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Trust in banks and borrower discouragement

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Abstract

This paper contributes to unravel the determinants of borrower discouragement, i.e., the fact that economic agents who need credit feel less inclined to borrow from a bank. Specifically, we use worldwide firm-level data to examine the role played by informal institutions, particularly trust in banks, in potentially reducing borrower discouragement. Lack of trust may explain such discouragement, and hence to enhance funding stability and the use of formal financial instruments, increasing trust could be determinant. Our empirical results show that firms are less likely to get discouraged from borrowing from financial institutions in countries where trust in banks is relatively high. Moreover, we also find a lower prevalence of borrower discouragement in countries where both trust in banks and interpersonal trust are high. These results stress the role played by informal institutions in influencing firms' access to credit via self-rationing. Overall, our results highlight the importance of building confidence and trust in banks to encourage formal credit demand and the use of formal finance, which is crucial for achieving financial inclusion.

Keywords: discouraged borrowers, trust in banks, interpersonal trust, credit constraints, financial inclusion

JEL Codes : G21, G41, O17, Z1, L26

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1. Introduction

The literature highlights the need for firms, especially small and medium enterprises (SMEs), to have access to stable funding to take advantage of growth, expansion, and innovation opportunities (Beck et al., 2005; Aghion et al., 2007; Ayyagari et al., 2011; Banerjee and Duflo, 2014), and hence, attain a dynamic and inclusive economy. Some SMEs, however, are inclined to rely on internal capital, profits, and short-term financing sources (Ayyagari et al., 2017; Behr and Güttler, 2007), including trade credit and informal ones, to finance their operations. This is because they often lack a reliable financial history to back up their creditworthiness that is often crucial when seeking funding from financial institutions (Beck et al., 2008; Scholtens, 1999), especially younger and smaller businesses. In addition, banks may ration credit due to the asymmetric information between borrowers and lenders (Stiglitz and Weiss, 1981). Moreover, some firms may not rely on formal finance, despite their capital needs, because they are discouraged from applying for loans. While most studies highlight fear of rejection as the reason behind borrower discouragement (Cowling et al., 2016; Kon and Storey, 2003; Jappelli, 1990); several findings from firm surveys worldwide cite other reasons why firms do not apply for loans, including high cost of credit, unfavorable economic conditions, complex application procedures, debt aversion, among others.

Discerning the reasons behind borrower discouragement is important because it is a self-rationing mechanism that exacerbates firms' credit constraints. Several studies show a higher incidence of discouraged borrowers than rejected borrowers (Freel et al., 2012; Wernli and Dietrich, 2022; Ferrando and Mulier, 2022). Borrower discouragement is also found to be more prevalent in developing countries (Chakravarty and Xiang, 2013). Moreover, although some evidence suggests that discouraged borrowers are riskier and are less creditworthy (Han et al., 2009) and thus form a rational strategy to avoid pursuing an application with low success probability, more recent papers highlight that at least 40% of discouraged borrowers in the UK, Switzerland, and Belgium would have likely obtained a loan if they had applied for one (Cowling et al., 2016; Wernli and Dietrich, 2022; Ferrando and Mulier, 2022). In addition, Ferrando and Mulier (2022) find strong adverse real effects of discouragement on firm outcomes. More specifically, they find that reducing firms' application costs for bank loans is significant in increasing firm sales by 5 to 10 percentage points, investment rate by about 6 to 10 percentage points, and employment growth by 2 to 4 percentage points. Previous research findings show that entrepreneurial and owner characteristics such as gender, education, firm banking relationship, innovation activity, and age are linked to borrower discouragement (Han et al., 2009; Cowling et al., 2016; Freel et al., 2012; Cole and Sokolyk, 2016; Nguyen et al., 2021; Brown et al., 2022). This paper presents novel evidence showing that trust in banks affects borrower discouragement as well.

Trust in financial institutions¹ is vital in the intermediation process. It affects funding sustainability, capital allocation efficiency, and productivity. The collapse of the Silicon Valley Bank (SVB) and difficulties faced by the Crédit Suisse in 2023 have caused immediate panic worldwide, raising fears of another systemic banking crisis. The 2007-2008 Global Financial Crisis (GFC), triggered by financial institutions' excessive risk-taking behavior, impaired confidence in banks (Sapienza and Zingales, 2012; Iyer and Puri, 2012) and has stressed the importance of well-functioning banks for the economy. Trust in banks may be defined as the expectation that banks are dependable and relied on to fulfill their promises (Sirdeshmukh et al., 2002; van der Crujisen et al., 2021a). It is different from interpersonal trust² which refers to trust to other people, in general, to whom one has no direct relationship. Increased distrust in

¹Trust in financial institutions and trust in banks are used interchangeably in the text.

²Other studies refer to interpersonal trust as generalized trust or societal trust.

banks may increase borrower discouragement in several ways. First, distrust in banks impairs bank deposits and discourages formal household saving behavior, which adversely affects the supply of loans. This may consequently raise firms' fear of rejection and expectations of higher cost of credit and stringent credit conditions especially smaller businesses, which are more informationally opaque and have less business assets to pledge as collateral. Second, lower trust in banks may discourage firms from using formal credit. Indeed, distrust in banks may inhibit consumers from becoming clients of the bank (van der Crujisen et al., 2021a). Studies show that trust in financial institutions affect the use of formal financial instruments, such as savings accounts (Beckmann and Mare, 2017; Ampudia and Palligkinis, 2018) due to fear of hidden charges and high transaction costs (Galiani et al., 2022; Bachas et al., 2021). As growing savings in banks is often perceived as a first step toward using other formal financial services, such as credit and insurance, distrust in banks may foster borrower discouragement. Third, lower trust in banks may discourage firms from applying for loans because the development of trust in banks may be linked to the familiarity with and knowledge about financial institutions and their services (Allen et al., 2016; van der Crujisen et al., 2021b). Moreover, higher trust in banks, which may be developed through repeated interactions between economic agents and financial institutions, may reduce the incidence of borrower discouragement. This is in line with firm-level studies that find businesses with established banking relationships less likely to be discouraged from applying for loans (Freel et al., 2012).

The main objective of this paper is to examine the influence of trust in banks on borrower discouragement. We also analyze the role of interpersonal trust in the trust in banks-borrower discouragement link. Interpersonal trust may reinforce the impact of trust in financial institutions in potentially reducing the incidence of borrower discouragement by influencing a firm's expectation of the cost of credit and success of a potential loan application. Several studies stress that interpersonal trust encourages a cooperative attitude and pro-social behavior (Fehr, 2009; Carlo et al., 2010), and increases contracting efficiency that could complement contract enforcement mechanisms, especially in countries with weak regulation (Cline and Williamson, 2020).

Our paper contributes to several strands in the literature. Our study adds to the emerging literature on demand-side credit constraints by investigating the role played by cross-country variations in trust in financial institutions in driving firm-level borrower discouragement. Recent studies find firm size, age, ownership and owner characteristics, risk profiles, innovative activity, financial fragmentation, firm-banking relationship, explain borrower discouragement (Levenson and Willard, 2000; Cavalluzzo et al., 2002; Cole, 2008; Han et al., 2009; Chakravarty and Yilmazer, 2009; Brown et al., 2011; Freel et al., 2012; Cole and Sokolyk, 2016; Cowling et al., 2016; Popov and Ongena, 2016; Rostamkalaei et al., 2020; Calabrese et al., 2021; Nguyen et al., 2021; Brown et al., 2022). Moreover, we also contribute to the literature exploring the impact of culture or informal institutions on economic outcomes and firm behavior (Guiso et al., 2006; Hilary and Hui, 2009; Nguyen and Canh, 2021), and the impact of interpersonal trust on firms' access to finance and financing constraints (Guiso et al., 2008; Leblang, 2022). Guiso et al. (2008) purport that individual beliefs are initially formed by cultural transmission and are slowly changed from one generation to another. Trust beliefs are therefore transmitted between generations, and may be altered by the experience of temporary shocks.

We address potential endogeneity issues by using the instrumental variable probit model and use robust regression techniques to address potential sample selection issues. We mainly use a country's experience with systemic banking crises and religion as instruments for trust in banks and interpersonal trust, respectively, consistent with studies that find banking crises'

experience alters people's trust in financial institutions (Fungáčová et al., 2019; Fungáčová et al., 2021), and evidence linking hierarchical religion, that focuses on a vertical bond vis-à-vis horizontal bond with fellow citizens, to lower interpersonal trust (Putnam, 1993; La Porta et al., 1997). Studying a sample of respondent firms to several World Bank Enterprise Surveys conducted from 2015 to 2019, our findings show that firms in high-trust-in-banks countries are less likely to get discouraged from borrowing from financial institutions than their counterparts. Moreover, we also find complementary effects of trust in banks and interpersonal trust in reducing the incidence of borrower discouragement. Further, we also study whether the interaction of both forms of trust – trust in banks and interpersonal trust, influence the proportion of firms' working capital operations financed by banks. Overall, our findings contribute to the understanding of how culture or informal institutions affect firms' credit constraints.

This paper is organized as follows. Section 2 reviews the related literature and discusses our research focus. We present the data and variables used in our empirical analyses in Section 3. Section 4 tackles the empirical methodology, while Section 5 reports the results. We check the robustness of our findings and investigate further issues in Section 6. We conclude in Section 7.

2. Research Framework and Hypotheses

2.1 Trust in Banks and Borrower Discouragement

Several studies show that trust in banks fell sharply in countries hit by the GFC (Iyer and Puri, 2012; Sapienza and Zingales, 2012; Knell and Stix, 2015). The experience of loss in a banking crisis influences personal perceptions and expectations (Mudd et al., 2010), affecting decision-making and risk preferences (Malmendier and Nagel, 2011). Consequently, this may lead to the erosion of trust (Lewicki and Bunker, 1995; Lewicki and Wiethoff, 2000). In addition, Fungáčová et al. (2021), investigating how experience with banking crises impacts an individual's trust in banks, find both the experience of a banking crisis and its length negatively related to trust in banks, degrading the trust of especially older people. Distrust in banks negatively affects both the availability and stability of funds via deposits (Sapienza and Zingales, 2012; Iyer and Puri, 2012). In addition, the erosion of trust impairs the relationship with banks (Guiso et al., 2013), forcing firms to find other alternatives to fund their operations, such as non-financial suppliers or the peer-to-peer lending market, or to forego their investments. Indeed, the emergence of fintech companies has been partly attributed to the GFC (Blaseg et al., 2021; Cortina and Schmukler, 2018). The collapse of the Silicon Valley Bank (SVB) in 2023 has caused a bank run not only on SVB but also to other banks such as Signature Bank. In addition, the financial difficulties experienced by globally systemically important banks such as Crédit Suisse, and Deutsche Bank at the same time, increased fears of contagion in the banking sector. Such episodes are expected to increase firms' supply-side and demand-side credit constraints, with increased expectations of rejection and tighter credit conditions.

Trust in banks may affect borrower discouragement through several channels. First, trust in banks influences depositors, which affects credit supply. Distrust in banks impairs the growth of deposits and hampers the intermediation process, which consequently increases fears of rejection and expectations of more stringent credit conditions, thus discouraging firms from applying for loans. Moreover, firms that have made deposits in banks may decide to secure their

bank deposits and forego applying for a loan even if they needed one when faced with increased distrust in banks, hence, decreasing their demand for formal credit.

Second, lower trust in banks may discourage firms from using formal financial services, including bank credit. Several studies find trust in financial institutions positively linked with household saving behavior, use of formal savings instruments, and savings diversity (Dupas et al., 2016; Beckmann and Mare, 2017; Ampudia and Palligkinis, 2018; Garz et al., 2021; Galiani et al., 2022; Bachas et al., 2021). Conducting a field experiment in Peru, Galiani et al. (2022) find building trust in financial institutions essential in increasing the use of formal financial services, suggesting that financial inclusion requires trust. Bachas et al. (2021) point out that poor households receiving cash transfers from the Mexican government through debit cards left small amounts in their accounts due to a lack of trust in banks. This is due to the high transaction costs associated with saving in a bank and the fear of hidden charges. Similar behavior was also found in India (Muralidharan et al., 2016). Moreover, evidence indicating that the use of formal saving tools increases bank deposit funding stability (Han and Melecky, 2017) suggests that increased distrust in banks may lead to instability in bank deposit funding, and hence, increased uncertainty of a loan application's approval, especially for smaller, younger businesses. (Han and Melecky, 2017). Thus, aside from influencing credit supply through increased saving behavior, trust in banks may serve as a gateway for firms to use other financial services, including credit and insurance, that fosters investment and better risk management. Although one could argue that trust is less of a concern for the borrower than for the bank in lending decisions, our view is that trust in banks propels borrowers to take the first step, which is to seek formal credit. Ferrando and Mulier (2022), and Wernli and Dietrich (2022) estimate that about 40%³, and 60%, respectively, of discouraged firms in Belgium and Switzerland would have obtained a bank loan if they sought for it.

Third, trust in banks is linked with knowledge about and experience with financial institutions and their services, and hence, a higher trust in banks may imply higher propensity to demand bank credit, and lower borrower discouragement. Several studies show that trust in banks is associated with familiarity about financial institutions and financial literacy (Allen et al., 2016; van der Crujisen et al., 2021b). Furthermore, trust in banks may be further strengthened from repeated interactions with banks or through established banking relationships that reduce borrower discouragement in line with firm-level studies (Freel et al., 2012). Moreover, low trust in banks may be driven by a culture of informality (Perry et al., 2007), where informality becomes a social norm, including the use of informal finance.

Thus, we purport that higher trust in banks increases a firm's propensity to demand bank credit and, hence, decreases the incidence of borrower discouragement.

Hypothesis 1. *Higher trust in banks decreases the incidence of borrower discouragement.*

2.2 Trust in Banks and Borrower Discouragement: Does Interpersonal Trust Matter?

Interpersonal trust, an essential mechanism for social capital, plays a significant role in enhancing economic performance (Putnam, 1993; Zak and Knack, 2001; Knack, 2001). It enhances cooperative attitude, pro-social behavior (Fehr, 2009; Carlo et al., 2010), and reduces

³ This corresponds to the percentage of discouraged borrowers who have a high likelihood of being approved if they applied for a loan. They note, in addition, that 40% of discouraged borrowers have reasonable likelihood of obtaining a bank loan if they applied for one.

the uncertainty about economic agents' willingness to reciprocate. Social capital can also improve economic efficiency and encourage reputation-building for honest dealing in transactions through the disciplinary mechanism of reputation loss (Kandori, 1992, McMillan and Woodruff, 2000). By increasing the costs of expropriation and breach, social capital enhances contract enforcement, especially in weak regulatory environments (Knack and Keefer, 1997; Carlin et al., 2009; Cline and Williamson, 2020). Through this channel, social capital diminishes financial contracting costs and facilitates access to external financing. In addition, social capital may serve as an alternative mechanism to resolve disputes through voluntary cooperation within a social network that diminishes the expected breadth and costs of legal interventions. This makes it easier for firms to obtain external financing.

SMEs, in particular, tend to follow the pecking order theory in their financing decisions and therefore have an initial preference for internal sources of finance, followed by debt (López-Gracia and Sogorb-Mira, 2008). However, an increase or expansion in the scope of social ties raises the potential use external finance – both formal, and informal. Indeed, Nguyen and Canh (2021) find habitual entrepreneurs or those with wider networks more likely to use external finance. In formal financial contracts, lenders often require historical financial information from potential borrowers to screen and monitor them. In addition, they also often ask for collateral to ensure their credibility. Trust plays a crucial role in reducing adverse selection and moral hazard problems, especially in the case of smaller banks and those that delegate operational autonomy to local managers (Degryse et al., 2021). Several studies find high levels of interpersonal trust facilitate firms' credit access even if the bank faces an information gap (Hernández-Cánovas and Martínez-Solano, 2010; Moro and Fink, 2013; Palazuelos et al., 2018; Kautonen et al., 2020). This is because interpersonal trust may reduce the uncertainty left when the bank has processed all information to assess the quality of the borrowing firm (Moro and Fink, 2013). Furthermore, trust creates a positive expectation of the firms' behavior, even if it could exploit the bank's vulnerability (Mayer et al., 1995; Rousseau et al., 1998). At the same time, it allows the bank's lending posture to be more benevolent towards the firm. Moreover, financial transactions are perceived to be less risky, mitigating opportunistic firm behavior, in high trust environments (Hasan et al., 2017). In contrast, informal financial transactions neither require financial information nor a reliable debtor guarantee. Informal finance lenders have to use personal relationships to reduce asymmetric information and use information built upon the network to screen the borrowers and price the loans. In this case, trust could facilitate the flow of private information about the credibility of the borrowers (Agarwal and Hauswald, 2010). Karlan et al. (2009) show that network-based trust leads to higher informal borrowing, suggesting that network connections serve as social collateral, which is crucial in obtaining informal finance. Hence, a firm's expectation about the credit conditions and likelihood of the success of its demand for loan from formal or informal lenders could be influenced by its interpersonal trust environment.

Thus, we argue that while higher trust in banks encourages firms in need of credit to take the first step in applying for a bank loan, a high interpersonal trust environment could further boost this decision. To the extent that interpersonal trust may reduce loan officers' hesitation⁴ and encourage a cooperative attitude toward a borrowing firm after evaluating its project and credit needs, trust in banks is primordial for firms to seek credit from banks. Thus, we posit that interpersonal trust and trust in banks are complements in reducing borrower discouragement.

⁴ This is in line with the definition of trust put forth by Guiso et al. (2008) as the “*subjective probability that individuals attribute to the possibility of being cheated.*” Thus, we expect loan officers in high interpersonal trust economies to attribute a relatively lower likelihood of being cheated.

Hypothesis 2. *Interpersonal trust complements trust in banks in reducing borrower discouragement*

3. Data, Variables, and Descriptive Statistics

3.1. Data and Sample

We obtain cross-section firm-level information on respondent firms from the World Bank Enterprise Surveys (WBES) conducted from 2015 to 2019 in 80 countries. Country-level trust data were gathered from the World Values Survey (WVS) database (Inglehart et al., 2018; Haerper et al., 2020). We note that only 27 countries report latest country-level trust information just before the firm surveys were conducted. We obtain macroeconomic indicators from the World Development Indicators and Global Financial Development Database, and institutional quality data from the Doing Business Database of the World Bank. We identify 15505 respondent firms in 24⁵ countries for which we have complete information on firm-specific, country-based trust, macroeconomic, and institutional quality variables. Out of the 15505 firms⁶, we identify 8395 firms that needed external financing in the past 12 months before the survey was conducted, and thus, have either applied for a loan or were discouraged to do so because of unfavorable interest rates, high collateral requirements, fear of rejection, etc.

3.2 Trust in Banks and Interpersonal Trust

We measure country-level trust in banks, and interpersonal trust based on individual responses to Waves 6 (2012-2016) and 7 (2017-2020) of the World Values Survey (WVS). The WVS provides a reliable comparison of trust across countries (Algan and Cahuc, 2014) and has been used in several trust-related studies (Horváth, 2013; Fungáčová et al., 2019; Fungáčová et al., 2021). The samples are selected using a combination of probability-proportional-to-size and multistage sampling techniques⁷. Thus, we rely on two sets of questions to distinguish between trust in banks, and interpersonal trust.

To measure trust in banks (*TrustinBanks*), we calculate the proportion of respondents who answered having a ‘great deal of confidence’ or ‘quite a lot of confidence’ to the question: “Could you tell me how much confidence you have in banks: Is it a great deal of confidence (1), quite a lot of confidence (2), not very much confidence (3) or none at all (4)?” To quantify interpersonal trust, we rely on respondents’ answers to the question: “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people?”. We calculate the proportion of respondents who answer: “Most people can be trusted” (*InterpersonalTrust*).

3.3 Borrower Discouragement

There is no consensus in the literature about the definition of borrower discouragement. Studies differ in the scope of the underlying causes of borrower discouragement (Brown et al.,

⁵ The countries included in the study are Bolivia, Colombia, Cyprus, Ecuador, Egypt, Greece, Guatemala, Indonesia, Kazakhstan, Kyrgyz Republic, Lebanon, Malaysia, Myanmar, Nicaragua, Peru, Philippines, Romania, Russia, Serbia, Thailand, Turkey, Ukraine, Vietnam, and Zimbabwe.

⁶ Summary statistics of the 15 505 firms are reported in the Appendix (Table A1).

⁷ The WVS Association allows the use of a multi-stage territorial stratified sampling selection in determining a national representative sample.

2022). While most consider fear of rejection as the reason behind firms' self-rationing, some survey studies consider other factors such as collateral requirements and other credit conditions (Cowling et al., 2016; Chakravarty and Xiang, 2013; Wernli and Dietrich, 2022), debt aversion (Nguyen et al., 2021), and informal turndowns (Rostamkalaei et al., 2020).

We measure borrower discouragement based on firms' responses to the WBES. Consistent with Chakravarty and Xiang (2013) who also use data from the WBES, and Wernli and Dietrich (2022), we define the dummy variable, *BorrowerDiscouragement*, which is equal to one for discouraged firms or those who did not apply for a loan or line of credit during the previous 12 months for other reasons besides not needing external financing (i.e., complex loan application procedures, unfavorable interest rates, high rejection likelihood...), and zero, for those who applied for a loan or line of credit.

3.4 Control Variables

For the control variables, we consider a range of firm-level and country-level factors that may affect a firm's credit access based on previous studies (Distinguin et al., 2016; Carreira and Silva, 2010; Beck et al., 2005).

We consider the firm's size by defining three dummy variables: *Small-sized*, *Medium-sized*, and *Large-sized*. We follow the WBES definition. *Small-sized*, *Medium-sized*, and *Large-sized* are dummy variables equal to one if the firm has five to 19, 20 to 99, and at least 100 full-time employees, respectively, and zero otherwise. In our estimations, we omit *Small-sized*, the benchmark, to avoid the singular matrix problem. We also account for a firm's age (*Age*) or the natural logarithm of the firm's age since its establishment. The literature documents a negative relationship between age, and size, on borrower discouragement. We also consider the characteristics of the firm's location and define the variable *Population1M*, which is equal to one if the locality where the firm operates has a population of over 1 million, and zero if less. More populated areas vis-à-vis less populous ones have different local banking market characteristics. We also control the firm's legal status and define three dummy indicators- *SoleProprietorship*, *Partnership*, and *Others*. The latter serves as the benchmark, and is thus, omitted in our estimations. Moreover, we also control for a firm's productivity (*Productivity*), defined as the natural logarithm of the value of the firm's sales over the number of permanent employees, scaled three years before the survey was conducted. We expect more productive firms to be less discouraged from borrowing from financial institutions because of their profitability potential. In addition, we control the firm's audit status (*Audited*). *Audited* is a dummy variable equal to one if an external auditor checks and verifies the firm's annual financial statement, and zero, otherwise. We also consider the firm's ownership and define two dummy variables – *State-owned* and *Foreign-owned*. *State-owned* and *Foreign-owned* are dummy variables equal to one if at least 50% of the firm is owned by the government/state and private foreign individuals and firms, respectively, and zero otherwise. We also distinguish firms that are affiliated with larger establishments from those which are not. Thus, we define *Multiple*, a dummy variable equal to one if the firm is part of a larger establishment and zero otherwise.

We also include manager-specific factors, such as the firm's top manager's sex (*FemaleManager*) and experience in the sector (*ManagerExperience*). Firms with more experienced managers are expected to be less discouraged from applying for formal credit. *ManagerExperience* is a dummy variable equal to 1 if the top manager has at least ten years of experience working in the sector and zero if less. *FemaleManager* is a dummy variable equal to one if the firm's top manager is female and zero otherwise. We also capture industry-specific

differences by including industry dummies in our estimations. We note that 64.57% of the firms in the sample belong to the manufacturing sector, while 31.37%, and 4.06%, respectively, are from the construction, and other sectors (i.e. transport, renting and business activities)⁸. We also include year-specific differences concerning the period when the survey in a country was conducted by introducing survey year dummies.

We also consider macroeconomic variables such as inflation rate (*Inflation*) and the natural logarithm of the real GDP per capita, orthogonalized with the trust measures (*LnGDP*). Moreover, we also include a country's strength of legal rights as an indicator of firm credit access. It measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders, thus facilitating lending. The index (*GettingCredit*) ranges from zero (weak) to 12 (strong), with higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit. To assess the level of particularized trust, we also include trust in family as a control variable. We calculate the proportion of respondents in the WVS who trust or somewhat trust their family members (*TrustinFamily*). We note that because *TrustinFamily* is highly correlated with *InterpersonalTrust* and *TrustinBanks*, at 0.5205 and 0.3243, respectively, we consider its orthogonalized values with interpersonal trust and trust in banks. In addition, we also consider bank net interest margin⁹ aggregated at the country level, *NetIntMargin*, defined as the accounting value of a bank's net interest revenue as a percentage of its average interest-bearing asset. This measure captures cross-country variations in banks' ability to generate net interest income, market power, interest rate risk, and credit risk (Angbazo, 1997; Hawtrey and Liang, 2008).

Table A3 in the Appendix contains all the definitions and sources for the variables used in the study.

3.5 Descriptive statistics

Table 1 reports the summary statistics of the variables used in our estimations for the sample of 8395 borrower firms¹⁰. Statistics show that 54.70% of firms needing credit are discouraged from applying for a loan or a line of credit. The majority of firms that need access to formal finance are dissuaded from applying for loans from financial institutions for various reasons. They include complex loan application procedures (17.94%), unfavorable interest rates (41.49%), high collateral requirements (12.96%), expectations about the loan not being approved (7.38%), and insufficient loan size and maturity (5.29%), and others (14.94%). Several studies show that in the case of developed countries, such as Switzerland (Wernli and Dietrich, 2022) and Belgium (Ferrando and Mulier, 2022), around 60% and 40% of discouraged firms, respectively, would have been granted a loan if they applied for one. Lack of loan application when a firm needs credit is, thus, a reason why firms rely less on formal financing. On average, only 17.88% of the working capital needs of firms in our sample are financed by banks.

⁸ We present more detailed information about the firms' industries and sectors in Appendix (Table A2).

⁹ We also consider a country's average bank lending rate instead of the net interest margin. However, only 18 out of the 24 countries included in the study report this information in the International Financial Statistics. We note that even after controlling the bank lending rate for a subsample of 18 countries, we obtain the same results with our main variable of interest.

¹⁰ We also report in the Appendix the summary statistics of the 15505 firms (Table A1) and a sub-sample of firms excluding discouraged borrowers (Table A4).

[Insert Table 1]

Regarding trust in banks, around half (52.85%) portray a great deal or quite a lot of confidence in banks, with significant cross-country variations (a minimum of 21.74% and a maximum of 91.74%). The level of interpersonal trust, however, is relatively low. Indeed, a large proportion of WVS respondents from the countries included in our study indicates that one needs to be very careful in dealing with people (around 85%, on average). In terms of firm-level characteristics, most top managers are male (78.55%), and experienced (83.23%). Moreover, around 40% of the firms in our sample have their financial statements checked and verified by an external auditor. Most of the firms are small and medium-sized (76%). We also note that the countries included in our study display high particularized trust, with 95.34%, on average, of the WVS respondents indicating that they completely or somewhat trust their family. We also observe significant variations in country-level net interest margins, with a minimum of 1.46% and a maximum of 8.46%, and in the getting credit index, which ranges from zero to 11.

We also present the descriptive statistics of our main trust indicators of interest - trust in banks, and interpersonal trust, by country in Table 2. The statistics show that Greece has the lowest trust in banks, with only 21.74% of the WVS respondents showing a great deal or quite a lot of confidence in banks. Other countries with relatively low trust in banks include Eastern European countries such as Romania, Cyprus, and Serbia. Southeast Asian countries, on the other hand, display relatively higher trust in banks, with Vietnam reporting that almost 92% of the WVS respondents show a great deal or quite a lot of confidence in their financial institutions. In terms of interpersonal trust, Zimbabwe (2.14%), Nicaragua (4.25%), and Colombia (4.54%) have low interpersonal trust levels, while Thailand (31.36%) and Ukraine (30.65%) display relatively high interpersonal trust.

[Insert Table 2]

Table 3 reports the average values of firms' reliance on banks to finance their working capital needs. Peru topped the list regarding the demand for and reliance on formal credit. Indeed, at least 35%, on average, of Peruvian firms in the sample finance their working capital through banks, while only 15% are considered discouraged borrowers. On the other hand, Egypt, Zimbabwe, and Ukraine rely the least on banks to finance their working capital requirements. Thailand and Indonesia document the highest proportion of discouraged borrower firms.

[Insert Table 3]

4. Empirical Methodology

4.1 Trust in banks and Borrower Discouragement

To examine the impact of trust in banks on borrower discouragement and test Hypothesis 1, we estimate Equation 1 (Eq. 1) using probit and IV probit regressions.

$$\Pr(\text{BorrowerDiscouragement} = 1) = \Phi \left(\begin{array}{l} \beta_1 + \beta_2 \text{TrustinBanks}_j + \beta_3 \text{InterpersonalTrust}_j + \Lambda Z \\ + \sum_{t=2016}^{2019} \gamma_t \text{SurveyYear}_t + \sum_{k=2}^{34} \text{Sector}_k \end{array} \right) \quad (\text{Eq. 1})$$

We calculate the marginal probability effects of *TrustinBanks* on borrower discouragement as follows (Eq. (1')):

$$\text{Eq. (1')} \quad \Phi(X' \beta) \beta_2$$

Where *BorrowerDiscouragement* is a dummy variable equal to one for discouraged borrowers, and zero, otherwise. *TrustinBanks* is the proportion of individuals in country *j* who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the survey was conducted. *InterpersonalTrust* is the proportion of individuals in country *j* who indicate, “Most people can be trusted” to the WVS trust question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” *Z* is a vector of firm-specific and country-specific control variables that consider the firm’s level of productivity, age, size, firm’s locality, legal status, ownership, manager-specific characteristics, audit status, the country’s strength of legal rights, net interest margin, trust in family, economic development, and inflation. Moreover, we also control for industry-specific differences by including industry dummies based on the firm’s International Standard Industry Classification (ISIC), and year-specific effects by including survey year dummies.

Using the instrumental variables regression, we deal with plausible endogeneity issues that could arise from reverse causality. Although *TrustinBanks* is country-specific, discouraged borrowers are more likely to distrust banks because they are less likely to have established lending relationships with financial institutions. Moreover, measurement error could arise due to misinterpretation of the survey question or omitted variables that could be correlated to the trust in banks WVS question. Indeed, Fungáčová et al. (2019) indicate that respondents tend to think about the banks’ role in the economy, financial institutions’ stability, confidence in bank supervisory authorities, and confidence in bankers when asked about their level of trust or confidence in banks. Moreover, interpersonal trust (*InterpersonalTrust*) might also be correlated to the error term because of measurement error or disparity in interpreting the WVS question across countries. Thus, we use the IV-probit regression.

As in Wernli and Dietrich (2022), we also deal with a plausible sample selection problem because we can only observe *BorrowerDiscouragement* for firms that expressed a need for financing, by using the maximum-likelihood probit model with sample selection. Further discussion and results using this method are reported in the Robustness Checks section.

4.2 Instruments

We use several instruments for trust in banks (*TrustinBanks*) and interpersonal trust (*InterpersonalTrust*). For trust in banks, we use as instrument a country’s experience with a banking crisis – *NumSysBankCrisis*. *NumSysBankCrisis* is the number of systemic banking crises experienced by country *j* since 1970. We rely on the systemic banking crises database of Laeven and Valencia (2018) to calculate our measures. Several studies, such as Fungáčová et al. (2021), find that the experience of a banking crisis diminishes a person’s trust in banks, which may be explained by the adverse effects of negative experiences on trust, consistent with findings in the behavioral science literature (Glanville and Paxton, 2007). Indeed, the experience of a banking crisis may alter a person’s expectations and confidence in financial institutions, which is in line with studies that show higher future inflation expectations of individuals who have lived during high inflation periods (Malmendier and Nagel, 2016). Moreover, increasing distrust in banks after the Global Financial Crisis in 2007/2008 has been

one of the pinpointed causes of the emergence of fintech. Indeed, banking crises enable individuals, households, and firms not only to tap other financial service providers but could also shrink bank deposits, especially in countries without explicit deposit insurance schemes. We also use as an instrument for confidence in banks the number of sovereign debt crises experienced by a country (*NumSovereignCrisis*) since 1970. Indeed, some sovereign debt crises in recent years either coincided with or followed banking crises. Moreover, the two sectors are closely interconnected, with transmission channels in both directions. Sovereign shocks can influence the banking system, and fragility in the banking system affects the sovereign (Correa and Sapriza, 2014).

In addition, we also include religious values as an instrument for both interpersonal trust and trust in banks. Putnam (1993) purports that hierarchical religion that includes Catholicism, Islam, and Orthodox Christianity discourages trust formation. Moreover, La Porta et al. (1997) find a negative link between the dominance of a strong hierarchical religion in a country, especially Catholicism, and trust. Meanwhile, Fungáčová et al. (2019) show a negative association between trust in banks and hierarchical religions (relative to Protestantism), particularly Catholicism and Orthodox Christianity, which could be explained by hierarchical religions' negative views on usury or charging of interest rates. Thus, we define *HierarchicalReligion*, which is equal to the percentage of the population whose religions are either Catholicism, Islam, or Orthodox Christianity. We obtain country-level data on religious affiliations from the World Values Survey (Inglehart et al., 2018; Haerpfer et al., 2020).

We note that using these instruments is expected to eliminate the direct correlation between trust in banks and interpersonal trust and firm-specific unobserved characteristics. Moreover, we reduce further endogeneity bias due to omitted variables by controlling for other firm-specific, country-specific, and year-fixed effects. We test the validity and relevance of our instruments, ensuring the satisfaction of the exclusion restriction and, hence, the IV estimator's consistency. Thus, we perform the weak identification test using the Sanderson-Windmeijer (SW) first-stage F test of excluded instruments, the underidentification test using the Kleibergen-Paap rk LM test, and verify the exclusion restriction using the Hansen-J test or test of overidentifying restrictions. Furthermore, we carry out an exogeneity test by calculating the C-statistic to verify that trust in banks, and interpersonal trust are indeed endogenous. We alternatively use other sets of instruments, relying on previous studies that find variations in geographic and biogeographical (initial) conditions as drivers of differences in cultural preferences (Olsson and Hibbs, 2005; Galor and Özak, 2016a; Falk et al., 2018) in the Robustness Checks Section.

4.3 Trust in Banks and Interpersonal Trust: Complements or Substitutes?

We also test Hypothesis 2 and examine whether there are complementary effects of trust in banks and interpersonal trust on borrower discouragement. Thus, we estimate Equation 2 (Eq. 2):

$$\Pr(\text{BorrowerDiscouragement} = 1) = \Phi \left(\begin{array}{l} \lambda_1 + \lambda_2 \text{TrustinBanks}_j + \lambda_3 \text{InterpersonalTrust}_j + \\ \lambda_4 (\text{TrustinBanks} \times \text{InterpersonalTrust})_j + \Lambda Z + \\ \sum_{t=2016}^{2019} \gamma_t \text{SurveyYear}_t + \sum_{k=2}^{34} \text{Sector}_k \end{array} \right) \quad (\text{Eq. 2})$$

Where *TrustinBanks* \times *InterpersonalTrust* is the interaction term between trust in banks and interpersonal trust.

Moreover, to obtain the marginal probability effects of *TrustinBanks* on borrower discouragement at different percentile levels of *InterpersonalTrust*, we calculate Eq. (2') as follows:

$$\text{Eq. (2')} \quad \Phi(X' \beta)(\lambda_2 + \lambda_4 \text{InterpersonalTrust}_i)$$

Higher positive marginal probability effects of trust in banks on borrower discouragement at higher percentile levels of interpersonal trust imply complementary effects of trust in banks and interpersonal trust.

5. Empirical Results

5.1 Results: Baseline Specification – Does trust in banks matter in reducing borrower discouragement?

We present the probit and instrument variable (IV)-probit estimation results of our baseline specification in Table 4a, where trust in banks, and interpersonal trust are considered endogenous. The Wald test of exogeneity confirms the correlation between these explanatory variables and the error term or the unobserved characteristics influencing borrower discouragement. Moreover, performing the Kleibergen Paap rk LM test and the Sanderson-Windmeijer (SW) first stage F-test of excluded instruments, we reject the null hypothesis of under identification and weak identification, thus, underlining the relevance of our instruments. To confirm the validity of our instruments and hence, the satisfaction of the exclusion restriction condition, we execute the test of overidentifying restrictions using the Hansen J test. The results suggest the absence of a correlation between the excluded instruments and the error term. Meanwhile, the weak-instrument robust inference test (Anderson-Rubin Wald test) indicates the significance of *TrustinBanks* and *InterpersonalTrust* in the structural equation. We present in Table 4b the first-stage regression results of the IV probit estimation. As expected, we find a negative relationship between our three excluded instruments: *NumSysBankCrisis*, *NumSovereignCrisis*, and *HierarchicalReligion*, and trust in banks. In terms of economic significance, we find hierarchical religion (expressed in percentage) to have the strongest influence on trust in banks, followed by the number of systemic banking crises experienced by a country. Indeed, a one-standard-deviation increase in *HierarchicalReligion* (*NumSysBankCrisis*) leads to a 0.8102 (0.1640) standard deviation decrease in *TrustinBanks*. This indirectly confirms the finding of Guiso et al. (2008), who suggest that individual values and beliefs are initially formed through cultural transmission and slowly change with the experience of temporary shocks. With regard to interpersonal trust, we find a negative impact of hierarchical religion and the number of sovereign crises experienced by a country on

interpersonal trust, while we find a positive impact of the number of systemic banking crises a country experienced on interpersonal trust¹¹. In terms of economic significance, we find hierarchical religion to have the strongest influence on interpersonal trust. A one-standard-deviation increase in *HierarchicalReligion* results in a 1.0447 standard deviation decrease in interpersonal trust.

[Insert Tables 4a and 4b]

We report the calculated marginal effects of *TrustinBanks* and *InterpersonalTrust* on the probability that a firm gets discouraged from borrowing from financial institutions (*BorrowerDiscouragement*) in Table 4c.

[Insert Table 4c]

Our findings show that firms in countries with higher trust in banks are less likely to get discouraged from borrowing from financial institutions, using both probit and IV-probit regression techniques. In terms of economic significance, our IV-probit results indicate that a one-standard-deviation increase in trust in banks lowers the probability of a firm getting discouraged from borrowing from financial institutions by 14.64 percentage points, which is about 10 percentage points larger in absolute value than the prediction of the probit estimation (4.86 p.p.). The larger marginal probability effect of trust in banks in reducing borrower discouragement using the IV-probit vis-à-vis the probit estimation technique may be explained by the use of the predicted value of trust in banks determined by the instruments in the first stage regression, rather than the observed value of trust in banks. The use of alternative instruments in the Robustness Checks section indicate consistent results; a one-standard-deviation increase in trust in banks diminishes the probability that a firm which needs credit gets discouraged from applying for a loan by 9.58 to 21.92 percentage points.

The results regarding the impact of interpersonal trust on borrower discouragement are, however, less robust. We only find a significant link between interpersonal trust and borrower discouragement using IV-probit regression but not with probit estimation. The IV-probit results suggest that firms in countries with higher interpersonal trust are more likely to be discouraged from applying for loans from financial institutions. This may be explained by the impact of social capital, such as network-based trust, in facilitating access to informal borrowing (Karlan et al., 2009). Wu et al. (2016) suggest that differences in the financing contract provisions between formal and informal credit may affect firms' decision to use informal vis-à-vis formal finance. Informal finance may be more attractive to firms because of its speed (Wu et al., 2016; Hu, 2010) and negotiation flexibility (Buckley, 1997).

Regarding our control variables, we find *NetIntMargin* positively linked with borrower discouragement. This suggests that firms in countries with higher net interest margins, and thus, are exposed to relatively higher interest rate and credit risks, are more likely to be discouraged from applying for loans from financial institutions than their counterparts. Moreover, we find *GettingCredit* significant in reducing the likelihood of borrower discouragement in the IV-

¹¹ A positive link between the number of systemic banking crises experienced and interpersonal trust could be explained by a positive association between economic threat and pro-social tendencies, and the establishment of social support networks (Alonso-Ferres et al., 2020). Moreover, Hörisch and Obert (2020) find state action during a crisis could even lead to social capital development, which is in line with studies that find government performance influences social capital (Rothstein and Stolle, 2008).

probit estimation. This is not surprising since better collateral and bankruptcy laws that safeguard the rights of both borrowers and lenders facilitate the borrowing and lending process and decision-making. Moreover, consistent with our expectations, larger firms are less likely to be discouraged from applying for loans than smaller firms. Meanwhile, we find audited firms less likely to be discouraged from applying for loans than their counterparts. Audited firms are more informationally transparent and are more likely to have already established a lending relationship with formal financial institutions. In contrast, unaudited firms do not have reliable financial information demonstrating their operations' viability and sustainability, which could dissuade them from seeking formal credit. We also find firms with experienced top managers (at least ten years of experience) less likely to be discouraged from borrowing from financial institutions. Furthermore, we find firms whose legal status are sole proprietorship and partnerships more likely to be discouraged borrowers than other firms (i.e., limited liability companies). We do not, however, find the gender of the top manager a significant determinant of borrower discouragement.

5.2 Transmission channel

We further investigate how trust in banks affects borrower discouragement by excluding firms that do not rely on banks to finance their working capital needs. This allows us to examine whether the impact of trust in banks on borrower discouragement holds even for firms that have an existing lending relationship with banks. We report the calculated marginal probability effects of trust in banks on borrower discouragement from estimating the baseline equation (Eq. 1) in Table 5. The results indicate that even when excluding businesses that may not have a lending relationship with banks, we find firms in countries with relatively higher trust in banks less likely to be discouraged from applying for loans from financial institutions. Indeed, a one-standard-deviation increase in trust in banks reduces the likelihood of credit self-rationing by 28.29 percentage points using the IV-probit regression and 8.26 percentage points using the probit estimation technique. Moreover, we also find that when using the probit regression, a one-standard-deviation increase in interpersonal trust reduces the probability of a firm getting discouraged from applying for loans by 5 percentage points.

[Insert Table 5]

5.3 Results: Effect of the interaction between TrustinBanks and InterpersonalTrust on firms' formal credit reliance

We present the regression results of the impact of the interaction between trust in banks and interpersonal trust on borrower discouragement in Table 6a. Moreover, we show the calculated marginal effects of higher trust in banks on the firm's likelihood of being a discouraged borrower in Table 6b. The findings generally indicate complementary effects of trust in banks and interpersonal trust in reducing borrower discouragement.

[Insert Tables 6a and 6b]

Indeed, trust in banks significantly lowers a firm's likelihood of becoming a discouraged borrower, but only in countries with relatively higher interpersonal trust levels. Using the IV-probit estimation technique, we find that for firms located in countries where at least 20% of the population indicates that most people can be trusted (evaluated at the 75th percentile), a one-

standard-deviation increase in trust in banks lowers a firm's probability of being a discouraged borrower by 19.57 percentage points (p.p.). Firms in countries where interpersonal trust level is very high (evaluated at the 90th percentile), the likelihood of being a discouraged borrower decreases by 26.91 p.p. with a one-standard-deviation increase in trust in banks. We find consistent results using the probit regression for firms in countries with high interpersonal trust levels. Indeed, a one-standard-deviation increase in trust in banks reduces the probability that a firm gets discouraged from borrowing from financial institutions by 15.69 and 22.27 percentage points, respectively, in countries with relatively higher interpersonal trust levels (evaluated at the 75th and 90th percentiles, respectively).

6. Robustness Checks and Further Issues

We perform several robustness checks by 1) estimating our model using alternative instruments; 2) considering subsamples of audited vs. unaudited firms and firms of different sizes; 3) addressing multicollinearity concerns across our trust measures; 4) excluding countries where Islamic banking is important; and 5) examining the impact of the interaction between trust in banks and interpersonal trust on bank financing of firms' working capital needs.

6.1 Using alternative instruments

We also use alternative instruments for trust in banks and interpersonal trust that have been used in the literature (Horváth, 2013; Ahlerup et al., 2009; Olsson and Hibbs, 2005; Galor and Özak, 2016a) – absolute latitude, initial biogeographic endowments, and genetic distance. Moreover, we consider the duration of colonization in a country as an alternative instrument for trust.

The variable *AbsLatitude* is the natural logarithm of the absolute value of the latitude of a country's approximate geodesic centroid, reported by the CIA World Factbook (Galor and Özak, 2016a). It is expected to be negatively linked to trust because of the prevalence of infectious diseases in countries nearer the equator (Hall and Jones, 1999), and more ethnic and linguistic heterogeneity that adversely affects the viability of mutually reinforcing societal characteristics (Le, 2013). Ahlerup et al. (2009) and Horváth (2013) also use absolute latitude as instrument for trust. We gather information about a country's geographical latitude, either of the capital city or most populated city, from Galor and Özak (2016b).

A recent study by Falk et al. (2018) shows positive correlations between biogeographic conditions (or the presence of large domesticable animals) and absolute latitude with trust preferences. Thus, we also use initial biogeographic endowments, particularly large domesticable animal presence, as an alternative instrument for trust. We collect data on the initial biogeographic endowments from Olsson and Hibbs (2005). We define the variable *Animals* as the number of domesticable mammals that weigh more than 45 kg known to exist in prehistory. The prevalence of such domesticable mammals sped up the hunter-gatherer to sedentary agriculture transition, that created new demands on social organization, which led to emerging cities, states, institutions, among others. Diamond (1997) presents varied distribution in terms of the species suitable for domestication, across continents. He finds that only 14 out of 148 species weighing more than 45kg have been domesticated. In Sub-Saharan Africa, for example, although they find 51 of the heaviest mammals, no one passed the grounds they set for domestication.

ColonialDuration refers to the duration of colonization in a country or the time spent under colonial rule, expressed in hundreds of years. Countries with higher values of *ColonialDuration* indicate higher degree of destruction of indigenous social and economic structures, and thus, have a younger current social, political and economic structure compared to other countries, which is crucial to the formation of trust not only between each other but also to its institutions.

We also consider a country's genetic distance to the U.S. as an alternative instrument. The use of the U.S. as a benchmark is consistent with Horváth (2013) and Gorodnichenko and Roland (2017) because of the country's high degree of individualism. Several studies such as Desmet et al. (2011) find correlation between genetic distance and cultural heterogeneity. We use the new F_{ST} genetic or ancestral distance data constructed by Spolaore and Wacziarg (2018), and based on the work of Pemberton et al. (2013). Unlike the classic genetic markers such as immunoglobulins, they are based on microsatellite variation that covers 267 populations and 645 microsatellite loci. By studying microsatellite variation, geneticists can infer relatedness between human populations. We use the weighted F_{ST} genetic distance (*GeneticDistance*) between each country j and the U.S. This measure indicates the expected genetic distance between a randomly selected individual in country j and another randomly selected individual in the U.S.

We present the calculated marginal probability effects of trust in banks and interpersonal trust on borrower discouragement in Table 7a, and the first-stage regression results and instrument validity tests in Table 7b, using the alternative sets of instruments: (i) *NumSysBankCrisis*, *NumSovereignCrisis*, *AbsLatitude*; (ii) *NumSysBankCrisis*, *NumSovereignCrisis*, *Animals*; (iii) *NumSysBankCrisis*, *NumSovereignCrisis*, *ColonialDuration*; (iv) *NumSysBankCrisis*, *NumSovereignCrisis*, *AbsLatitude*, *HierarchicalReligion*; and (v) *NumSysBankCrisis*, *HierarchicalReligion*, *GeneticDistance*. Overall, we find consistent results regarding the impact of trust in banks on borrower discouragement when using alternative instruments. We find firms in countries with higher trust in banks less likely to be discouraged from borrowing from financial institutions than firms in countries with lower trust in banks. Indeed, a one-standard-deviation increase in trust in banks decreases the probability that a firm becomes discouraged from applying for loans from financial institutions by 21.92 percentage points (p.p.), 17.46 p.p., 14.30 p.p., 14.81 p.p., and 9.58 p.p., respectively using instruments (i), (ii), (iii), (iv), and (v). Moreover, the statistics confirm the relevance and validity of our instruments and, thus, verify the exclusion restriction. Concerning the impact of interpersonal trust on borrower discouragement, we only find significant results when using the presence of large domesticable mammals (ii), and colonialization duration (iii) as alternative instruments for hierarchical religion, but not when using absolute latitude (i), and genetic distance (v).

[Insert Tables 7a and 7b]

6.2 Subsamples: Audited vs. Unaudited Firms

We also investigate the subsample of audited and unaudited firms in exploring the impact of trust in banks on borrower discouragement. We report the estimation results and calculated marginal probability effects of *TrustinBanks* on borrower discouragement in Tables

8a and 8b, respectively. Our findings show that the positive impact of trust in banks in reducing the likelihood that a firm becomes a discouraged borrower holds only for unaudited firms. Indeed, a one-standard-deviation increase in trust in banks decreases the probability that an unaudited firm gets discouraged from applying for a loan from a financial institution by 7.30 to 13.09 percentage points. These findings confirm the crucial role played by informal institutions, particularly by trust in banks, in increasing reliance on formal credit.

[Insert Tables 8a and 8b]

6.3 Subsamples according to firm size

We also examine the impact of trust in banks on borrower discouragement for a subsample of firms according to size (SMEs and non-small enterprises). We rely on the WBES definition to distinguish firms according to size. We note that we initially examined subsamples of small-sized, medium-sized, and large-sized firms. This disaggregation, however, results in violations in the full rank condition of the estimated covariance matrix in the IV-probit regression, which could be due to decreased variations in some firm-specific control variables. We estimate our baseline specification (Eq.1), report the results, and calculated marginal probability effects of trust in banks on borrower discouragement in Tables 9a and 9b, respectively.

[Insert Tables 9a and 9b]

Our findings show that subsamples of SMEs, and non-small firms, encompassing medium-sized and large-sized enterprises, benefit from the positive impact of increased trust in banks in reducing the likelihood of borrower discouragement. We note, however, that the coefficient estimates are larger for non-small firms than SMEs. Indeed, our results indicate that a one-standard-deviation increase in trust in banks leads to a decrease in the likelihood of an SME getting discouraged from applying for credit from financial institutions by 3.58 to 13.04 percentage points. Moreover, for medium-sized and large-sized firms (non-small firms), a one-standard-deviation increase in trust in banks leads to a decreased incidence of borrower discouragement by 6.38 to 17.76 percentage points.

6.4 Multicollinearity issues between *TrustinBanks* and *InterpersonalTrust*

We consider potential multicollinearity concerns between our trust variables that may cause interpretation problems concerning our main variable of interest, *TrustinBanks*. Table 10a shows the correlation matrix between *TrustinBanks* and *InterpersonalTrust*. Although the correlation coefficient is relatively low (0.1772), to mitigate the impact of multicollinearity on the efficiency of our IV estimator, we calculate the orthogonalized value of trust in banks, *TrustinBanks-oth*, retaining only the component that is not explained by interpersonal trust. We report the results using the orthogonalized value of trust in banks in Tables 10b. Moreover, we present the calculated marginal probability effects of trust in banks on borrower discouragement in Table 10c and at varying percentile values of *InterpersonalTrust* in Table 10d. Overall, our findings regarding the impact of our main variable of interest, *TrustinBanks-orth*, on borrower discouragement hold even after considering multicollinearity issues.

[Insert Tables 10a, 10b, 10c, and 10d]

6.5. Firms' bank credit reliance: does trust matter?

We also examine the impact of the interaction between trust in banks and interpersonal trust on firms' bank credit reliance to finance their working capital needs¹². Tapping banks to finance firms' working capital requirements is an important first step especially for smaller firms toward using more complex formal financial services and long-term bank credit. Moreover, focusing on working capital (WC) financing is important because of its implications for firms' investment decisions (Nicolas, 2022).

We conjecture that trust in banks may also lead to higher bank credit reliance but only in high interpersonal trust environments. Indeed, the degree of bank credit reliance is also determined by supply-side factors beyond firms' expectations of loan officers' decisions. A strong borrower-lender trust provides extra insurance for lenders that may bridge potential opportunistic behaviors' in lending transactions (Anderson and Nyborg, 2011; Hasan et al., 2017). High interpersonal trust facilitates access to external financing by enhancing pro-social behavior and cooperative attitude, reputation-building and honest dealing with transactions (Kandori, 1992; McMillan and Woodruff, 2000). Moreover, some studies show that societal trust promotes financial reporting transparency and suggest that increased trust improves information production and enhances information sharing mechanisms (Garrett et al., 2014; Nanda and Wysocki, 2015). Trust is also found to reduce monitoring costs (Lewicki et al., 1998). Thus, to the extent that social capital or trust enhances the use of external financing – formal or informal, as found by recent studies (Nguyen and Canh, 2021), higher trust in banks could drive firms to rely more on banks to finance their working capital needs.

Thus, to test whether interpersonal trust complements trust in banks in enhancing the use of bank financing to fund working capital needs, we examine a sample of firms that exclude discouraged borrowers. This allows us to have a more homogenous sample of firms that expressed a need for a bank loan, or those that do not need credit but have obtained one in previous years. We present the descriptive statistics of this sample of firms in the Appendix (Table A4).

We mainly base our bank credit reliance measure on the firms' responses to the WBES question: "Over the fiscal year, please estimate the proportion of this establishment's working capital, that is, the funds available for day-to-day operations, that was financed from each of the following sources?". The sources of financing listed were (a) internal funds or retained earnings, (b) borrowed from banks, (c) borrowed from non-bank financial institutions [microfinance institutions, credit cooperatives, credit unions, or finance companies], (d)

¹² We also consider the proportion of purchased fixed assets financed by banks. However, only 38.52% in the sample which excludes discouraged borrowers (4203 out of 10911) provide information about the financing of their fixed assets. In addition, the sample distribution according to firm size is different when considering the purchase of fixed assets vis-à-vis working capital financing. Only about 29% of the firms with information on fixed asset funding is small, compared to 40% when looking into working capital financing. Furthermore, as investment in fixed assets requires long-term financing, which is limited, especially in less developed economies (Hu et al., 2022), and which are mainly provided by banks (Martinez-Peria and Schmukler, 2017), we expect supply-side factors to weigh more than demand-side decisions.

purchases on credit from suppliers, and advances from customers, and (e) others that include moneylenders, friends, relatives, etc. We define the variable, *BankFinance*, as the ratio of a firm's working capital financed by banks to its total working capital¹³.

We use the OLS, IV, and Heckman selection estimation techniques to test whether there is a significant interaction effect between trust in banks and interpersonal trust on firms' bank credit reliance. To ensure that the Heckman selection model is well-identified, the selection equation (*NeedExternalFinancing* or the need for external financing) should contain at least one variable that is not in the outcome equation (*BankFinance*). The variable *NeedExternalFinancing* is a dummy variable equal to one if the firm has applied for a loan in the past 12 months or has an existing line of credit, and zero, if the firm did not apply for a loan. We note that *BankFinance* can only be observed if *NeedExternalFinancing* is equal to one. As in Leon (2015), we consider the share of sales (goods and services) paid after delivery (*PercSalesAfterDelivery*), which is a measure of the funds needed by a firm to finance its working capital as an instrument or excluded variable that is present in the selection equation but not in the outcome equation. Moreover, we have also performed robustness checks by using other excluded selection variables that indicate a firm's growth potential: the presence of an ISO certification (*ISOCertification*), and a license to import (*ImportLicense*). We test the relevance of the Heckman selection model using the Wald test of independent equations. Moreover, we also calculate the athrho , which is a non-linear transformation of ρ or the correlation between the error terms of the outcome and selection equations, to evaluate the presence of a sample selection bias. The negative inverse mills ratio implies that firms with lower *BankFinance* are more likely to be observed. The results indicate a sample selection problem. We present the OLS, Heckman, and IV estimation results in Table 11a, and the calculated marginal effect of trust in banks at varying interpersonal trust levels in Table 11b.

[Insert Tables 11a and 11b]

The regression results show a positive interaction effect of trust in banks and interpersonal trust on the proportion of working capital needs financed by banks. These findings are robust to various specifications: OLS, Heckman, and IV regression. The calculated marginal effects in Table 11b indicate a positive, increasing impact of trust in banks on bank credit reliance but only at high interpersonal trust levels. A one-standard-deviation increase in trust in banks raises the proportion of a firm's working capital needs financed by banks by 0.0908 to 0.1090 (0.1240 to 0.1364) using the Heckman selection estimation, and IV regression techniques, respectively, at the 75th (90th) percentile value of interpersonal trust. Moreover, we note that in countries with very low interpersonal trust levels, we find a negative relationship between trust in banks and firms' reliance on bank credit. Furthermore, the findings in Table 12a suggest that increasing interpersonal trust level would not be enough to raise firms' bank credit reliance in low trust-in-banks environments. Overall, these findings indicate that trust in banks and interpersonal trust go hand-in-hand in increasing reliance and access to bank credit.

6.6 Using Alternative Estimation Technique: Heckman Probit

¹³ We only retain firms for which at least 90% of their working capital funding sources is reported (banks, internal funds or retained earnings, non-bank financial institutions, other sources).

We also examine the impact of trust in banks, and the interaction effect of trust in banks and interpersonal trust using the Heckman probit regression. As discouraged borrowers are only observed when firms are credit-constrained, we address potential sample selection bias by using a probit model with sample selection (Van de Ven and Van Praag, 1981). Thus, we assume that there exists an underlying relationship: $BorrowerDiscouragement_i^* = X\beta + \varepsilon_{1i}$ such that we only observe the binary outcome (*BorrowerDiscouragement*): $BorrowerDiscouragement_i^{Probit} = (BorrowerDiscouragement_i^* > 0)$. The dependent variable, however, is only observed if $BorrowerDiscouragement_i^{Select} = (Z\alpha + \varepsilon_{2i} > 0)$ or when the firm is credit-constrained (selection equation), where $\varepsilon_1 \sim N(0,1)$; $\varepsilon_2 \sim N(0,1)$; $corr(\varepsilon_1, \varepsilon_2) = \rho$. When $\rho \neq 0$, standard probit techniques yield biased results. For identification purposes, the selection equation should contain at least one variable that is excluded from the outcome equation (*BorrowerDiscouragement*). *CreditConstrained* is a dummy variable equal to one if the firm applied for a loan in the past 12 months and has no existing line of credit, and if the firm needs credit but has not applied for a loan, and zero if the firm has a current line of credit or has not applied for a loan because it does not need external financing. We use three instruments or excluded variables affecting a firm's credit constraint (*CreditConstrained*) but not directly impacting its discouragement from applying for loans. As in Leon (2015), we use the percentage of sales paid by customers after the delivery of goods and services (*PercSalesAfterDelivery*), which measures the firm's working capital needs. We also use two other excluded variables that indicate a firm's growth potential: the presence of an ISO certification (*ISOCertification*), and a license to import (*ImportLicense*).

We present the probit with sample selection estimation results examining the impact of trust in banks, and the interaction between trust in banks and interpersonal trust, on borrower discouragement in Table 12a. Meanwhile, we show the conditional marginal probability effects of *TrustinBanks* on borrower discouragement in Table 12b, and at varying levels of *InterpersonalTrust* in Table 12c. Our findings suggest the presence of selection bias, as indicated by the significance of the α , which is a non-linear transformation of ρ . We note that even after tackling the presence of selection bias, our results regarding the impact of trust in banks on borrower discouragement remain unchanged. Indeed, firms in countries with higher trust in banks are less likely to be discouraged borrowers. Indeed, a one-standard-deviation increase in trust in banks lowers the likelihood of a firm getting discouraged from borrowing from financial institutions by around 2.67 percentage points. In countries with relatively higher interpersonal trust levels, at the 75th and 90th percentile levels of *InterpersonalTrust*, respectively, a one-standard-deviation increase in trust in banks reduces the probability that a firm becomes discouraged from applying for loans from financial institutions, when it needs one, by 5 to 7.68 percentage points.

[Insert Tables 12a, 12b, 12c]

6.7 Excluding countries where Islamic banking is important

We also check the robustness of our results by investigating the subsample of firms in countries where Islamic banking is not prevalent. Islamic banking and finance, or Sharia-compliant finance, whose main principles include the prohibition of paying or charging interest rates, has expanded in recent decades. We, thus, look into the impact of trust in banks without considering the ambiguity that respondents may face- whether the bank in question refers to conventional or Islamic banks.

We report the marginal probability effects of trust in banks on borrower discouragement in Table 13. We find the same results even after excluding countries where Islamic financial institutions have proliferated in recent years. Firms in countries with higher trust in banks are less likely to be discouraged from seeking loans from financial institutions than in countries with relatively lower trust in banks.

[Insert Table 13]

7. Discussion and Concluding Remarks

The main objective of this paper is to examine how informal institutions, specifically trust in banks, affect a firm's likelihood of being a discouraged borrower. Our findings using empirical estimation techniques that address endogeneity and sample selection issues indicate a positive impact of increased trust in banks in reducing the likelihood of credit self-rationing in firms. Trust in banks is vital for deposit stability, which is crucial in the intermediation process. Loss of trust in banks may impair the allocation of funds to productive use and increase expectations of stricter lending standards and tighter credit conditions. Moreover, in low-trust-in-bank environments, firms are less likely to use formal financial services because of the fear of hidden charges and high transaction costs. We also investigate whether interpersonal trust alters the mechanism through which trust in banks reduce the likelihood of borrower discouragement. We hypothesize that a firm's interpersonal trust environment may affect loan approval and cost of credit expectations. Our results show that interpersonal trust and trust in banks go hand-in-hand in fostering the decision of a firm that needs credit to seek loan from a financial institution. We find a stronger influence of trust in banks in reducing the incidence of borrower discouragement in countries with relatively higher interpersonal trust levels, where financial transactions are perceived as less risky and cooperative attitudes and pro-social behavior are more pronounced. We also examine a further issue by studying whether a firm's trust environment affects the proportion of its working capital needs financed by banks. Our findings suggest complementary effects of trust in banks and interpersonal trust on bank credit reliance to finance firms' working capital requirements. Indeed, in high interpersonal trust environments, trust in banks has a stronger impact on firm's reliance on banks to fund their working capital needs. Our results are robust to various alternative econometric specifications in which other instruments are used for trust, potential sample selection issues are considered, and in which specific subsamples of firms are assessed.

Overall, this study provides additional insights for policymakers in understanding the mechanisms through which they could reduce firms' self-rationing credit constraints and improve firms' use of and access to formal finance. Our findings highlight the importance of trust in banks not only for capital allocation efficiency but also for achieving financial inclusion. The results of our study also stress the importance of strengthening the resilience of the banking industry to diminish the adverse effects of bank failures on the confidence in the banking system.

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TABLES

Table 1. Summary statistics of the variables used in the study

	Obs	Mean	Std Dev	Min	Max
<i>BorrowerDiscouragement</i>	8395	0.5470	0.4978	0	1
<i>TrustinBanks</i>	8395	0.5285	0.2273	0.2174	0.9174
<i>InterpersonalTrust</i>	8395	0.1422	0.0960	0.0214	0.3137
<i>BankFinance</i>	8395	0.1788	0.2479	0	1
<i>TrustinFamily</i>	8395	0.9534	0.0415	0.8170	0.9958
<i>TrustinFamily(orthog)</i>	8395	-0.0086	0.0344	-0.1338	0.0584
<i>Productivity</i>	8395	13.4586	4.6684	-2.1484	28.2686
<i>NetIntMargin</i>	8395	4.9267	1.8769	1.4627	8.4599
<i>GettingCredit</i>	8395	5.9701	2.9381	0	11
<i>Small-sized</i>	8395	0.4105	0.4920	0	1
<i>Medium-sized</i>	8395	0.3499	0.4770	0	1
<i>Large-sized</i>	8395	0.2397	0.4269	0	1
<i>Population1M</i>	8395	0.5711	0.4950	0	1
<i>Age</i>	8395	2.9539	0.6293	1.0986	5.2832
<i>SoleProprietorship</i>	8395	0.2334	0.4230	0	1
<i>Partnership</i>	8395	0.2155	0.4112	0	1
<i>State-owned</i>	8395	0.0024	0.0488	0	1
<i>Foreign-owned</i>	8395	0.0507	0.2195	0	1
<i>Multiple</i>	8395	0.1499	0.3569	0	1
<i>ManagerExperience</i>	8395	0.8323	0.3736	0	1
<i>FemaleManager</i>	8395	0.2145	0.4105	0	1
<i>Audited</i>	8395	0.4133	0.4925	0	1
<i>LnGDP</i>	8395	8.6104	0.8128	7.0178	10.3764
<i>LnGDP (orthog)</i>	8395	0.1050	0.6979	-1.2678	1.2123
<i>Inflation</i>	8395	4.5450	4.2183	-1.5664	15.1768
<i>SurveyYear2015</i>	8395	0.2312	0.4216	0	1
<i>SurveyYear2016</i>	8395	0.1514	0.3585	0	1
<i>SurveyYear2017</i>	8395	0.2061	0.4045	0	1
<i>SurveyYear2018</i>	8395	0.0289	0.1677	0	1
<i>SurveyYear2019</i>	8395	0.3824	0.4860	0	1
<i>HierarchicalReligion</i>	8395	71.3157	28.5428	4.1	100
<i>NumSysBankCrisis</i>	8395	1.43764	0.7047	0	3
<i>NumSovereignCrisis</i>	8395	0.7631	0.7036	0	3
<i>AbsLatitude</i>	8395	2.8208	1.0294	0.6931	4.0943
<i>GeneticDistance</i>	8258	0.0296	0.0117	0.0148	0.0499
<i>Animals</i>	8395	5.4836	3.5334	0	9
<i>ColonialDuration</i>	8395	1.4523	1.6206	0	4.93
<i>CreditConstrained</i>	10098	0.3495	0.4768	0	1
<i>PercSalesAfterDelivery</i>	10098	39.22	35.91	0	100
<i>ISOCertification</i>	10098	0.2636	0.4406	0	1
<i>ImportLicense</i>	10098	0.1047	0.3061	0	1

Table 2. Average values of various trust measures (*TrustinBanks*, and *InterpersonalTrust*), by country

	<i>TrustinBanks</i>	<i>InterpersonalTrust</i>	Obs
Bolivia	0.4796	0.0860	160
Colombia	0.2829	0.0454	674
Cyprus	0.2532	0.0802	76
Ecuador	0.5461	0.0586	235
Egypt	0.6515	0.0735	221
Greece	0.2174	0.0842	243
Guatemala	0.3209	0.1796	52
Indonesia	0.8363	0.0519	811
Kazakhstan	0.5689	0.2389	466
Kyrgyz Republic	0.7847	0.1185	119
Lebanon	0.2873	0.0992	224
Malaysia	0.7550	0.1957	406
Myanmar	0.8342	0.1508	248
Nicaragua	0.3400	0.0425	55
Peru	0.3289	0.0530	609
Philippines	0.8057	0.0535	243
Romania	0.2468	0.1187	402
Russia	0.4474	0.2391	557
Serbia	0.2951	0.1662	137
Thailand	0.8011	0.3137	344
Turkey	0.4246	0.1426	615
Ukraine	0.3387	0.3065	614
Vietnam	0.9174	0.2767	481
Zimbabwe	0.5075	0.0214	403
Whole Sample	0.5436	0.1453	8395

Table 3. Average values of discouraged borrowers (*BorrowerDiscouragement*), and the proportion of working capital financed by banks (*BankFinance*), by country

	Full sample	Firms that need credit sample	
	<i>BankFinance</i>	<i>BankFinance</i>	<i>BorrowerDiscouragement</i>
Bolivia	0.1627	0.2007	0.3438
Colombia	0.2232	0.2601	0.2493
Cyprus	0.2416	0.3579	0.5132
Ecuador	0.1704	0.2342	0.2936
Egypt	0.0285	0.0480	0.7421
Greece	0.0930	0.1542	0.5267
Guatemala	0.1144	0.1885	0.2885
Indonesia	0.1030	0.1241	0.8002
Kazakhstan	0.0716	0.1149	0.6288
Kyrgyz Republic	0.0928	0.1734	0.5042
Lebanon	0.2044	0.2481	0.5714
Malaysia	0.2128	0.2204	0.5197
Myanmar	0.0724	0.1203	0.7016
Nicaragua	0.0915	0.1565	0.4909
Peru	0.3150	0.3715	0.1511
Philippines	0.0777	0.1638	0.3663
Romania	0.1364	0.1656	0.7239
Russia	0.0671	0.1012	0.7558
Serbia	0.1656	0.2457	0.1679
Thailand	0.0960	0.1206	0.8837
Turkey	0.1107	0.1754	0.5236
Ukraine	0.0606	0.0770	0.7345
Vietnam	0.1884	0.3052	0.2079
Zimbabwe	0.0692	0.0729	0.7916
Total	0.1266	0.1788	0.5470

Table 4a. The impact of trust in banks on borrower discouragement, 2015-2019

	Probit Regression	IV probit
	Pr (<i>BorrowerDiscouragement</i> =1)	
<i>TrustinBanks</i>	-0.651*** (-3.24)	-1.974*** (-5.39)
<i>InterpersonalTrust</i>	-0.451 (-1.48)	1.823*** (3.02)
<i>TrustinFamily</i>	-6.763*** (-5.20)	-3.984** (-2.57)
<i>Productivity</i>	-0.00800** (-2.15)	0.000691 (0.16)
<i>NetIntMargin</i>	0.123*** (9.09)	0.166*** (9.64)
<i>GettingCredit</i>	0.00243 (0.27)	-0.0432*** (-3.21)
<i>Medium-sized</i>	-0.274*** (-7.61)	-0.273*** (-7.61)
<i>Large-sized</i>	-0.495*** (-11.40)	-0.490*** (-11.31)
<i>Population1M</i>	-0.00521 (-0.14)	0.0468 (1.21)
<i>Age</i>	-0.00234 (-0.08)	-0.0319 (-1.08)
<i>SoleProprietorship</i>	0.0522 (1.10)	0.0937* (1.91)
<i>Partnership</i>	0.0995** (2.35)	0.120*** (2.77)
<i>State-owned</i>	-0.372 (-1.02)	-0.375 (-1.02)
<i>Foreign-owned</i>	0.180** (2.56)	0.203*** (2.86)
<i>Multiple</i>	-0.0824* (-1.80)	-0.0582 (-1.27)
<i>ManagerExperience</i>	-0.0795* (-1.85)	-0.0995** (-2.30)
<i>FemaleManager</i>	0.0454 (1.18)	0.0108 (0.27)
<i>Audited</i>	-0.287*** (-8.56)	-0.284*** (-8.42)
<i>LnGDP</i>	0.302*** (8.82)	0.441*** (9.37)
<i>Inflation</i>	0.00148 (0.33)	0.000134 (0.03)
Industry dummies	Yes	Yes
Survey year dummies	Yes	Yes
Constant	0.525** (2.34)	1.236*** (4.14)
Obs	8395	8395
Chi-squared test	1500.2***	1539.8***
Wald test of exogeneity		19.12***

t statistics in parentheses. Robust standard errors are used. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Description of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those that need financing but did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?"; Firm-specific and country-specific control variables include the firm's level of productivity (*Productivity*), age (*Age*), size (*Medium-sized*, *Large-sized*), firm's locality (*Population1M*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), audit status (*Audited*), the country's getting credit indicator (*GettingCredit*), net interest margin (*NetIntMargin*), particularized trust (*TrustinFamily*,

orthogonalized), economic development (*LnGDP*, orthogonalized) and inflation (*Inflation*). For a full definition of the variables, please refer to Appendix Table A3. We also include survey-year and industry dummies based on the firm's ISIC. List of instruments (IV-probit): *NumSysBankCrisis*, *NumSovereignCrisis*, and *HierarchicalReligion*.

Table 4b. First stage regression results – IV probit regressions and test of the validity of instruments

	<i>TrustinBanks</i>	<i>InterpersonalTrust</i>
Excluded Instruments		
<i>NumSysBankCrisis</i>	-0.0529*** (-30.85)	0.0185*** (18.12)
<i>NumSovereignCrisis</i>	-0.0228*** (-11.74)	-0.00621*** (-6.69)
<i>HierarchicalReligion</i>	-0.00645*** (-57.15)	-0.00352*** (-63.18)
Control variables	Yes	Yes
Constant	Yes	Yes
<i>Test of validity & relevance of instruments</i>		
F-test of excluded instruments (1 st -stage)	1171.41***	2129.79***
Sanderson-Windmeijer F-test of excluded instruments (Weak identification)	459.72***	939.74***
Kleibergen Paap rk LM test		896.12***
Anderson-Rubin Wald test (Weak-instrument-robust inference)		8.93***
Hansen-J test		0.121
p-value		0.7283
Wald test of exogeneity		15.336***

t statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Definition of variables: *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" Instruments' definitions: *NumSysBankCrisis* is the number of systemic banking crises experienced by country j since 1970; *NumSovereignCrisis* is the number of sovereign debt crises experienced by country j since 1970; *HierarchicalReligion* is equal to the percentage of the population whose religions are either Catholicism, Islam, or Orthodox Christianity.

Table 4c. Marginal Effects of *TrustinBanks* and *InterpersonalTrust* on the probability that a firm becomes discouraged from borrowing from financial institutions (Pr (*BorrowerDiscouragement*=1))

	Probit	IV-Probit
<i>TrustinBanks</i>	-0.2136*** (0.0656)	-0.6440*** (0.1174)
<i>InterpersonalTrust</i>	-0.1481 (0.1000)	0.5949*** (0.1962)

Delta standard errors in parentheses.

Table 5. Marginal effects of *TrustinBanks* and *InterpersonalTrust* on the probability of borrower discouragement, excluding firms that do not rely on banks to finance their working capital operations.

	Probit	IV-Probit
<i>TrustinBanks</i>	-0.3546*** (0.0873)	-1.2130*** (0.1684)
<i>InterpersonalTrust</i>	-0.7468*** (0.1516)	0.4973 (0.3544)

Delta standard errors in parentheses.

Table 6a. The impact of the interaction between trust in banks (*TrustinBanks*) and interpersonal trust (*InterpersonalTrust*) on borrower discouragement.

	(i) Probit Pr (<i>BorrowerDiscouragement</i> =1)	(ii) IV-Probit
<i>TrustinBanks</i>	1.636*** (5.72)	0.870 (1.17)
<i>InterpersonalTrust</i>	8.416*** (10.09)	9.554*** (5.80)
<i>TrustinBanks*InterpersonalTrust</i>	-15.52*** (-11.62)	-14.88*** (-4.67)
Control Variables	Yes	Yes
Industry Dummies	Yes	Yes
Survey Year Dummies	Yes	Yes
Constant	-0.564** (-2.34)	-0.240 (-0.53)
Obs	8395	8395
Wald test of exogeneity		19.85***
Chi-squared test	1784.3***	1692.3***

t and *z* statistics in parentheses. Robust standard errors are used. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Description of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those that need credit but did not apply for a loan or line of credit because of complex application procedures, unfavorable interest rates, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country *j* who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted, *InterpersonalTrust* is the proportion of individuals in country *j* who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" *TrustinBanks* x *InterpersonalTrust* is the interaction term between *TrustinBanks* and *InterpersonalTrust*. Firm-specific and country-specific control variables include the firm's level of productivity (*Productivity*), age (*Age*), size (*Medium-sized*, *Large-sized*), firm's locality (*PopulationIM*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), audit status (*Audited*), the country's getting credit indicator (*GettingCredit*), net interest margin (*NetIntMargin*), particularized trust (*TrustinFamily*, orthogonalized), economic development (*LnGDP*, orthogonalized) and inflation (*Inflation*). For full definition of the variables, please refer to Appendix Table A3. We also include survey-year and industry dummies based on the firm's ISIC. Excluded instruments (IV-probit): *NumSysBankCrisis*, *NumSovereignCrisis*, *HierarchicalReligion*, *NumSysBankCrisis*AbsLatitude*, *NumSovereignCrisis*AbsLatitude*, *HierarchicalReligion*AbsLatitude*

Table 6b. Marginal probability effects of *TrustinBanks* on borrower discouragement ($\Pr(\text{BorrowerDiscouragement}=1)$) at different percentile levels of *InterpersonalTrust*

Percentile Levels	(i)	(ii)
	Probit	IV-Probit
P10	0.2911*** (3.94)	0.0623 (0.10)
P25	0.2564*** (3.51)	0.0261 (0.02)
P50	-0.0691 (-1.06)	-0.2875*** (-2.71)
P75	-0.6903*** (-10.14)	-0.8611*** (-9.78)
P90	-0.9799*** (-14.03)	-1.1838*** (-9.50)

z-statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Description of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those who need financing but did not apply for a loan or line of credit because of complex loan application procedures, unfavorable interest rates, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES survey was conducted, *InterpersonalTrust* is the proportion of individuals in country j who indicate, “Most people can be trusted” to the WVS question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”

Table 7a. Marginal Effects of *TrustinBanks* and *InterpersonalTrust* on the probability that a firm becomes a discouraged borrower (*BorrowerDiscouragement*) using alternative instruments – IV-probit

	(i)	(ii)	(iii)	(iv)	(v)
<i>TrustinBanks</i>	-0.9644*** (0.1905)	-0.7680*** (0.1744)	-0.6291*** (0.1166)	-0.6514*** (0.1186)	-0.4213*** (0.1102)
<i>InterpersonalTrust</i>	0.1905 (0.2702)	0.4539*** (0.1612)	0.6104** (0.2410)	0.5685 (0.1970)	0.1746 (0.1820)

Excluded Instruments: (i) *NumSysBankCrisis*, *NumSovereignCrisis*, *AbsLatitude*; (ii) *NumSysBankCrisis*, *NumSovereignCrisis*, *Animals*; (iii) *NumSysBankCrisis*, *NumSovereignCrisis*, *ColonialDuration*; (iv) *NumSysBankCrisis*, *NumSovereignCrisis*, *AbsLatitude*, *HierarchicalReligion*; (v) *NumSysBankCrisis*, *GeneticDistance*, *HierarchicalReligion*
Delta standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Variable definitions: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those who did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, “Most people can be trusted” to the WVS question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”. Control variables include *TrustinFamily* (orthogonalized), the firm’s level of productivity (*Productivity*), age (*Age*), size (*Medium-sized*, *Large-sized*), firm’s locality (*Population1M*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), audit status (*Audited*), a country’s getting credit indicator (*GettingCredit*), a country’s average net interest margin (*NetIntMargin*), economic development (*LnGDP*, *orthogonalized*) and inflation (*Inflation*). For full definition of the variables, please refer to Appendix (Table A3). We also include survey-year and industry dummies based on the firm’s ISIC.

Table 7b. First-Stage Regressions using Alternative Instruments

	(i)	(ii)	(iii)	(iv)	(v)
Endogenous: <i>TrustinBanks</i>					
<i>NumSysBankCrisis</i>	-0.0268*** (-13.20)	-0.0363*** (-16.33)	-0.0196*** (-10.24)	-0.0507*** (-27.65)	-0.0785*** (-31.37)
<i>NumSovereignCrisis</i>	-0.0142*** (-5.39)	-0.0300*** (-9.69)	-0.0442*** (-17.99)	-0.0230*** (-11.68)	
<i>AbsLatitude</i>	0.0422*** (16.61)			0.0174*** (8.46)	
<i>Animals</i>		0.0213*** (14.07)			
<i>ColonialDuration</i>			-0.0832*** (-39.51)		
<i>HierarchicalReligion</i>				-0.0063*** (-53.22)	-0.0068*** (-55.16)
<i>GeneticDistance</i>					-5.253*** (-13.48)
F-test of excluded instruments (1 st stage)	305.51***	104.24***	605.48***	1204.81***	1054.65***
Sanderson-Windmeijer F-test of excluded instruments (Weak Identification)	309.84***	242.62***	868.50***	398.21***	566.15***
Endogenous: <i>InterpersonalTrust</i>					
<i>NumSysBankCrisis</i>	0.0329*** (22.95)	0.0230*** (20.71)	0.0347*** (26.26)	0.0199*** (19.25)	0.0124*** (11.22)
<i>NumSovereignCrisis</i>	-0.0016 (-1.33)	-0.0248*** (-20.31)	-0.0127*** (-10.52)	-0.0064*** (-7.29)	
<i>AbsLatitude</i>	0.0251*** (18.27)			0.0113*** (10.18)	
<i>Animals</i>		0.0302*** (50.69)			
<i>ColonialDuration</i>			-0.0315*** (-27.86)		
<i>HierarchicalReligion</i>				-0.0034*** (-62.89)	-0.0037*** (-60.77)
<i>GeneticDistance</i>					-3.188*** (-20.05)
F-test of excluded instruments (1 st stage)	295.67***	868.15***	422.05***	1575.99***	2449.29***
Sanderson-Windmeijer F-test of excluded instruments (Weak Identification)	358.57***	1446.33***	534.88***	639.80***	1466.75***
Obs	8395	8395	8395	8395	8260
Kleibergen-Paap rk LM test	602.7***	292.8***	713.3***	1028.5***	1009.745***
Hansen J-test	0.725	0.262	0.173	4.593	0.351
Hansen J-test (p-value)	0.395	0.609	0.678	0.101	0.5534
Anderson-Rubin Wald test (Weak-instrument robust inference)	8.218***	5.295***	9.623***	8.196***	6.34***
Wald test of exogeneity	22.25***	20.08***	22.86***	18.66***	2.82

t statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Excluded Instruments: (i) *NumSysBankCrisis*, *NumSovereignCrisis*, *AbsLatitude*; (ii) *NumSysBankCrisis*, *NumSovereignCrisis*, *Animals*; (iii) *NumSysBankCrisis*, *NumSovereignCrisis*, *ColonialDuration*; (iv) *NumSysBankCrisis*, *NumSovereignCrisis*, *AbsLatitude*, *HierarchicalReligion*; (v) *NumSysBankCrisis*, *GeneticDistance*, *HierarchicalReligion*. Endogenous variables: *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". Instruments' definitions: *NumSysBankCrisis* is the number of systemic banking crises experienced by country j since 1970; *NumSovereignCrisis* is the number of sovereign debt crises experienced by country j since 1970; *HierarchicalReligion* is equal to the percentage of the population whose religions are either Catholicism, Islam, or Orthodox Christianity. *AbsLatitude* is the natural logarithm of the absolute value of the latitude of a country's approximate geodesic

centroid. *Animals* is the number of domesticable mammals that weigh more than 45 kg known to exist in prehistory. *ColonialDuration* refers to the duration of colonization in a country, in hundreds of years.

Table 8a. The impact of trust in banks on borrower discouragement, audited vs. unaudited firms

	Probit	IV-Probit	Probit	IV-Probit
	Audited		Unaudited	
	Pr(<i>BorrowerDiscouragement</i> = 1)			
<i>TrustinBanks</i>	-0.101 (-0.34)	-0.932 (-1.01)	-1.020*** (-3.56)	-1.833*** (-4.66)
Control variables	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Survey year dummies	Yes	Yes	Yes	Yes
Constant	-0.122 (-0.38)	0.734 (1.32)	0.749** (2.26)	0.969** (2.57)
<i>TrustinBanks</i> (First stage) – excluded instruments				
<i>NumSysBankCrisis</i>		-0.0438*** (-18.31)		-0.0623*** (-21.20)
<i>NumSovereignCrisis</i>		-0.0138*** (-5.58)		-0.0405*** (-12.15)
<i>HierarchicalReligion</i>		-0.00598*** (-37.27)		-0.00720*** (-45.64)
F-test of excluded instruments (1 st stage)		599.58***		704.36***
Sanderson-Windmeijer F-test of excluded instruments		76.51***		289.53***
N	3456	3456	4917	4917
Wald test of exogeneity		14.81***		27.82***
Chi-squared test	571.8***	570.1***	774.6***	817.1***
Kleibergen-Paap rk LM test		136.5***		694.2***
Hansen J-test		0.152		1.407
Hansen J-test (p-value)		0.697		0.236
Anderson-Rubin Wald test (Weak identification)		3.360**		6.953***

t statistics in parentheses. Robust standard errors are used. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Note that *InterpersonalTrust* is also considered endogenous. For the sake of brevity, we only present the results on our main variable of interest: *TrustinBanks*. Description of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those who need financing but did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country *j* who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country *j* who indicate, “Most people can be trusted” to the WVS question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”. Control variables include *TrustinFamily* (orthogonalized), the firm’s level of productivity (*Productivity*), age (*Age*), size (*Medium-sized*, *Large-sized*), firm’s locality (*PopulationIM*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), a country’s getting credit indicator (*GettingCredit*), a country’s average net interest margin (*NetIntMargin*), economic development (*LnGDP*, *orthogonalized*) and inflation (*Inflation*). For full definition of the variables, please refer to Appendix (Table A3). We also include survey-year and industry dummies based on the firm’s ISIC. Instruments’ definitions: *NumSysBankCrisis* is the number of systemic banking crises experienced by country *j* since 1970; *NumSovereignCrisis* is the number of sovereign debt crises experienced by country *j* since 1970; *HierarchicalReligion* is equal to the percentage of the population whose religions are either: Catholicism, Islam, and Orthodox Christianity.

Table 8b. Marginal effects of *TrustinBanks* on borrower discouragement (Pr (*BorrowerDiscouragement*=1)), for audited vs. unaudited firms

	Probit	IV probit	Probit	IV-Probit
	Audited		Unaudited	
<i>TrustinBanks</i>	-0.0340 (0.1013)	-0.3129 (0.3107)	-0.3210*** (0.0890)	-0.5761*** (0.1215)

Delta standard error in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Definitions of variables: *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted. *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those who need financing did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit.

Table 9a. The impact of trust in banks on borrower firm discouragement, according to firm size: non-small firms, and non-large firms (SMEs)

	Non-small Probit	Non-small IV Probit	SMEs Probit	SMEs IV Probit
	Pr (<i>BorrowerDiscouragement</i> = 1)			
<i>TrustinBanks</i>	-0.864*** (-3.23)	-2.429*** (-4.60)	-0.471** (-2.17)	-1.720*** (-4.58)
Control variables	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Survey year dummies	Yes	Yes	Yes	Yes
Constant	0.311 (1.01)	1.086** (2.55)	0.411* (1.66)	1.087*** (3.42)
<i>TrustinBanks</i> (1 st stage)				
<i>NumSysBankCrisis</i>		-0.0490*** (-22.60)		-0.0593*** (-28.07)
<i>NumSovereignCrisis</i>		-0.0238*** (-8.73)		-0.0233*** (-10.44)
<i>HierarchicalReligion</i>		-0.00616*** (-43.02)		-0.00685*** (-50.67)
F-test of excluded instruments (1 st stage)		652.80***		887.64***
Sanderson-Windmeijer F-test of excluded instruments		241.52***		375.64***
Obs	4931	4931	6377	6377
Wald test of exogeneity		13.50***		16.19***
Chi-squared test	920.1***	970.0***	947.8***	977.6***
Kleibergen-Paap rk LM test		480.5***		713.4***
Hansen J-test		1.000		2.508
Hansen J-test (p-value)		0.317		0.113
Anderson-Rubin Wald test (Weak identification)		6.610***		7.399***

t statistics in parentheses. Robust standard errors are used. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Note that *InterpersonalTrust* is also considered endogenous. For the sake of brevity, we only present the results on our main variable of interest: *TrustinBanks*. Description of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those who need financing but did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country *j* who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country *j* who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". Control variables include *TrustinFamily* (orthogonalized), the firm's level of productivity (*Productivity*), age (*Age*), firm's locality (*PopulationIM*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), audit status (*Audited*), a country's getting credit indicator (*GettingCredit*), a country's average net interest margin (*NetIntMargin*), economic development (*LnGDP*, *orthogonalized*) and inflation (*Inflation*). For full definition of the variables, please refer to Appendix (Table A3). We also include survey-year and industry dummies based on the firm's ISIC. Instruments' definitions: *NumSysBankCrisis* is the number of systemic banking crises experienced by country *j* since 1970; *NumSovereignCrisis* is the number of sovereign debt crises experienced by country *j* since 1970; *HierarchicalReligion* is equal to the percentage of the population whose religions are either Catholicism, Islam, or Orthodox Christianity.

Table 9b. Marginal effects of *TrustinBanks* on borrower discouragement (*BorrowerDiscouragement*), according to firm size (Non-small: Large and Medium-sized firms; Non-large (SMEs): Small and Medium-sized firms)

	Probit	IV probit	Probit	IV-Probit
	Non-small		Non-large firms (SMEs)	
<i>TrustinBanks</i>	-0.2807*** (0.0863)	-0.7813*** (0.1653)	-0.1577*** (0.0727)	-0.5738*** (0.1237)

Delta standard error in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Definitions of variables: *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted. *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those who need financing but did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit.

Table 10a. Correlation matrix between our trust variables.

	<i>TrustinBanks</i>	<i>InterpersonalTrust</i>
<i>TrustinBanks</i>	1.0000	
<i>InterpersonalTrust</i>	0.1772	1.0000

Description of variables: *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?"

Table 10b. The impact of trust in banks on borrower discouragement, using orthogonalized value of *TrustinBanks*

	(i) Probit	(ii) IV Probit
<i>TrustinBanks-orth</i>	-0.651*** (-3.24)	-1.974*** (-5.39)
<i>InterpersonalTrust</i>	-0.724** (-2.38)	0.995* (1.91)
Control variables	Yes	Yes
Industry dummies	Yes	Yes
Survey year dummies	Yes	Yes
Constant	0.220 (1.35)	0.310* (1.70)
First stage (excluded instruments): <i>InterpersonalTrust</i>		
<i>NumSysBankCrisis</i>		0.0185*** (18.12)
<i>NumSovereignCrisis</i>		-0.00621*** (-6.69)
<i>HierarchicalReligion</i>		-0.00352*** (-63.18)
F-test of excluded instruments (1 st stage)		2129.75***
Sanderson-Windmeijer F-test of excluded instruments		1233.16***
First stage (excluded instruments): <i>TrustinBanks</i>		
<i>NumSysBankCrisis</i>		-0.0607*** (-31.39)
<i>NumSovereignCrisis</i>		-0.0202*** (-10.27)
<i>HierarchicalReligion</i>		-0.00498*** (-43.14)
F-test of excluded instruments (1 st stage)		665.21***
Sanderson-Windmeijer F-test of excluded instruments		459.72***

instruments		
Obs	8395	8395
Wald test of exogeneity		19.02***
Chi-squared test	1500.2***	1539.8***
Kleibergen-Paap rk LM test		896***
Hansen J-test		0.113
Hansen J-test (p-value)		0.737
Anderson-Rubin Wald test (Weak-instrument robust inference)		8.919***

t and *z* statistics in parentheses. Robust standard errors are used. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Description of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those that need financing but did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks-orth* is the proportion of individuals in country *j* who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted, orthogonalized with *InterpersonalTrust*; *InterpersonalTrust* is the proportion of individuals in country *j* who indicate, “Most people can be trusted” to the WVS question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”. Control variables include trust in family (*TrustinFamily*, orthogonalized), the firm’s level of productivity (*Productivity*), age (*Age*), size (*Medium-sized*, *Large-sized*), firm’s locality (*Population1M*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), audit status (*Audited*), the country’s getting credit indicator (*GettingCredit*), a country’s average net interest margin (*NetIntMargin*), economic development (*LnGDP*, orthogonalized) and inflation (*Inflation*). For full definition of the variables, please refer to Appendix (Table A3). We also include survey-year and industry dummies based on the firm’s ISIC.

Table 10c. Marginal effects of *TrustinBanks* on the probability of borrower discouragement, using the orthogonalized values of *TrustinBanks* (to *InterpersonalTrust*): *TrustinBanks-orth*

	Probit	IV probit
<i>TrustinBanks-orth</i>	-0.2136*** (0.0656)	-0.6440*** (0.1174)
<i>InterpersonalTrust</i>	-0.2377** (0.0994)	0.3248* (0.1694)

Table 10d. Marginal effects of *TrustinBanks-orth* (orthogonalized value of trust in banks) on borrower discouragement ($\Pr(\text{BorrowerDiscouragement})=1$) according to different percentile levels of *InterpersonalTrust*

Percentile Levels	(i)	(ii)
	Probit	IV-Probit ^a
P10	0.3650*** (0.0745)	0.1639 (0.75)
P25	0.3287*** (0.0738)	0.1251 (0.59)
P50	-0.0167 (0.0656)	-0.2103*** (-1.43)
P75	-0.6791*** (0.0660)	-0.8238*** (-9.51)
P90	-0.9809*** (0.0682)	-1.1689*** (-9.42)

Table 11a. The impact of the interaction between *TrustinBanks* and *InterpersonalTrust* on the proportion of working capital operations financed by banks

	OLS	Heckman (i)	Heckman-two step <i>BankFinance</i>	Heckman (ii)	IV Regression
<i>TrustinBanks</i>	-0.434*** (-12.60)	-0.508*** (-5.83)	-0.501*** (-6.14)	-0.511*** (-6.15)	-0.275*** (-3.48)
<i>InterpersonalTrust</i>	-1.160*** (-11.50)	-1.511*** (-6.35)	-1.483*** (-6.02)	-1.549*** (-6.15)	-2.275*** (-6.08)
<i>TrustinBanks*InterpersonalTrust</i>	2.193*** (13.12)	3.758*** (9.92)	3.725*** (9.69)	3.787*** (9.67)	3.108*** (5.65)
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes
Survey Year Dummies	Yes	Yes	Yes	Yes	Yes
Constant	0.306*** (9.87)	0.301*** (3.52)	0.332*** (4.06)	0.300*** (3.77)	0.223*** (4.10)
Selection Equation: <i>NeedExternalFinancing</i>					
<i>Medium-sized</i>		0.217*** (6.82)	0.219*** (6.84)	0.228*** (6.81)	
<i>Large-sized</i>		0.290*** (8.17)	0.290*** (8.16)	0.320*** (7.88)	
<i>Age</i>		0.0457** (2.11)	0.0461** (2.10)	0.000940 (0.04)	
<i>PercSalesAfterDelivery</i>		0.00838*** (22.50)	0.00832*** (22.08)	0.00840*** (20.95)	
<i>ImportLicense</i>				0.258*** (6.05)	
<i>ISOCertification</i>				0.0294 (0.82)	
<i>Foreign-owned</i>				-0.366*** (-6.23)	
<i>Multiple</i>				0.0689* (1.79)	
<i>ManagerExperience</i>				0.141*** (3.56)	
Industry dummies				Yes	
Constant		-0.975*** (-15.02)	-0.973*** (-14.86)	-0.930*** (-11.72)	
Inverse Mills Ratio (lambda)			-0.103*** (-4.18)		
atrho		-0.267*** (-5.22)		-0.278*** (-4.32)	
Obs	10911	9270	9270	8989	10911
F-statistics	22.32***				20.29***
Kleibergen-Paap rk LM test					809.2***
Hansen J statistic					2.985
Hansen J (p-value)					0.0841
Test of exogeneity					106.2***
Anderson-Rubin Wald test					11.60***
Wald test of independent equations		27.23***		14.92***	
rho		-0.261	-0.382	-0.271	

t statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Definition of variables: *BankFinance* is the proportion of the firm's working capital needs that is financed by banks; *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". *TrustinBanks*InterpersonalTrust* is the interaction term between *TrustinBanks* and *InterpersonalTrust*. Firm-specific and country-specific control variables include the firm's level of productivity (*Productivity*), age (*Age*), size (*Medium-sized*, *Large-sized*), firm's locality (*PopulationIM*), legal status (*SoleProprietorship*, *Partnership*), ownership (*State-owned*, *Foreign-owned*, *Multiple*), manager-specific characteristics (*ManagerExperience*, *FemaleManager*), audit status (*Audited*), the country's getting credit indicator (*GettingCredit*), net interest margin (*NetIntMargin*), particularized trust (*TrustinFamily*, orthogonalized), economic development (*LnGDP*, orthogonalized) and inflation (*Inflation*). For full definition of the variables, please refer to Appendix (Table A3). Selection Equation: *NeedExternalFinancing* is equal to one if the firm has applied for a loan in the past 12 months or if the firm has an existing line of credit, and zero, if the firm did not apply for a loan. *PercSalesAfterDelivery* is the percentage of sales paid by customers after the delivery of goods and services; *ISOCertification* is a dummy variable equal to one if a firm has an ISO certification, and zero, otherwise; *ImportLicense* is a dummy variable equal to one if a firm has an import license, and zero, otherwise. Excluded instruments for the IV regression: *NumSysBankCrisis*, *HierarchicalReligion*, *HierarchicalReligion*NumSysBankCrisis*, *HierarchicalReligion*FiscalCostCrisis*

Table 11b. Marginal effects of *TrustinBanks* on bank credit reliance to finance working capital needs (*BankFinance*), according to different percentile levels of *InterpersonalTrust*

Percentile Levels	<i>BankFinance</i>			
	OLS	Heckman (i)	Heckman (ii)	IV Regression
P10	-0.3206*** (0.0283)	-0.3377*** (0.0752)	-0.3390*** (0.0709)	-0.1137** (0.0564)
P25	-0.3171*** (0.0282)	-0.3072*** (0.0733)	-0.3083*** (0.0690)	-0.1088* (0.0558)
P50	-0.1740*** (0.0230)	0.0276 (0.0590)	0.0291 (0.0560)	0.0941** (0.0409)
P75	0.0896*** (0.0258)	0.3895*** (0.0633)	0.3939*** (0.0642)	0.4676*** (0.0759)
P90	0.1724*** (0.0296)	0.5316*** (0.0703)	0.5370*** (0.0727)	0.5850*** (0.0941)

Delta standard error in parentheses. The marginal effect of *TrustinBanks* on *BankFinance*, conditional on *NeedforExternalFinancing* being observed, is reported for the Heckman selection estimation method.

Table 12a. The impact of trust in banks on borrower discouragement, using Heckman Probit estimation

	Heckman Probit			
	Pr(<i>BorrowerDiscouragement</i> =1)			
	(i)	(ii)	(iii)	(iv)
<i>TrustinBanks</i>	-0.488** (-2.01)	-0.480** (-1.99)	0.656 (1.55)	0.663 (1.56)
<i>InterpersonalTrust</i>	-0.388 (-0.77)	-0.436 (-0.86)	3.369*** (2.63)	3.317** (2.57)
<i>TrustinBanks*InterpersonalTrust</i>			-6.401*** (-3.09)	-6.390*** (-3.06)
Control Variables	-4.660**	-4.758**	-4.188*	-4.281**
Industry Dummies	(-2.08)	(-2.12)	(-1.94)	(-1.97)
Survey Year Dummies	0.00612	0.00568	0.00655	0.00609
Constant	1.508*** (4.58)	1.479*** (4.50)	0.825** (2.18)	0.794** (2.09)
Selection Equation:				
<i>CreditConstrained</i>				
<i>Medium-sized</i>	-0.0873*** (-2.90)	-0.0975*** (-3.19)	-0.0881*** (-2.93)	-0.0981*** (-3.22)
<i>Large-sized</i>	-0.229*** (-6.27)	-0.235*** (-6.19)	-0.231*** (-6.33)	-0.236*** (-6.24)
<i>Age</i>	-0.00825 (-0.40)	-0.0199 (-0.89)	-0.00876 (-0.43)	-0.0203 (-0.91)
<i>ImportLicense</i>	-0.282*** (-6.33)	-0.289*** (-6.35)	-0.283*** (-6.35)	-0.290*** (-6.36)
<i>ISOCertification</i>	-0.0823*** (-2.59)	-0.0580* (-1.78)	-0.0792** (-2.50)	-0.0549* (-1.68)
<i>PercSalesAfterDelivery</i>	-0.00270*** (-7.41)	-0.00306*** (-8.18)	-0.00266*** (-7.32)	-0.00303*** (-8.08)
<i>Foreign-owned</i>		-0.213*** (-3.53)		-0.213*** (-3.54)
<i>Multiple</i>		-0.0526 (-1.32)		-0.0526 (-1.32)
<i>ManagerExperience</i>		-0.0509 (-1.43)		-0.0508 (-1.42)
Industry dummies	No	Yes	No	Yes
Constant	-0.126** (-2.12)	-0.0448 (-0.64)	-0.125** (-2.12)	-0.0452 (-0.65)
Obs	10098	10098	10098	10098
Chi-squared test	14768.3***	22437.0***	12823.7***	20280.5***
Wald test of independent equations	38.05***	35.52***	33.00***	31.01***
atrho	-1.181***	-1.179***	-1.231***	-1.212***
rho	-0.828	-0.827	-0.843	-0.837

t statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Definition of variables: *BorrowerDiscouragement* is a dummy indicator equal to one for discouraged firms or those that need financing but did not apply for a loan or line of credit because of complex loan application procedures, among others, and zero, for those who applied for a loan or line of credit. *TrustinBanks* is the proportion of individuals in country j who have a great deal or quite a lot of confidence in banks in the most recent World Values Survey (WVS) before the WBES was conducted; *InterpersonalTrust* is the proportion of individuals in country j who indicate, "Most people can be trusted" to the WVS question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". *TrustinBanks*InterpersonalTrust* is the interaction term between *TrustinBanks* and *InterpersonalTrust*. *CreditConstrained* is a dummy variable equal to one if the firm applied for a loan in the past 12 months and has no existing line of credit, and if the firm needs credit but has not applied for a loan, and zero if the firm has an existing line of credit or has not applied for a loan because it does not need external financing. *PercSalesAfterDelivery* is the percentage of sales paid by customers after the delivery of goods and services (*PercSalesAfterDelivery*); *ISOCertification* is a dummy variable equal to one if a firm has an ISO certification, and zero, otherwise; *ImportLicense* is a dummy variable equal to one if a firm has an import license, and zero, otherwise.

Table 12b. Conditional marginal effects of *TrustinBanks* and *InterpersonalTrust* on the probability of borrower discouragement, excluding firms that do not rely on banks to finance their working capital operations.

	Heckman Probit (i)	Heckman Probit (ii)
<i>TrustinBanks</i>	-0.1212** (0.0605)	-0.1194** (0.0601)
<i>InterpersonalTrust</i>	-0.0964 (0.1260)	-0.1085 (0.1270)

Delta standard error in parentheses.

Table 12c. Conditional marginal probability effects of *TrustinBanks* on borrower discouragement ($\Pr(\text{BorrowerDiscouragement}=1)$) at different percentile levels of *InterpersonalTrust*

Percentile Levels	(iii)	(iv)
P10	0.0806 (0.0851)	0.0819 (0.0850)
P25	0.0781 (0.0845)	0.0794 (0.0844)
P50	-0.0645 (0.0605)	-0.0624 (0.0602)
P75	-0.2258*** (0.0728)	-0.2240*** (0.0725)
P90	-0.3449*** (0.1043)	-0.3437*** (-0.1039)

Delta standard error in parentheses.

Table 13. Marginal effects of trust in banks (*TrustinBanks*) on the probability that a firm gets discouraged from borrowing from financial institutions (*BorrowerDiscouragement*), using a subsample of firms in countries with relatively lower Islamic banking presence

	IV probit	Heckman Probit
<i>TrustinBanks</i>	-6.508*** (0.1992)	-0.4266* (0.2569)

Delta standard error in parentheses. List of excluded instruments in the IV-probit regression: *NumSysBankCrisis*, *AbsLatitude*, *Animals*. List of variables in the selection equation: *Small-sized*, *Age*, *PercSalesAfterDelivery*, *ISOCertification*, *ImportLicense*, *Industry dummies*).

Appendix.

Table A1. Summary Statistics of Variables used in the Study (full-sample)

	Obs	Mean	Std Dev	Min	Max
<i>BorrowerDiscouragement</i>	8395	0.5470	0.4978	0	1
<i>TrustinBanks</i>	15505	0.5436	0.2295	0.2174	0.9174
<i>InterpersonalTrust</i>	15505	0.1453	0.0935	0.0214	0.3137
<i>BankFinance</i>	15505	0.1266	0.2230	0	1
<i>TrustinFamily</i>	15505	0.9592	0.0388	0.8170	0.9958
<i>Productivity</i>	15505	13.3636	4.6509	-2.1484	28.2686
<i>NetIntMargin</i>	15505	4.6712	1.8410	1.4627	8.4599
<i>GettingCredit</i>	15505	5.6324	2.9959	0	11
<i>PopulationIM</i>	15505	0.5048	0.4999	0	1
<i>Age</i>	15505	2.9408	0.6411	0.6931	5.2832
<i>SoleProprietorship</i>	15505	0.24431	0.4297	0	1
<i>Partnership</i>	15505	0.1999	0.3999	0	1
<i>State-owned</i>	15505	0.0029	0.0538	0	1
<i>Foreign-owned</i>	15505	0.0620	0.2411	0	1
<i>Multiple</i>	15505	0.1514	0.3585	0	1
<i>ManagerExperience</i>	15505	0.8230	0.3817	0	1
<i>FemaleManager</i>	15505	0.2130	0.4095	0	1
<i>Audited</i>	15505	0.4250	0.4945	0	1
<i>LnGDP</i>	15505	8.6216	0.8405	7.018	10.376
<i>Inflation</i>	15505	4.5832	4.3475	-1.566	15.177
<i>Small-sized</i>	15505	0.4226	0.4940	0	1
<i>Medium-sized</i>	15505	0.3457	0.4756	0	1
<i>Large-sized</i>	15505	0.2317	0.4220	0	1
<i>SurveyYear2015</i>	15505	0.2462	0.4308	0	1
<i>SurveyYear2016</i>	15505	0.1537	0.3607	0	1
<i>SurveyYear2017</i>	15505	0.1535	0.3605	0	1
<i>SurveyYear2018</i>	15505	0.0380	0.1912	0	1
<i>SurveyYear2019</i>	15505	0.4086	0.4916	0	1
<i>HierarchicalReligion</i>	15505	72.6495	29.6354	4.1	100
<i>NumSysBankCrisis</i>	15505	1.4230	0.7017	0	3
<i>NumSovereignCrisis</i>	15505	0.7535	0.6725	0	3
<i>AbsLatitude</i>	15505	2.92528	0.9843	0.6931	4.0943
<i>GeneticDistance</i>	15232	0.0287	0.0117	0.0148	0.0499
<i>Animals</i>	15505	5.8470	3.3874	0	9
<i>ColonialDuration</i>	15505	1.3553	1.6317	0	4.93

Table A2. Industries and Sector of the firms in the sample (full sample: 15505; firms that need credit: 8395)

ISIC	Sector	Obs (full sample: 15 505)	Obs (firms that need credit: 8395)
Manufacture of food products and beverages	Manufacturing	2145	1202
Manufacture of tobacco products	Manufacturing	13	6
Manufacture of textiles	Manufacturing	502	311
Manufacture of wearing apparel	Manufacturing	1303	765
Tanning and dressing of leather	Manufacturing	180	114
Manufacture of wood and of wood products	Manufacturing	203	124
Manufacture of paper and paper products	Manufacturing	120	66
Publishing, printing and recorded media reproduction	Manufacturing	255	136
Manufacture of cook, refined petroleum products	Manufacturing	20	12
Manufacture of chemicals and chemical products	Manufacturing	592	305
Manufacture of rubber and plastic products	Manufacturing	695	358
Manufacture of other non-metallic mineral products	Manufacturing	845	454
Manufacture of basic metals	Manufacturing	141	75
Manufacture of fabricated metal products	Manufacturing	1115	613
Manufacture of machinery and equipment	Manufacturing	710	392
Manufacture of office and computing machinery	Manufacturing	11	4
Manufacture of electrical machinery and apparatus	Manufacturing	356	168
Manufacture of radio, television and communication equipment	Manufacturing	51	25
Manufacture of medical, precision and optical instruments	Manufacturing	65	36
Manufacture of motor vehicles, trailers	Manufacturing	83	48
Manufacture of other transport and equipment	Manufacturing	42	23
Manufacture of furniture	Manufacturing	276	157
Recycling	Manufacturing	47	26
Construction	Construction	811	448
Sale, maintenance and repair of motor vehicles & motorcycles	Construction	470	256
Wholesale trade and commission trade	Construction	1226	689
Retail trade, except of motor vehicles and motorcycles	Construction	2029	1032
Hotels and restaurants	Construction	515	209
Land transport	Transport, storage & communications	279	166
Water transport	Transport, storage & communications	14	5
Air transport	Transport, storage & communications	8	0
Supporting and auxiliary transport activities	Transport, storage & communications	158	64
Post and telecommunications	Transport, storage & communications	50	19
Computer and related activities	Real estate, renting & business activities	175	87

Table A3. Description of variables

Variables	Description	Source
<i>BorrowerDiscouragement</i>	It indicates whether the firm is a discouraged borrower. It is equal to 1 for firms that need credit but did not apply for loans or line of credit because of complex loan application procedures, unfavorable interest rates, unattainable collateral requirements, insufficient loan size and maturity, expectation that loan would not be approved, among others. It is equal to 0 for firms who applied for a loan or a line of credit. Firms who did not apply for a loan because they have sufficient capital were excluded because they are not considered non-borrowers (following Chakravarty & Xiang (2013)). This is also consistent to the definition used by Wernli and Dietrich (2022)).	WBES 2015-2019
<i>TrustinBanks</i>	This captures the level of trust in banks, calculated based on responses to the question: “Could you tell me how much confidence you have in banks: Is it a great deal of confidence, quite a lot, not very much or none at all. This variable corresponds to the proportion of respondents who responded having a great deal or quite a lot of confidence in banks.	World Values Survey (WVS)
<i>InterpersonalTrust</i>	This captures the level of interpersonal trust, calculated based on responses to the question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” This variable corresponds to the proportion of the respondents in a given country who responded that most people can be trusted.	WVS
<i>Small-sized</i>	It is equal to 1 if the firm is small (5-19 full-time employees), and zero, otherwise, following the definition used in the WBES. In our estimations, it is the reference firm size.	WBES 2015-2019
<i>Medium-sized</i>	It is equal to 1 if the firm is medium-sized (20-99 full-time employees), and zero, otherwise.	WBES 2015-2019
<i>Large-sized</i>	It is equal to 1 if the firm is large (at least 100 full-time employees).	WBES 2015-2019
<i>Age</i>	It is the natural logarithm of the firm’s age	WBES 2015-2019
<i>Multiple</i>	It is a dummy variable equal to one if the firm is part of a larger establishment and zero, otherwise.	WBES 2015-2019
<i>State-owned</i>	It is a dummy variable equal to 1 if at least 50% of the firm is owned by the government/state, and zero, otherwise.	WBES 2015-2019
<i>Foreign-owned</i>	It is a dummy variable equal to 1 if at least 50% of the firm is owned by private foreign individuals and firms, and zero, otherwise.	WBES 2015-2019
<i>Audited</i>	It is equal to 1 if an external auditor checks and verifies the firm’s annual financial statement, and zero, otherwise.	WBES 2015-2019
<i>Productivity</i>	It is the natural logarithm of the value of firm sales over the number of permanent employees, scaled three years before the survey was conducted	WBES 2015-2019
<i>SoleProprietorship</i>	It is a firm’s legal status indicator. It is equal to 1 if the firm is a sole proprietorship and zero, otherwise	WBES 2015-2019

<i>Partnership</i>	It is equal to 1 if the firm's legal status is a partnership (limited or not) and zero, otherwise.	WBES 2015-2019
<i>ManagerExperience</i>	It measures the top manager's working experience in the sector. It is a dummy variable equal to 1 if the top manager has at least 10 years of experience working in the sector and zero, if less	WBES 2015-2019
<i>FemaleManager</i>	It is equal to one if the firm's top manager is female and zero, otherwise.	WBES 2015-2019
<i>Population1M</i>	It measures the population of the city where the firm is located. It is equal to 1 if the locality has a population of over 1 million, and zero, if less.	WBES 2015-2019
<i>TrustinFamily</i>	This captures the level of family trust, calculated based on responses to the question: «Could you tell me whether you trust your family completely, somewhat, not very much or not at all?» This variable corresponds to the proportion of respondents in a given country who responded: completely or somewhat. The variable is orthogonalized to <i>TrustinBanks</i> and <i>InterpersonalTrust</i> .	WVS
<i>LnGDP</i>	It is the natural logarithm of the real GDP per capita (constant 2010 USD), orthogonalized with the trust measures: <i>InterpersonalTrust</i> , <i>TrustinFamily</i> and <i>TrustinBanks</i>	World Development Indicators
<i>Inflation</i>	It is the inflation rate of the country where the firm is located.	World Development Indicators
<i>GettingCredit</i>	It is an index variable which measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 to 12	Doing Business, World Bank
<i>NetIntMargin</i>	It is the accounting value of a bank's net interest revenue as a percentage of its average interest-bearing asset.	Global Financial Development Database (GFDD)
<i>BankFinance</i>	The proportion of a firm's working capital financed by banks.	WBES 2015-2019
<i>Survey Year dummies</i>	Dummies indicating the year when the survey was conducted (SurveyYear2015, SurveyYear2016, SurveyYear2017, SurveyYear2018, SurveyYear2019).	WBES 2015-2019
<i>Industry Dummies</i>	Dummies indicating the firm's industry according to the ISIC classification. More information on the firms' ISIC in Table A2.	WBES 2015-2019
<i>NumSysBankCrisis</i>	The number of systemic banking crises experienced by country <i>j</i> since 1970.	Laeven and Valencia (2018)
<i>NumSovereignCrisis</i>	The number of sovereign debt crises experienced by country <i>j</i> since 1970.	Laeven and Valencia (2018)
<i>HierarchicalReligion</i>	The percentage of the population in a country whose religions are either Catholicism, Islam, or Orthodox Christianity	WVS
<i>AbsLatitude</i>	The natural logarithm of the absolute value of the latitude of a country's approximate geodesic centroid.	Galor and Özak (2016b), CIA World Factbook
<i>Animals</i>	The number of domesticable mammals that weigh more than 45 kg known to exist in prehistory in country <i>j</i> .	Olsson and Hibbs (2005)
<i>ColonialDuration</i>	The duration of colonization in a country (expressed in hundreds of years).	Galor and Özak (2016b)
<i>PercSalesAfterDelivery</i>	the percentage of sales paid by customers after the delivery of goods and services	WBES 2015-2019

<i>ISOCertification</i>	a dummy variable equal to one if a firm has an ISO certification, and zero, otherwise	WBES 2015-2019
<i>ImportLicense</i>	a dummy variable equal to one if a firm has an import license, and zero, otherwise	WBES 2015-2019
<i>CreditConstrained</i>	It is a dummy variable equal to one if the firm applied for a loan in the past 12 months and has no existing line of credit, and if the firm needs credit but has not applied for a loan, and zero if the firm has an existing line of credit or has not applied for a loan because it does not need external financing.	WBES 2015-2019; Authors' calculations
<i>NeedExternalFinancing</i>	It is equal to one if the firm has applied for a loan in the past 12 months or if the firm has an existing line of credit, and zero, if the firm did not apply for a loan.	WBES 2015-2019; Authors' calculations
<i>FiscalCostCrisis</i>	It refers to the outlays directly related to the restructuring of the financial sector (as a % of the GDP)	Laeven and Valencia (2018)

Table A4. Summary statistics of variables used in the study for a sample of firms which exclude discouraged borrowers

	Obs	Mean	Std Dev	Min	Max
<i>BankFinance</i>	10911	0.1439	0.2372	0	1
<i>TrustinBanks</i>	10911	0.5411	0.2332	0.2174	0.9174
<i>InterpersonalTrust</i>	10911	0.1423	0.0907	0.0214	0.3137
<i>TrustinFamily</i>	10911	0.9584	0.0414	0.8170	0.9958
<i>TrustinFamily (orthog)</i>	10911	-0.0042	0.0356	-0.1338	0.0584
<i>Productivity</i>	10911	13.5283	4.6208	-1.7918	28.2686
<i>NetIntMargin</i>	10911	4.5669	1.7872	1.4627	8.4599
<i>GettingCredit</i>	10911	5.5954	3.0848	0	11
<i>Small-sized</i>	10911	0.3956	0.4890	0	1
<i>Medium-sized</i>	10911	0.3524	0.4777	0	1
<i>Large-sized</i>	10911	0.2520	0.4342	0	1
<i>Population1M</i>	10911	0.4972	0.5000	0	1
<i>Age</i>	10911	2.9571	0.6447	0.6931	5.2149
<i>SoleProprietorship</i>	10911	0.2342	0.4235	0	1
<i>Partnership</i>	10911	0.1987	0.3990	0	1
<i>State-owned</i>	10911	0.0037	0.0604	0	1
<i>Foreign-owned</i>	10911	0.0692	0.2538	0	1
<i>Multiple</i>	10911	0.1639	0.3702	0	1
<i>ManagerExperience</i>	10911	0.8300	0.3757	0	1
<i>FemaleManager</i>	10911	0.2034	0.4025	0	1
<i>Audited</i>	10911	0.4656	0.4988	0	1
<i>LnGDP</i>	10911	8.6313	0.8438	7.0178	10.3764
<i>LnGDP (orthog)</i>	10911	0.1455	0.6417	-1.2678	1.2123
<i>Inflation</i>	10911	4.4395	4.3524	-1.5664	15.1768
<i>SurveyYear2015</i>	10911	0.2537	0.4351	0	1
<i>SurveyYear2016</i>	10911	0.1279	0.3339	0	1
<i>SurveyYear2017</i>	10911	0.1815	0.3854	0	1
<i>SurveyYear2018</i>	10911	0.0423	0.2012	0	1
<i>SurveyYear2019</i>	10911	0.3947	0.4888	0	1
<i>HierarchicalReligion</i>	10911	72.3420	30.2536	4.1	100
<i>NumSysBankingCrisis</i>	10911	1.4044	0.6872	0	3
<i>NumSovereignCrisis</i>	10911	0.7512	0.6671	0	3
<i>AbsLatitude</i>	10911	2.9068	0.9737	0.6931	4.0943
<i>GeneticDistance</i>	10661	0.0286	0.0114	0.0148	0.0499
<i>Animals</i>	10911	5.7823	3.3776	0	9
<i>ColonialDuration</i>	10911	1.4201	1.6372	0	4.93
<i>NeedExternalFinancing</i>	9270	0.3744	0.4840	0	1

