Greece	26	0.808	2007	0.809	14.743	0.151	-0.015	0.173
Hong Kong SAR	292	0.432	2007	0.448	16.497	0.126	0.012	0.408
Hungary	45	1.000	2007	0.404	13.901	0.107	0.007	0.389
India	206	0.961	2006	0.003	15.724	0.106	0.009	0.102
Indonesia	428	1.000	2007	0.598	13.781	0.157	0.012	0.190
Ireland	31	0.000	2007	0.451	16.790	0.087	0.001	0.443
Israel	73	1.000	2007	0.449	16.752	0.066	0.005	0.288
Italy	216	0.000	2007	0.030	13.594	0.135	0.002	0.384
Japan	139	1.000	2006	0.327	15.948	0.052	0.001	0.436
Jordan	87	0.000	2011	0.562	14.839	0.140	0.013	0.204
Kazakhstan	94	1.000	2007	0.752	13.189	0.298	0.031	0.378
Kenya	66	0.788	2013	0.367	12.822	0.208	0.013	0.242
Korea, Rep.	90	0.889	2007	0.117	17.080	0.085	0.007	0.209
Kuwait	62	0.952	2007	0.520	16.735	0.125	0.012	0.348
Luxembourg	323	0.000	2007	0.094	14.999	0.105	0.006	0.510
Malaysia	47	1.000	2007	0.887	13.961	0.208	0.008	0.553
Malta	23	0.652	2013	0.236	12.841	0.100	0.007	0.301
Mauritius	55	1.000	2013	0.595	13.979	0.120	0.008	0.424
Mexico	102	1.000	2013	0.587	12.435	0.186	0.011	0.305
Morocco	36	1.000	2010	0.371	14.696	0.114	0.006	0.225

Country	*N*	*Credit Reform*	*First Data Year*	*Loan Ratio*	*Bank Size*	*Bank Equity*	*Bank ROA*	*Bank Liquidity*
Netherlands	97	0.186	2007	0.433	15.159	0.118	0.003	0.357
New Zealand	138	0.543	2007	0.181	15.880	0.104	0.008	0.167
Nigeria	32	0.688	2007	0.243	14.373	0.165	0.000	0.330
Norway	32	0.000	2015	0.070	13.193	0.142	0.013	0.111
Oman	70	0.671	2007	0.354	15.480	0.142	0.017	0.229
Pakistan	54	0.463	2013	0.612	12.844	0.179	0.010	0.343
Peru	120	0.975	2006	0.246	13.585	0.152	0.014	0.284
Philippines	35	1.000	2013	0.303	13.847	0.161	0.017	0.241
Poland	234	0.966	2007	0.031	11.995	0.101	0.006	0.272
Qatar	65	0.662	2007	0.442	16.386	0.147	0.021	0.264
Russian Federation	1,289	1.000	2009	0.722	11.232	0.264	0.012	0.451
Saudi Arabia	72	1.000	2009	0.562	17.022	0.190	0.029	0.246
Singapore	19	0.895	2009	0.226	16.761	0.083	0.009	0.109
Slovenia	18	0.722	2007	0.087	14.394	0.078	-0.003	0.102
South Africa	45	0.978	2007	0.241	13.935	0.117	0.003	0.197
Spain	62	0.000	2007	0.046	13.557	0.262	0.005	0.530
Sri Lanka	53	1.000	2013	0.044	12.433	0.158	0.015	0.276
Sweden	78	1.000	2013	0.331	13.869	0.147	0.008	0.228
Switzerland	465	0.000	2007	0.005	14.180	0.119	0.004	0.275
Thailand	86	0.279	2007	0.440	15.304	0.231	0.009	0.303
Tunisia	30	1.000	2013	0.138	13.049	0.101	0.007	0.619
Turkey	99	0.323	2007	0.757	13.018	0.208	0.015	0.296
Ukraine	249	1.000	2011	0.881	10.986	0.288	0.007	0.274
Untd Arab Emirates	177	0.893	2007	0.449	16.002	0.166	0.018	0.260
United Kingdom	459	0.000	2006	0.197	14.032	0.171	0.006	0.474
United States	66,369	0.000	2005	0.140	12.136	0.112	0.009	0.291
Venezuela, RB	29	0.793	2007	0.082	12.721	0.197	0.027	0.341
Vietnam	253	1.000	2010	0.083	12.061	0.189	0.010	0.412
Total	77,337	0.091	2005	0.175	12.416	0.117	0.009	0.297

Panel B: Firms Sample

Country	*N*	*Reform Year*	*Credit Reform*	*First Data*	*GDP Grow*	*Log-GDP*	*Instit. Quality*	*StkMkt Cap*	*Emerging*	*CR*
Argentina	677	-	0.000	2005	2.716	26.766	0.133	-0.220	1	1
Australia	12293	2013	0.393	2005	2.785	27.767	1.075	1.586	0	3
Austria	669	-	0.000	2005	1.495	26.714	0.327	1.539	0	3
Bahrain	166	2014	0.434	2005	4.054	24.073	0.730	-0.035	1	.
Bangladesh	172	-	0.000	2005	6.607	25.794	0.304	-0.858	1	2
Belgium	985	-	0.000	2005	1.511	26.906	0.676	1.290	0	2
Brazil	2067	-	0.000	2005	2.312	28.222	0.538	-0.047	1	1
Bulgaria	345	2006	0.974	2005	2.536	24.708	0.172	0.205	1	2
Canada	16864	-	0.000	2005	2.360	28.097	1.199	1.621	0	1
Chile	1566	2012	0.499	2005	3.571	26.111	1.041	1.129	1	2
China	26217	2007	0.891	2005	8.830	29.630	0.579	-0.493	1	2
Colombia	275	2015	0.356	2005	3.906	26.381	0.466	-0.291	1	0
Croatia	590	2008	0.795	2005	1.087	24.772	0.445	0.416	1	3
Cyprus	466	2011	0.637	2006	1.398	23.905	0.240	1.010	0	.
Czech Republic	133	2015	0.256	2005	2.800	26.035	0.203	0.914	0	3
Denmark	1256	2007	0.852	2005	1.359	26.502	0.602	1.774	1	3
Egypt	772	2010	0.917	2006	4.006	26.318	0.233	-0.834	0	2
Finland	1387	-	0.000	2005	1.154	26.256	0.103	1.822	0	1
France	5999	2007	0.846	2005	1.162	28.597	0.802	1.196	0	0
Germany	6016	2008	0.760	2005	1.460	28.881	0.461	1.489	0	3
Greece	2449	2010	0.614	2005	-1.253	26.289	0.344	0.428	0	1
Hong Kong	10122	2016	0.256	2005	3.356	26.286	10.329	1.434	0	4
Hungary	169	2007	0.864	2005	1.836	25.631	0.204	0.679	1	1
India	20159	2007	0.865	2005	6.763	28.145	0.887	-0.230	1	2
Indonesia	3343	2007	0.881	2005	5.491	27.300	0.420	-0.376	1	2
Ireland	723	-	0.000	2005	4.586	26.310	0.439	1.472	0	1
Israel	3233	2006	0.951	2005	3.742	26.279	0.759	0.648	0	3
Italy	2361	-	0.000	2005	0.007	28.364	0.310	0.553	0	2
Japan	38058	2006	0.931	2005	0.720	29.253	0.878	1.278	0	2
Jordan	623	-	0.000	2007	2.708	24.316	0.743	-0.088	1	1
Kazakhstan	112	2007	0.911	2005	5.074	25.764	0.213	-0.507	1	2
Kenya	313	2016	0.265	2005	5.359	24.626	0.289	-0.644	1	4
Korea Republic	11008	2009	0.837	2005	3.272	27.931	0.861	0.795	0	3
Kuwait	727	2008	0.886	2005	2.022	25.615	0.975	-0.035	1	3
Luxembourg	237	-	0.000	2005	2.705	24.784	1.298	1.701	0	.
Malaysia	10072	2007	0.856	2005	4.924	26.283	1.342	0.347	1	3
Malta	102	2017	0.196	2005	4.454	23.032	0.440	1.133	1	.
Mauritius	155	2007	0.910	2005	3.764	23.139	0.667	0.788	1	.
Mexico	853	2012	0.532	2005	2.148	27.741	0.352	-0.204	1	0
Morocco	243	2010	1.000	2010	3.539	25.384	0.554	-0.293	1	1
Netherlands	1144	2018	0.101	2005	1.480	27.449	0.915	1.661	0	3
New Zealand	1153	2015	0.291	2005	2.416	25.791	0.354	1.786	0	4
Nigeria	441	2015	0.363	2005	4.586	26.627	0.127	-1.099	1	4
Norway	1518	-	0.000	2005	1.479	26.753	0.602	1.728	0	2
Oman	670	2012	0.527	2005	3.852	24.823	0.424	0.198	1	0
Pakistan	2186	2017	0.215	2005	4.010	26.107	0.194	-1.048	1	1
Peru	907	2007	0.863	2005	5.341	25.746	0.466	-0.230	1	0

Country	*N*	*Reform Year*	*Credit Reform*	*First Data*	*GDP Grow*	*Log-GDP*	*Instit. Quality*	*StkMkt Cap*	*Emer ging*	*CR*
Phillipines	1682	2013	0.471	2005	5.780	26.175	0.683	-0.396	1	1
Poland	3275	2010	0.659	2005	3.954	26.895	0.332	0.733	1	1
Puerto Rico	501	-	0.000	2005	-1.273	25.305	0.335	1.027	1	1
Qatar	207	2012	0.614	2007	8.116	25.733	0.821	0.517	1	.
Russia	1172	2009	1.000	2009	1.094	28.154	0.412	-0.708	1	2
Saudi Arabia	822	2009	1.000	2009	2.918	27.223	0.838	-0.307	1	3
Singapore	5869	2011	0.551	2005	5.279	26.223	2.269	1.531	0	3
Slovenia	209	2012	0.565	2005	2.363	24.587	0.210	0.943	0	3
South Africa	2479	2008	0.776	2005	2.486	26.518	2.505	0.265	1	3
Spain	1222	-	0.000	2005	1.165	27.948	0.775	0.861	0	2
Sri Lanka	1705	2009	0.820	2005	5.413	24.861	0.241	-0.280	1	2
Sweden	3660	2006	0.930	2005	2.035	26.950	0.867	1.746	0	1
Switzerland	2207	-	0.000	2005	2.007	27.114	2.100	1.739	0	1
Thailand	5298	2018	0.127	2005	3.462	26.588	0.837	-0.275	1	2
Tunisia	253	2008	0.881	2005	2.609	24.477	0.179	-0.208	1	0
Turkey	2344	2018	0.148	2005	4.942	27.389	0.267	-0.194	1	2
Ukraine	71	2010	1.000	2010	0.296	25.593	0.103	-0.682	1	2
U. Arab Emirates	432	2009	0.836	2007	2.821	26.572	0.478	0.571	1	2
United Kingdom	11919	-	0.000	2005	1.484	28.640	1.163	1.418	0	4
United States	48597	-	0.000	2005	1.876	30.418	1.304	1.253	0	1
Venezuela	95	2008	0.611	2005	4.882	26.337	0.043	-1.211	1	3
Vietnam	1583	2008	1.000	2008	6.117	25.834	0.326	-0.463	1	1
Total	287598		0.504	2005	3.252	28.309	1.278	0.816		

Table 3: Correlations for firm-level and country-level variables

This table reports reform correlation coefficients between pairs of firm- and country-level variables. The sample period is 2004-2019. he definitions of variables are given in the appendix.

Panel A: Bank sample

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Credit Reform	[1]	1											
LR Reform	[2]	0.812	1										
CI Reform	[3]	0.901	0.666	1									
Loan Ratio	[4]	0.489	0.429	0.511	1								
Bank Size	[5]	0.294	0.222	0.266	0.193	1							
Bank Equity	[6]	0.187	0.153	0.204	0.163	-0.181	1						
Bank ROA	[7]	0.016	-0.006	0.024	0.034	0.051	0.192	1					
Bank Liquidity	[8]	0.056	0.061	0.056	0.106	-0.117	0.126	0.017	1				
GDP Growth	[9]	0.247	0.243	0.272	0.113	0.193	-0.023	0.063	0.027	1			
LogGDP	[10]	-0.638	-0.438	-0.599	-0.350	-0.309	-0.190	-0.024	-0.066	-0.127	1		
StkMktCap	[11]	-0.237	-0.160	-0.314	-0.122	0.058	-0.084	0.019	0.015	0.072	0.1	1	
Institutional Quality	[12]	-0.750	-0.644	-0.796	-0.564	-0.179	-0.265	-0.060	-0.072	-0.248	0.5	0.338	1

Panel B: Firm sample

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Leverage	[1]	1															
Credit Reform	[2]	0.117	1														
LR Reform	[3]	0.052	0.655	1													
CI Reform	[4]	0.131	0.720	0.280	1												
Size	[5]	0.101	0.378	0.311	0.336	1											
Asset Tangibility	[6]	0.216	0.096	0.039	0.133	0.050	1										
Profitability	[7]	0.051	0.134	0.078	0.158	0.279	0.066	1									
Tobin's Q	[8]	0.035	-0.056	-0.014	-0.046	-0.301	0.098	-0.172	1								
Capex	[9]	0.227	0.019	-0.002	0.032	-0.108	0.519	0.010	0.364	1							
Liquidity	[10]	-0.137	-0.106	-0.076	-0.092	-0.223	-0.123	-0.099	0.174	-0.018	1						
Depreciation	[11]	0.216	0.021	0.008	0.027	-0.098	0.446	0.012	0.354	0.563	-0.111	1					
Med.Ind. Leverage	[12]	0.266	0.177	0.043	0.214	0.233	0.283	0.142	-0.096	0.095	-0.181	0.148	1				
GDP Growth	[13]	0.059	0.141	-0.007	0.315	0.073	0.031	0.075	0.041	0.033	-0.028	-0.034	-0.019	1			
LogGDP	[14]	-0.047	-0.079	0.172	-0.102	0.024	-0.081	-0.056	0.066	-0.040	0.024	-0.010	-0.031	-0.109	1		
StkMktCap	[15]	0.020	-0.140	-0.080	-0.199	-0.054	-0.053	-0.029	0.042	-0.005	0.041	-0.004	-0.077	-0.015	-0.197	1	
Institutional Quality	[16]	-0.133	-0.345	-0.108	-0.542	-0.269	-0.108	-0.163	0.030	-0.037	0.108	0.010	-0.199	-0.577	0.153	0.246	1

Table 4: Credit reforms and bank loans

This table provides regression results on the effect of getting credit reforms on bank loans. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include bank and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01,* ** *p<.05,* * *p<.1.*

DV= Corporate Loan Ratio	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.016	0.02						
	[0.021]	[0.018]						
LR Reform			0.022	0.006			0.02	0.003
			[0.018]	[0.010]			[0.018]	[0.010]
CI Reform					0.054**	0.050**	0.052**	0.050**
					[0.025]	[0.023]	[0.025]	[0.023]
Bank Size	0.009***	0.008***	0.009***	0.008***	0.009***	0.008***	0.009***	0.008***
	[0.001]	[0.003]	[0.001]	[0.003]	[0.001]	[0.003]	[0.001]	[0.003]
Bank Equity	0.015	0.004	0.014	0.004	0.014	0.003	0.013	0.003
	[0.040]	[0.034]	[0.040]	[0.034]	[0.040]	[0.034]	[0.040]	[0.034]
Bank ROA	-0.096	-0.015	-0.092	-0.015	-0.095	-0.014	-0.09	-0.013
	[0.220]	[0.071]	[0.220]	[0.072]	[0.220]	[0.071]	[0.220]	[0.071]
Bank Liquidity	0.070***	0.003	0.070***	0.003	0.070***	0.004	0.070***	0.003
	[0.010]	[0.008]	[0.010]	[0.008]	[0.010]	[0.008]	[0.010]	[0.008]
GDP Growth	-0.612***	-0.413***	-0.656***	-0.460***	-0.557***	-0.373***	-0.568***	-0.376***
	[0.154]	[0.125]	[0.158]	[0.130]	[0.156]	[0.126]	[0.159]	[0.128]
LogGDP	-0.097**	0.029	-0.092**	0.031	-0.096**	0.03	-0.092**	0.03
	[0.039]	[0.029]	[0.038]	[0.030]	[0.039]	[0.029]	[0.038]	[0.030]
StkMktCap	-0.030***	-0.009	-0.030***	-0.009	-0.027***	-0.006	-0.027***	-0.006
	[0.009]	[0.007]	[0.009]	[0.007]	[0.009]	[0.007]	[0.009]	[0.007]
Institutional Quality	0.045	-0.027	0.028	-0.033	0.044	-0.029	0.03	-0.032
	[0.048]	[0.036]	[0.048]	[0.038]	[0.048]	[0.036]	[0.047]	[0.037]
Constant	2.842***	-0.714	2.702***	-0.788	2.801***	-0.754	2.711***	-0.767
	[1.046]	[0.865]	[1.022]	[0.877]	[1.042]	[0.862]	[1.016]	[0.868]
$Adjusted - R^2$	0.47	0.882	0.47	0.882	0.47	0.883	0.471	0.883
N	77337	77337	77337	77337	77337	77337	77337	77337

Table 5: Credit reforms and bank loans, developed versus emerging countries

This table provides regression results on the effect of getting credit reforms on bank loans for developed and emerging countries. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include bank and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** p<.01, ** p<.05, * p<.1.

DV= Corporate Loan Ratio	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.059*	0.041						
	[0.035]	[0.034]						
Credit Reform x Emerging	-0.081*	-0.039						
	[0.044]	[0.040]						
LR Reform			-0.032	-0.061*			-0.034	-0.062*
			[0.045]	[0.036]			[0.045]	[0.036]
LR Reform x Emerging			0.065	0.078**			0.071	0.080**
			[0.049]	[0.037]			[0.049]	[0.037]
CI Reform					0.189***	0.145***	0.191***	0.146***
					[0.047]	[0.052]	[0.046]	[0.052]
CI Reform x Emerging					-0.214***	-0.147***	-0.224***	-0.152***
					[0.054]	[0.056]	[0.054]	[0.056]
Bank Size	0.009***	0.008***	0.009***	0.008***	0.009***	0.008***	0.009***	0.008***
	[0.001]	[0.003]	[0.001]	[0.003]	[0.001]	[0.003]	[0.001]	[0.003]
Bank Equity	0.014	0.003	0.015	0.004	0.014	0.003	0.013	0.003
	[0.040]	[0.034]	[0.040]	[0.034]	[0.040]	[0.034]	[0.040]	[0.034]
Bank ROA	-0.096	-0.016	-0.09	-0.012	-0.095	-0.016	-0.087	-0.01
	[0.220]	[0.071]	[0.220]	[0.071]	[0.220]	[0.071]	[0.220]	[0.071]
Bank Liquidity	0.070***	0.003	0.070***	0.003	0.070***	0.003	0.069***	0.003
	[0.010]	[0.008]	[0.010]	[0.008]	[0.010]	[0.008]	[0.010]	[0.008]
GDP Growth	-0.649***	-0.429***	-0.684***	-0.492***	-0.640***	-0.420***	-0.692***	-0.463***
	[0.157]	[0.128]	[0.159]	[0.130]	[0.157]	[0.128]	[0.162]	[0.130]
LogGDP	-0.096**	0.029	-0.088**	0.036	-0.085**	0.037	-0.075**	0.043
	[0.039]	[0.029]	[0.038]	[0.030]	[0.039]	[0.028]	[0.037]	[0.029]
StkMktCap	-0.033***	-0.01	-0.026***	-0.005	-0.028***	-0.007	-0.024***	-0.003
	[0.009]	[0.007]	[0.009]	[0.007]	[0.009]	[0.007]	[0.009]	[0.007]
Institutional Quality	0.046	-0.026	0.018	-0.044	0.033	-0.034	0.003	-0.05
	[0.047]	[0.035]	[0.048]	[0.038]	[0.046]	[0.034]	[0.045]	[0.036]
Constant	2.821***	-0.722	2.594**	-0.912	2.507**	-0.951	2.255**	-1.111
	[1.042]	[0.863]	[1.013]	[0.880]	[1.030]	[0.840]	[0.988]	[0.848]
$Adjusted - R^2$	0.47	0.882	0.47	0.882	0.471	0.883	0.472	0.883
N	77337	77337	77337	77337	77337	77337	77337	77337

Table 6: Credit reforms and bank loans, the role of existing strength of creditor rights

This table provides regression results on the effect of getting credit reforms on bank loans for developed and emerging countries. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include bank and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01,* ** *p<.05,* * *p<.1.*

DV= Corporate Loan Ratio	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.023	0.092*						
	[0.054]	[0.050]						
Credit Reform x CR	-0.001	-0.027*						
	[0.018]	[0.015]						
LR Reform			0.092	0.104***			0.089	0.098**
			[0.059]	[0.040]			[0.060]	[0.040]
LR Reform x CR			-0.03	-0.044**			-0.03	-0.042**
			[0.025]	[0.019]			[0.025]	[0.019]
CI Reform					0.037	0.07	0.029	0.064
					[0.049]	[0.045]	[0.050]	[0.046]
CI Reform x CR					0.011	-0.009	0.014	-0.007
					[0.017]	[0.014]	[0.017]	[0.014]
Bank Size	0.009***	0.007**	0.009***	0.007**	0.009***	0.007**	0.009***	0.007**
	[0.001]	[0.003]	[0.001]	[0.003]	[0.001]	[0.003]	[0.001]	[0.003]
Bank Equity	0.009	0.007	0.009	0.006	0.008	0.006	0.008	0.006
	[0.040]	[0.035]	[0.040]	[0.035]	[0.040]	[0.035]	[0.040]	[0.035]
Bank ROA	-0.074	-0.026	-0.068	-0.024	-0.073	-0.026	-0.066	-0.022
	[0.222]	[0.071]	[0.222]	[0.072]	[0.222]	[0.071]	[0.222]	[0.072]
Bank Liquidity	0.068***	0.003	0.068***	0.002	0.068***	0.003	0.068***	0.003
	[0.010]	[0.008]	[0.010]	[0.008]	[0.010]	[0.008]	[0.010]	[0.008]
GDP Growth	-0.650***	-0.381***	-0.731***	-0.474***	-0.618***	-0.366***	-0.667***	-0.413***
	[0.170]	[0.140]	[0.176]	[0.148]	[0.171]	[0.141]	[0.175]	[0.144]
LogGDP	-0.098**	0.029	-0.089**	0.036	-0.096**	0.03	-0.087**	0.037
	[0.040]	[0.030]	[0.039]	[0.031]	[0.040]	[0.030]	[0.039]	[0.031]
StkMktCap	-0.034***	-0.012**	-0.030***	-0.010*	-0.031***	-0.012**	-0.027***	-0.008
	[0.008]	[0.006]	[0.008]	[0.006]	[0.008]	[0.006]	[0.008]	[0.005]
Institutional Quality	0.049	-0.016	0.022	-0.033	0.044	-0.018	0.019	-0.034
	[0.049]	[0.037]	[0.050]	[0.040]	[0.049]	[0.037]	[0.049]	[0.039]
Constant	2.877***	-0.706	2.613**	-0.919	2.798***	-0.748	2.581**	-0.936
	[1.072]	[0.892]	[1.042]	[0.913]	[1.068]	[0.887]	[1.035]	[0.900]
$Adjusted - R^2$	0.472	0.884	0.472	0.884	0.472	0.884	0.473	0.884
$\boldsymbol{N}$	76684	76684	76684	76684	76684	76684	76684	76684

Table 7: Credit reforms and firm leverage

This table provides regression results on the effect of getting credit reforms on firm leverage. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include firm and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** $p<.01$, ** $p<.05$, * $p<.1$.

DV: Firm leverage	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.016***	0.024***						
	[0.005]	[0.005]						
LR Reform			0.010*	0.019***			0.010*	0.019***
			[0.006]	[0.006]			[0.006]	[0.006]
CI Reform					0.00	0.003	0.00	0.003
					[0.004]	[0.004]	[0.004]	[0.004]
Size	0.024***	0.129***	0.024***	0.129***	0.024***	0.129***	0.024***	0.129***
	[0.001]	[0.004]	[0.001]	[0.004]	[0.001]	[0.004]	[0.001]	[0.004]
Asset Tangibility	0.115***	0.326***	0.115***	0.326***	0.115***	0.327***	0.115***	0.326***
	[0.009]	[0.012]	[0.009]	[0.012]	[0.009]	[0.012]	[0.009]	[0.012]
Profitability	-0.064***	-0.007	-0.064***	-0.008	-0.064***	-0.008	-0.064***	-0.008
	[0.007]	[0.008]	[0.007]	[0.008]	[0.007]	[0.008]	[0.007]	[0.008]
Tobin's Q	-0.005***	0.004***	-0.005***	0.004***	-0.005***	0.004***	-0.005***	0.004***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Capex	0.587***	0.328***	0.587***	0.327***	0.587***	0.327***	0.587***	0.327***
	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]
Liquidity	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***	-0.004***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Depreciation	0.777***	0.273***	0.776***	0.270***	0.776***	0.270***	0.776***	0.270***
	[0.054]	[0.059]	[0.054]	[0.059]	[0.054]	[0.059]	[0.054]	[0.059]
Median Industry Leverage	0.712***	0.585***	0.713***	0.589***	0.712***	0.587***	0.713***	0.589***
	[0.018]	[0.022]	[0.018]	[0.022]	[0.018]	[0.022]	[0.018]	[0.022]
GDP Growth	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
LogGDP	0.102***	0.112***	0.103***	0.113***	0.106***	0.119***	0.103***	0.113***
	[0.008]	[0.009]	[0.008]	[0.009]	[0.008]	[0.009]	[0.008]	[0.009]
StkMktCap	0.016***	0.013***	0.016***	0.013***	0.016***	0.014***	0.016***	0.013***
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Institutional Quality	0.008	-0.017	0.002	-0.028	0.003	-0.028	0.002	-0.03
	[0.018]	[0.019]	[0.018]	[0.020]	[0.019]	[0.020]	[0.019]	[0.020]
Constant	-2.789***	-4.016***	-2.816***	-4.029***	-2.897***	-4.185***	-2.817***	-4.033***
	[0.212]	[0.245]	[0.214]	[0.246]	[0.207]	[0.240]	[0.213]	[0.246]
$Adjusted - R^2$	0.163	0.348	0.162	0.348	0.162	0.348	0.162	0.348
N	287598	287598	287598	287598	287598	287598	287598	287598

Table 8: Credit reforms and firm leverage, developed versus emerging countries

This table provides regression results on the effect of getting credit reforms on firm leverage. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include firm and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01,* ** *p<.05,* * *p<.1.*

DV: Firm leverage	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.013**	0.016**						
	[0.006]	[0.007]						
Credit Reform x Emerging	0.005	0.018*						
	[0.009]	[0.010]						
LR Reform			0.017**	0.026***			0.017**	0.027***
			[0.008]	[0.009]			[0.008]	[0.009]
LR Reform x Emerging			-0.014	-0.013			-0.014	-0.016
			[0.011]	[0.012]			[0.012]	[0.012]
CI Reform					0.001	-0.002	0.002	-0.001
					[0.005]	[0.006]	[0.005]	[0.006]
CI Reform x Emerging					-0.002	0.011	-0.001	0.012
					[0.009]	[0.009]	[0.009]	[0.009]
Size	0.024***	0.129***	0.024***	0.129***	0.024***	0.128***	0.024***	0.129***
	[0.001]	[0.004]	[0.001]	[0.004]	[0.001]	[0.004]	[0.001]	[0.004]
Asset Tangibility	0.115***	0.326***	0.115***	0.327***	0.115***	0.326***	0.115***	0.326***
	[0.009]	[0.012]	[0.009]	[0.012]	[0.009]	[0.012]	[0.009]	[0.012]
Profitability	-0.064***	-0.008	-0.063***	-0.007	-0.064***	-0.008	-0.064***	-0.007
	[0.007]	[0.008]	[0.007]	[0.008]	[0.007]	[0.008]	[0.007]	[0.008]
Tobin's Q	-0.005***	0.004***	-0.005***	0.004***	-0.005***	0.004***	-0.005***	0.004***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Capex	0.587***	0.328***	0.587***	0.327***	0.587***	0.327***	0.587***	0.327***
	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]
Liquidity	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***	-0.004***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Depreciation	0.777***	0.273***	0.776***	0.270***	0.777***	0.270***	0.776***	0.270***
	[0.054]	[0.059]	[0.054]	[0.059]	[0.054]	[0.059]	[0.054]	[0.059]
Median Industry Leverage	0.711***	0.583***	0.713***	0.589***	0.712***	0.586***	0.713***	0.589***
	[0.018]	[0.022]	[0.018]	[0.022]	[0.018]	[0.022]	[0.018]	[0.022]
GDP Growth	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
LogGDP	0.101***	0.107***	0.107***	0.116***	0.107***	0.113***	0.107***	0.112***
	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.010]	[0.010]	[0.011]
StkMktCap	0.016***	0.013***	0.015***	0.013***	0.016***	0.014***	0.015***	0.013***

	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Institutional Quality		-0.017		-0.025		-0.023		-0.022
		[0.019]		[0.020]		[0.020]		[0.021]
Constant	-2.770***	-3.869***	-2.904***	-4.108***	-2.925***	-4.040***	-2.914***	-3.991***
	[0.234]	[0.265]	[0.235]	[0.264]	[0.247]	[0.284]	[0.260]	[0.297]
$Adjusted - R^2$	0.163	0.348	0.162	0.348	0.162	0.348	0.162	0.348
$\boldsymbol{N}$	287598	287598	287598	287598	287598	287598	287598	287598

Table 9: Credit reforms and firm leverage, the role of existing strength of creditor rights

This table provides regression results on the effect of getting credit reforms on firm leverage. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include firm and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01, ** p<.05, * p<.1.*

DV: Firm leverage	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.020*	0.033***						
	[0.011]	[0.012]						
Credit Reform x CR	-0.002	-0.004						
	[0.005]	[0.005]						
LR Reform			0.001	0.002			-0.003	-0.005
			[0.012]	[0.013]			[0.012]	[0.013]
LR Reform x CR			0.004	0.008			0.005	0.01
			[0.006]	[0.006]			[0.006]	[0.006]
CI Reform					0.025*	0.051***	0.023	0.047***
					[0.014]	[0.016]	[0.015]	[0.016]
CI Reform x CR					-0.011*	-0.021***	-0.01	-0.019***
					[0.006]	[0.007]	[0.007]	[0.007]
Size	0.024***	0.129***	0.024***	0.129***	0.024***	0.128***	0.024***	0.129***
	[0.001]	[0.004]	[0.001]	[0.004]	[0.001]	[0.004]	[0.001]	[0.004]
Asset Tangibility	0.116***	0.326***	0.116***	0.327***	0.116***	0.327***	0.116***	0.327***
	[0.009]	[0.012]	[0.009]	[0.012]	[0.009]	[0.012]	[0.009]	[0.012]
Profitability	-0.064***	-0.007	-0.063***	-0.007	-0.064***	-0.007	-0.064***	-0.007
	[0.007]	[0.008]	[0.007]	[0.008]	[0.007]	[0.008]	[0.007]	[0.008]
Tobin's Q	-0.005***	0.004***	-0.005***	0.004***	-0.005***	0.004***	-0.005***	0.004***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Capex	0.587***	0.327***	0.587***	0.327***	0.587***	0.327***	0.587***	0.327***
	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]	[0.025]
Liquidity	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***	-0.004***	-0.007***	-0.004***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Depreciation	0.777***	0.275***	0.776***	0.271***	0.776***	0.271***	0.776***	0.272***
	[0.054]	[0.059]	[0.054]	[0.059]	[0.054]	[0.059]	[0.054]	[0.059]
Median Industry Leverage	0.709***	0.584***	0.711***	0.589***	0.709***	0.585***	0.710***	0.588***
	[0.018]	[0.023]	[0.018]	[0.023]	[0.018]	[0.023]	[0.018]	[0.023]
GDP Growth	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
LogGDP	0.102***	0.112***	0.103***	0.112***	0.107***	0.120***	0.104***	0.114***
	[0.008]	[0.009]	[0.008]	[0.009]	[0.008]	[0.009]	[0.008]	[0.009]
StkMktCap	0.016***	0.014***	0.015***	0.012***	0.016***	0.014***	0.015***	0.012***

	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Institutional Quality		-0.022		-0.026		-0.033		-0.029
		[0.019]		[0.020]		[0.020]		[0.020]
Constant	-2.789***	-4.013***	-2.801***	-4.004***	-2.911***	-4.225***	-2.831***	-4.066***
	[0.220]	[0.247]	[0.222]	[0.247]	[0.215]	[0.242]	[0.225]	[0.250]
$Adjusted - R^2$	0.162	0.348	0.162	0.348	0.162	0.348	0.162	0.348
$\boldsymbol{N}$	286265	286265	286265	286265	286265	286265	286265	286265

Table 10: Credit reforms and firm leverage by firm size

This table provides regression results on the effect of getting credit reforms on firm leverage. LR stands for legal rights and CI for credit information. The sample period is 2004-2019. All regressions include firm and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01,* ** *p<.05,* * *p<.1.*

	SMALL SIZE FIRMS			MEDIUM SIZE FIRMS			LARGE SIZE FIRMS		
LR Reform	0.042***	0.038**	0.019	0.019***	0.048***	-0.026	0.017	0.038**	-0.014
	[0.013]	[0.015]	[0.020]	[0.006]	[0.018]	[0.020]	[0.011]	[0.016]	[0.031]
CI Reform	-0.006	-0.005	-0.014	0.003	0.058***	-0.008	-0.002	-0.014	0.126***
	[0.010]	[0.014]	[0.027]	[0.004]	[0.016]	[0.028]	[0.008]	[0.010]	[0.032]
LR x Emerging		0.024			-0.062***			-0.035	
		[0.036]			[0.022]			[0.022]	
CI Reform x Emerging		-0.008			-0.055***			0.033*	
		[0.019]			[0.019]			[0.018]	
LR x CR			0.011			0.016*			0.013
			[0.009]			[0.009]			[0.015]
CI Reform x CR			0.005			0.011			-0.060***
			[0.011]			[0.012]			[0.014]
Size	0.081***	0.081***	0.081***	0.129***	0.180***	0.180***	0.199***	0.199***	0.199***
	[0.005]	[0.005]	[0.005]	[0.004]	[0.007]	[0.007]	[0.009]	[0.009]	[0.009]
Asset Tangibility	0.202***	0.202***	0.200***	0.326***	0.407***	0.409***	0.443***	0.443***	0.443***
	[0.019]	[0.019]	[0.019]	[0.012]	[0.023]	[0.023]	[0.027]	[0.027]	[0.026]
Profitability	-0.001	-0.001	0	-0.008	0.016	0.016	-0.060**	-0.060**	-0.062**
	[0.010]	[0.010]	[0.010]	[0.008]	[0.023]	[0.023]	[0.030]	[0.030]	[0.030]
Tobin's Q	0.003**	0.003**	0.003**	0.004***	0.010***	0.010***	0	0	0
	[0.001]	[0.001]	[0.001]	[0.001]	[0.003]	[0.003]	[0.004]	[0.004]	[0.004]
Capex	0.200***	0.200***	0.199***	0.327***	0.488***	0.489***	0.586***	0.584***	0.584***
	[0.033]	[0.033]	[0.033]	[0.025]	[0.048]	[0.048]	[0.063]	[0.063]	[0.063]
Liquidity	-0.002***	-0.002***	-0.002***	-0.004***	-0.007***	-0.007***	-0.015***	-0.015***	-0.015***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]	[0.001]	[0.003]	[0.003]	[0.003]
Depreciation	0.272***	0.271***	0.277***	0.270***	0.713***	0.708***	0.161	0.161	0.172
	[0.079]	[0.079]	[0.079]	[0.059]	[0.130]	[0.130]	[0.149]	[0.149]	[0.149]
Median Industry Leverage	0.537***	0.535***	0.531***	0.589***	0.558***	0.561***	0.536***	0.533***	0.543***
	[0.046]	[0.046]	[0.046]	[0.022]	[0.034]	[0.034]	[0.039]	[0.039]	[0.040]

GDP Growth	-0.002*	-0.002*	-0.002*	-0.006***	-0.005***	-0.005***	-0.007***	-0.007***	-0.008***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]	[0.002]	[0.002]	[0.002]
LogGDP	-0.044**	-0.041*	-0.054**	0.113***	0.041***	0.016	0.222***	0.213***	0.218***
	[0.022]	[0.023]	[0.023]	[0.009]	[0.015]	[0.014]	[0.014]	[0.021]	[0.014]
StkMktCap	0.025**	0.025**	0.024**	0.013***	0.006	0.006*	0.022***	0.022***	0.020***
	[0.010]	[0.010]	[0.010]	[0.003]	[0.004]	[0.004]	[0.008]	[0.008]	[0.007]
Institutional Quality	0.019	0.014	0.021	-0.03	-0.019	-0.014	-0.055	-0.038	-0.064*
	[0.038]	[0.039]	[0.039]	[0.020]	[0.032]	[0.032]	[0.038]	[0.039]	[0.038]
Constant	0.929	0.862	1.196*	-4.033***	-2.388***	-1.675***	-8.318***	-8.079***	-8.210***
	[0.609]	[0.626]	[0.643]	[0.246]	[0.415]	[0.386]	[0.405]	[0.588]	[0.405]
$Adjusted - R^2$	0.397	0.397	0.397	0.348	0.367	0.367	0.368	0.368	0.368
$\boldsymbol{N}$	85436	85436	84800	287598	110839	110391	91323	91323	91074

Appendices

Table 5A: Credit reforms and bank loans, developed versus emerging countries with non-US sample

This table provides regression results on the effect of getting credit reforms on bank loans for developed and emerging countries. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include bank and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01, ** p<.05, * p<.1.*

DV= Corporate Loan Ratio	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.025	0.017						
	[0.035]	[0.034]						
Credit Reform x Emerging	-0.064	-0.03						
	[0.044]	[0.042]						
LR Reform			-0.078*	-0.103***			-0.071	-0.097**
			[0.047]	[0.039]			[0.046]	[0.039]
LR Reform x Emerging			0.096*	0.111***			0.097*	0.110***
			[0.050]	[0.041]			[0.050]	[0.041]
CI Reform					0.161***	0.134**	0.160***	0.130**
					[0.046]	[0.054]	[0.046]	[0.054]
CI Reform x Emerging					-0.199***	-0.151**	-0.205***	-0.154***
					[0.053]	[0.059]	[0.053]	[0.059]
Bank Size	0.013***	0.033***	0.013***	0.033***	0.013***	0.034***	0.013***	0.034***
	[0.005]	[0.011]	[0.005]	[0.011]	[0.005]	[0.011]	[0.005]	[0.011]
Bank Equity	0.042	0.078	0.042	0.08	0.041	0.08	0.041	0.081
	[0.058]	[0.050]	[0.058]	[0.050]	[0.058]	[0.050]	[0.058]	[0.050]
Bank ROA	-1.074***	0.012	-1.062***	0.024	-1.074***	0.011	-1.060***	0.025
	[0.267]	[0.130]	[0.267]	[0.131]	[0.267]	[0.129]	[0.266]	[0.130]
Bank Liquidity	0.169***	-0.022	0.170***	-0.022	0.168***	-0.024	0.168***	-0.026
	[0.033]	[0.030]	[0.033]	[0.030]	[0.033]	[0.029]	[0.033]	[0.029]
GDP Growth	-0.436***	-0.318**	-0.395**	-0.310**	-0.462***	-0.337***	-0.485***	-0.355***
	[0.162]	[0.131]	[0.159]	[0.126]	[0.161]	[0.130]	[0.164]	[0.131]
LogGDP	-0.091**	0.029	-0.080*	0.041	-0.081*	0.035	-0.069	0.047
	[0.045]	[0.038]	[0.045]	[0.039]	[0.045]	[0.037]	[0.044]	[0.037]
StkMktCap	-0.017**	-0.002	-0.007	0.007	-0.016*	-0.002	-0.009	0.005
	[0.009]	[0.007]	[0.008]	[0.007]	[0.009]	[0.007]	[0.008]	[0.007]
Institutional Quality	0.017	-0.068	-0.012	-0.099*	0.014	-0.069	-0.021	-0.100*
	[0.062]	[0.050]	[0.067]	[0.057]	[0.062]	[0.051]	[0.063]	[0.053]
Constant	2.507**	-0.799	2.218*	-1.139	2.260*	-0.988	1.929	-1.308
	[1.204]	[1.007]	[1.199]	[1.035]	[1.195]	[0.990]	[1.179]	[1.000]
$Adjusted - R^2$	0.485	0.884	0.485	0.885	0.486	0.885	0.486	0.886
$\boldsymbol{N}$	10968	10968	10968	10968	10968	10968	10968	10968

Table 6A: Credit reforms and bank loans, the role of existing strength of creditor rights with non-US sample

This table provides regression results on the effect of getting credit reforms on bank loans for developed and emerging countries. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include bank and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** *p<.01,* ** *p<.05,* * *p<.1.*

DV= Corporate Loan Ratio	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	-0.004	0.076						
	[0.052]	[0.053]						
Credit Reform x CR	-0.002	-0.030*						
	[0.018]	[0.017]						
LR Reform			0.093	0.118***			0.091	0.113**
			[0.063]	[0.043]			[0.064]	[0.044]
LR Reform x CR			-0.039	-0.056***			-0.038	-0.053***
			[0.026]	[0.020]			[0.026]	[0.020]
CI Reform					0.018	0.054	0.01	0.045
					[0.047]	[0.047]	[0.048]	[0.047]
CI Reform x CR					0.01	-0.009	0.012	-0.007
					[0.017]	[0.015]	[0.017]	[0.015]
Bank Size	0.012***	0.026**	0.012***	0.027**	0.012***	0.027**	0.012***	0.026**
	[0.005]	[0.011]	[0.005]	[0.010]	[0.005]	[0.011]	[0.005]	[0.010]
Bank Equity	0.031	0.075	0.032	0.075	0.031	0.074	0.031	0.074
	[0.058]	[0.052]	[0.058]	[0.052]	[0.058]	[0.052]	[0.058]	[0.052]
Bank ROA	-1.061***	-0.025	-1.051***	-0.022	-1.060***	-0.031	-1.050***	-0.021
	[0.274]	[0.132]	[0.274]	[0.133]	[0.274]	[0.132]	[0.274]	[0.133]
Bank Liquidity	0.166***	-0.022	0.166***	-0.021	0.166***	-0.022	0.166***	-0.021
	[0.034]	[0.031]	[0.034]	[0.031]	[0.034]	[0.031]	[0.034]	[0.031]
GDP Growth	-0.384**	-0.237*	-0.406**	-0.273*	-0.373**	-0.233*	-0.401**	-0.260*
	[0.174]	[0.141]	[0.174]	[0.143]	[0.172]	[0.141]	[0.174]	[0.143]
LogGDP	-0.096**	0.031	-0.087*	0.04	-0.099**	0.025	-0.089*	0.039
	[0.047]	[0.040]	[0.046]	[0.041]	[0.046]	[0.040]	[0.046]	[0.041]
StkMktCap	-0.020***	-0.004	-0.014**	0	-0.021***	-0.008	-0.014**	0.001
	[0.007]	[0.005]	[0.007]	[0.005]	[0.008]	[0.006]	[0.007]	[0.005]
Institutional Quality	0.021	-0.059	-0.001	-0.084	0.031	-0.045	0.004	-0.077
	[0.067]	[0.056]	[0.072]	[0.061]	[0.068]	[0.058]	[0.071]	[0.060]
Constant	2.648**	-0.787	2.424*	-1.024	2.753**	-0.628	2.478**	-1.015
	[1.242]	[1.069]	[1.238]	[1.086]	[1.231]	[1.059]	[1.234]	[1.080]
$Adjusted - R^2$	0.49	0.888	0.49	0.888	0.49	0.888	0.49	0.888
N	10315	10315	10315	10315	10315	10315	10315	10315

Table 8A: Credit reforms and firm leverage, developed versus emerging countries with non-US sample

This table provides regression results on the effect of getting credit reforms on firm leverage. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include firm and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** p<.01, ** p<.05, * p<.1.

DV: Firm leverage	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.003	0.002						
	[0.007]	[0.007]						
Credit Reform x Emerging	0.003	0.014						
	[0.009]	[0.010]						
LR Reform			0.007	0.011			0.005	0.009
			[0.009]	[0.009]			[0.009]	[0.009]
LR Reform x Emerging			-0.014	-0.01			-0.009	-0.007
			[0.012]	[0.012]			[0.012]	[0.013]
CI Reform					-0.010*	-0.013**	-0.010*	-0.012**
					[0.006]	[0.006]	[0.006]	[0.006]
CI Reform x Emerging					-0.003	0.006	-0.002	0.006
					[0.009]	[0.009]	[0.009]	[0.009]
$Adjusted - R^2$	0.156	0.342	0.156	0.342	0.156	0.342	0.156	0.342
N	239001	239001	239001	239001	239001	239001	239001	239001

Table 9A: Credit reforms and firm leverage, the role of existing strength of creditor rights with non-US sample

This table provides regression results on the effect of getting credit reforms on firm leverage. The sample period is 2004-2019. Models 1, 3, 5, and 6 include country and year fixed effects while models 2, 4, 6, and 8 include firm and year fixed effects. Standard errors reported in brackets are clustered at the firm-level. The significance levels are indicated as *** p<.01, ** p<.05, * p<.1.

DV: Firm leverage	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Credit Reform	0.01	0.024**						
	[0.011]	[0.012]						
Credit Reform x Emerging	-0.002	-0.007						
	[0.005]	[0.005]						
LR Reform			-0.005	0.003			-0.008	-0.005
			[0.012]	[0.013]			[0.013]	[0.014]
LR Reform x Emerging			0.002	0.001			0.003	0.003
			[0.006]	[0.006]			[0.006]	[0.006]
CI Reform					0.012	0.036**	0.014	0.036**
					[0.014]	[0.016]	[0.015]	[0.016]
CI Reform x Emerging					-0.01	-0.021***	-0.011*	-0.021***
					[0.006]	[0.007]	[0.006]	[0.007]
$Adjusted - R^2$	0.156	0.342	0.156	0.342	0.156	0.342	0.156	0.342
N	237668	237668	237668	237668	237668	237668	237668	237668