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Olayinka Oyekola, Sofia Johan, Rilwan Sakariyahu, Oluwatoyin Esther Dosumu, and Shima Amini

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Political institutions, financial liberalisation, and access to finance: firm-level empirical evidence

Olayinka Oyekola (Corresponding author)
Department of Economics
University of Exeter
Rennes Dr, Exeter EX4 4PU
Exeter, UK
Email: o.oyekola@exeter.ac.uk

Sofia Johan
College of Business
Florida Atlantic University
Florida, USA
Email: sjohan@fau.edu

Rilwan Sakariyahu
Business School
Edinburgh Napier University
Edinburgh, UK.
Email: r.sakariyahu@napier.ac.uk

Oluwatoyin Esther Dosumu
Alliance Manchester Business School
University of Manchester
Manchester, UK
Email: oluwatoyin.dosumu@manchester.ac.uk

Shima Amini
Department of Finance
University of Leeds
Leeds, UK
Email: s.amini@lubs.leeds.ac.uk

Abstract

Worldwide, lack of access to finance has been identified by many firms as the most detrimental obstacle facing business entities. This article studies how political institutions and financial liberalisation alleviate or deepen financial constraints faced by firms. We hypothesise that a complementarity exists between political institutions and financial liberalisation in constructing barriers to firms securing bank financing. Evidence from an international sample of over 63,000 firms in 75 countries, establishes that political institutions, proxied by democracy level in a country, and financial liberalisation, proxied by entry and participation of foreign banks, are significant factors in explaining cross-country disparities in firm-level credit accessibility. Importantly, we find a strong support for our proposition, documenting a remarkably significant and sizeable positive interaction effect between foreign bank presence and the level of democracy for access to finance. These results are robust against various forms of sensitivity checks. Overall, our study provides fresh insights into the financing effects of foreign bank activities interacted with democracy on firms. We conclude that these results may be of considerable benefit to policymakers, especially within developing, and emerging, economies, who are searching for economic growth, to re-evaluate what are the primary lending obstacles for their small and medium-sized enterprises.

JEL codes: G21; G23; G32; O16

Keywords: financial liberalisation; foreign banks; political institutions; access to finance; credit constraints; firm-level data

INTRODUCTION

Does global access to finance for firms differ across countries? If there are variations, why? Can the variance be explained by the political institutions of countries? We provide answers to these pertinent questions by empirically investigating the connection between political institutions, financial liberalisation, and firms' access to finance, using a large sample of cross-country firm-level data. We draw on the political economy theory of financial development, which stresses how political institutions shape the distribution of financial resources from the surplus units to the deficit sectors (Claessens, Feijen, & Laeven, 2008; Rajan & Zingales, 2003) and the distributional consequences of concentrating financial resources in the hands of the elite (Girma & Shortland, 2008). The implications of such command economy include collusion that leads to high borrowing cost, restricted access to economic opportunities, lack of competition, and sub-optimal performance of firms. To further advance our proposition, we leverage the financial liberalisation and efficient structure hypotheses, which jointly postulate that in a free market there are no constraints to financing, as all borrowing firms operate within an efficient financial system, guaranteeing equitable access to credit (Bekaert, Harvey, & Lundblad, 2005; Malkiel, 2003). Arguably, financing is the most significant driver of firms' growth, and as such, a painstaking evaluation of its constraints and effects is warranted.

The financial system is an enabler of economic activities. It exists as an organised platform for lenders and borrowers to exchange funds for production or consumption purposes, facilitated through intermediation by institutions, markets and instruments. Economic literature surmises that a stable and efficient financial system is fundamental to firm growth. Essentially, it accelerates capital formation by providing firms with the mechanisms to access funds for modernisation, diversification, and expansion of operations. From a macroeconomic perspective, having greater access to finance can be an elixir for firms to create more jobs, consequently reducing unemployment in the economy and contributing to the tax revenues of government. However, an increasing amount of empirical research suggests that firms across countries face different constraints in accessing finance. Some empirical findings show that some of these constraints are firm-specific (Bose, Mallick, & Tsoukas, 2020; Cull & Xu, 2005; Cornaggia & Li, 2019; Erel & Liebersohn, 2022). Other studies find that firms' credit constraints are due to country characteristics such as economic conditions and political institutions, with the latter having significant

impact on the general business environment (Beck, Demirguc-Kunt, & Peria, 2007; Brown, Cookson, & Heimer, 2019; Claessens et al., 2008).

Up until now, scanty evidence appears in the literature on how political institutions of countries influence firms' access to finance. The current scores of evidences only document the impact of political institutions on overall economic and financial development, with a vast majority of these studies reinforcing the position that democratic countries push for populist-market-oriented reforms which invariably promote financial sector development and long-run economic benefits.[1]

For instance, Huang (2010) shows that political institutions enhance financial development with evidence of low financial development pre-transition, followed by upward movement in financial development in post-transition periods. Similarly, Ho, Huang, Shi, and Wu (2018) find significant association between the efficiency with which financial institutions allocate financial resources and the level of political democracy.

By implication, the financial system depends on and interacts with political institutions to craft rules and regulations that guide its functioning; hence, the political outcome of a nation can, to a considerable extent, determine financial access of firms. This can happen in two ways. First, in countries, with little or no democratic institutions, there may be a propensity for a few elites to influence the allocation of financial resources into projects that would protect their powers. In such countries, firms' access to finance is likely to be negatively impacted as the financial institutions tend to serve the interests of the elites. On the other hand, countries with strong democratic institutions are conscious of the fact that political power resides in the hands of the people rather than political elites. To consolidate political powers, the distribution of financial resources is mostly targeted at improving the welfare of the people. For such countries, an efficient financial system is a catalyst for achieving this goal, and as such, firms face meagre bottlenecks in accessing finance.

Over the past few decades, the world has experienced a growing number of political reforms, with several nations abandoning autocratic rule in favour of institutionalised democracy. Although there has been a decline in recent times in the number of global democracies, the report by Freedom House (2022), nevertheless, shows that more than half of the countries in the world still practice democracy. Given the continuous drive for global adoption of democratic tenets, the debate on whether democratic institutions

of government bring about firms' prosperity remains an open question. While the evidence of economic and financial impact of democracy is well accepted, our main argument is whether economic agents, such as firms, can exploit political reforms to break financing barriers.

Moreover, an important channel through which political institutions can exert their influence on firms' financing is through globalised financial sector institutions and capital accounts. The liberalisation of financial markets around the world has transformed the financial sector, leading to cross-border flow of capital and financial integration among countries, thus creating a global financial system. Expectedly, the presence of foreign banks should enhance access to finance by firms in host countries, thereby leading to enhanced performance and growth. However, most research on financial liberalisation suggests that its effect could be positive or negative depending on factors such as percentage of ownership by foreign banks, availability of credit information, cost of contract enforcement, economic development of host country, and firm characteristics, to mention a few (Claessens & Van Horen, 2014; Mol-Gomez-Vazquez, Hernández-Cánovas, & Koëter-Kant, 2020; Sasidharan, 2020). Interestingly, little attention has been paid to how political democratisation fosters financial liberalisation and, consequently, improves access to finance. Exploring this vacuum is imperative, given the ample evidence suggesting that firms in democratic countries enjoy the benefits of financial liberalisation through economic and trade partnerships, as well as free capital flows. Indeed, if democracy improves access to finance via financial liberalisation, it therefore pays firms to migrate to only democratic nations. Hence, the question of whether firms' capital formation in non-democratic nations is hindered by financial liberalisation or political institutions also remains a subject of empirical debate.

In this paper, we address the relation between political institutions, financial liberalisation, and access to finance by opening a new vista in the literature on firms' financing**.** Apparently, burgeoning studies document that greater access to credit is a *sine qua non* for firms' success. Demirgüç-Kunt and Maksimovic (1998) document that financially constrained firms could lose out on investment opportunities that would have otherwise driven growth. Conversely, firms with unfettered access to finance tend to grow at rates higher than predicted, particularly in countries with developed financial and legal institutions (McLean & Zhao, 2014). It is on this premise that we develop our conjecture. We

use a sample of over 63,000 firms in 75 countries. Our initial findings suggest that neither the presence of foreign banks nor democratic political institutions have a significant direct effect on alleviating firms' credit constraints. This prompts us to further examine whether there is complementarity between foreign bank presence and democracy. Hence, we also investigate if democratic political institutions moderate the effect of financial liberalisation on access to finance. To our best knowledge, this is the first study to do this and to this end, we offer fresh insights into the current literature. Our quest to consider the conditional role of foreign bank presence on democracy is mainly due to the notion that differences in the level of democratic institutions may be fundamental to whether the financial liberalisation efforts of countries succeed, or not. Thus, our foremost empirical concern lies with the size and significance of the interaction of foreign bank presence and democracy for firms' access to finance. Our findings confirm our hypothesis of a complementary interaction effect between foreign bank presence and democracy for access to finance, which is highly statistically significant and positive.

Considering the above discussion and the rising lack of access to finance of firms, our study renders some noteworthy contributions to the literature in different ways. First, we add to the current body of knowledge by examining how political institutions, proxied by the presence of democracy, and financial liberalisation, proxied by the presence of foreign banks, affect firms' access to finance. We consider both the linear and heterogeneous effects of these factors, and do not find financial liberalisation or democracy, on their own, to significantly foster or hinder access to finance. Instead, both have a conditional relationship and need to complement each other. Given this situation, our findings resonate with the postulations of the political economy and financial liberalisation theories (Bekaert et al., 2005; Claessens et al., 2008).

Second, in examining access to finance, we address some econometric concerns that may affect the generalisation of our results (sample inferences). Hence, to validate the outcomes of our baseline results, we employ several robust alternative estimation techniques. Essentially, we account for endogeneity, sample size and outliers, non-linearity, firm heterogeneity, and cross-sectional dependency. Considering the merits and assumptions of these techniques, adopting them further serves as robustness checks, thus affirming the consistency of our results. In that case, our study therefore distinguishes itself from most of the empirical studies on access to finance (Gygli, Haelg, Potrafke, & Sturm, 2019).

Third, we address issues that may arise from misspecification or omission of variables by employing alternative measures of our key variables. Specifically, we check whether our baseline results on the effects of political institutions, financial liberalisation, and their conditional relationship on access to finance is sensitive to alternative indicators of the key dependent and explanatory variables. For the dependent variable, we replace the main proxy *Access to finance* with other proxies such as *Financing obstacle, Bank account, Bank credit,* and *Bank finance.* For the independent variables, we switch the main proxy for financial liberalisation, *Foreign bank presence*, to other literature-acknowledged proxies such as *Foreign bank number* (Gopalan & Sasidharan, 2020), *Financial openness index* (Chinn & Ito, 2008) and *Financial globalisation index* (Gygli et al., 2019). Essentially, our results do not materially differ from the baseline results when these proxies are deployed. Furthermore, we employ three alternative measures to capture political institutions, which was hitherto proxied with the *extent of institutionalised democracy* in a country. Specifically, we use the *Polity* score, the *quality of democratic institutions index* (Bjornskov & Rode, 2020; Cheibub, Gandhi, & Vreeland, 2010) and the *electoral democracy index* from the Varieties of Democracy (V-Dem) project (Coppedge et al., 2021). The output from these iterations further validates the preceding results.[2]

Lastly, we contend that our study offers some policy implications. We believe that the findings of our study can directly benefit relevant stakeholders, including international development agencies, financial institutions, governments, policy makers, and managers/owners of firms, amongst other to gain a better understanding of the interplay between political institutions, financial liberalisation, and credit constraints faced by firms. Most of the research on firms' financing constraints have largely focused on their separate relationships and have ignored the impact of interaction, perhaps leading to mixed findings in the literature. As shown in our study, the effect of interaction is positive and significant, thus providing comprehensive and efficient information to key stakeholders.

The remainder of the paper proceeds as follows. Section two discusses the literature review and states our study's hypotheses; section three describes data and gives summary statistics; section four discusses the empirical model and results, including robustness checks; and section five concludes the paper.

PRIOR LITERATURE AND HYPOTHESIS DEVELOPMENT

The existing literature on financing of business operations is replete with several factors that affect firms' access to finance. From a theoretical perspective, these arguments can be divided into two streams of literature. The first line is the *political economy theory of financial development*, which constitutes a critical starting point for these explanations. The theory articulates the roles of political institutions in influencing financing and investment decisions, thus shaping the ability of firms to access credit through the financial system. The second strand is the *financial liberalisation theory*, which explains the importance of eliminating restrictions and removing government interference from the financial market. Essentially, this theory considers the non-intervention of government in the financial system as a crucial mechanism to foster efficient allocation of financial resources. In this section, we take a deep look at these theories and how they impact on access to finance of firms, especially from an empirical point of view.

Political Institutions and Access to Finance

Our first hypothesis is based on the political economy theory which generally focuses on the interplay between political institutions and economic development. In the context of firms' access to finance, the theory has also been used to explain how the political class, in place of the market, sets criteria for the allocation of funds to critical sectors (Claessens et al., 2008). From the standpoint of this theory, there are two competing views espoused in the literature. First, there is a school of thought that is founded on the developmental state view of the political economy theory which supports the control of financial resources by government and its institutions. Given that the principal role of government is to foster economic growth and development, proponents of this view assert that a government's direct involvement in the financial market is aimed at fulfilling the criteria of a developmental state (Gerschenkron, 1962; La Porta, Lopez-de-Silanes, & Shleifer, 2002; Sapienza, 2004). Hence, the government focuses on the financial market as a vehicle for macroeconomic planning through appropriate policy measures, as well as direct control over the allocation of financial resources. Furthermore, scholars opine that the role of government in the financial market is to prevent systemic failure, which potentially occurs due to *self-serving behaviour* of the market agents (Girma & Shortland, 2008; Sapienza, 2004). With the presence of government, operations of the market are closely

monitored, thus ensuring the efficient distribution of funds for productive and industrial purposes. This action instils confidence in investors, encourages savings, improves investments, and prevents misappropriation by the financial institutions. Besides, it gives firms equitable access to credit and consequently promotes economic growth.

Despite the above arguments, the second school of thought proclaims that in countries where few elites dominate the political space, financial institutions may be constrained to provide access to finance. In such countries, there is a high likelihood of *rent-seeking behaviour* to manifest through the manipulation of the political environment (Huang, 2010; Rajan & Zingales, 2003). These rent seeking tendencies emanate from government interference in the market through legislations and directives. In such a situation, companies can target regulatory agencies or legislators to amend or enact laws to their economic advantage, even at the expense of competitors or the larger society, creating a form of coercive monopoly (Krueger, 1974). For instance, financial institutions can form cartels, hire professional lobbyists, or even directly lobby politicians to amend or enact laws that would prevent the presence of foreign banks in the country. This puts the allocation of funds solely in the hands of local banks, thus stiffening competition and limiting the ability of firms to access credit.

Although, rent seeking in some climes is legal and recognised, the implications, however, have far-reaching effects on firms' growth. Specifically, it can distort capital formation through misallocation of resources, induce uneven competition, create unfair price advantage, discourage new entries and expansion, disrupt the efficiency of the financial market, create artificial barriers to credit, and suppress innovation and productivity (Krueger, 1974; Murphy, Shleifer, & Vishny, 1993; Rowley, Tollison, & Tullock, 2013). Moreover, rent-seeking behaviour, orchestrated by political dominance of the financial system, tends to corruptly enrich politicians, financial institutions, and the firms' beneficiaries. This can be detrimental to economic growth as the reputation of the country and the parties involved is tarnished, consequently making it difficult for them to seek external partnerships and funding.

In the face of the problems highlighted above, a plethora of empirical studies have emerged in the literature to explain the impact of political institutions on firms' access to finance. In a study conducted by the World Bank (2013), it was reported that the tendency to participate in rent-seeking is dependent on the quality of democratic institutions with strong democracies having a low likelihood to participate.

Some recent studies have also examined the presence or absence of strong democratic institutions on firms' access to credit. Osei-Tutu and Weill (2022), relying on firm-level dataset in 108 countries, find a negative relationship between political institutions and credit constraints, especially for small- and medium-sized firms. Their findings suggest that firms operating in countries where the quality of political institutions is poor face more financial constraints compared to their counterparts in countries with "better" political environment. In similar veins, Delis, Hasan, and Ongena (2020), using loan data of 80 countries from 1984 to 2014 report that a point increase in institutionalised democracy produces about 20 points decrease in the cost of debt. More importantly, they find positive and significant relationship between autocracy and the cost of debt. By implication, firms operating in countries where there is reversal from democracy to autocracy immediately experience sharp increase in the cost of debt that could result in credit crunch. The study by Ho et al. (2018) reports that innovation is enhanced by the moderating relationship between political institutions and financial deepening. They find that an increase in the quality of political institutions raises innovation by improving access to finance. Likewise, Huang (2010) covering the period 1960 to 1999 empirically show that countries with improved institutional quality due to political reforms are associated with a significant increase in financial development mostly in developing countries and ethnically diverse countries.

The above studies consistently demonstrate the importance of political institutions in facilitating economic and financial development. However, the implications for firms' access to finance has received little attention in the literature. The free flow of information and the quality of institutions promoted by political institutions play significant roles in increasing banks' incentive to give credit facility. Motivated by these studies, we leverage on our cross-country firm- and country-level data to explore how political institutions impact access to finance. Specifically, we focus on the presence or absence of democratic institutions in the sampled countries. Because rent-seeking behaviour thrives in a low-quality institutional environment and poses tremendous challenges to accessing credit, we believe the tendencies can be discouraged with strong democratic institutions. Accordingly, we hypothesise that there is a strong link between political institutions and access to finance.

Hypothesis 1: Democracy reduces financing constraints by firms.

Financial Liberalisation and Access to Finance

Our next hypothesis is based on the theoretical postulations of McKinnon (1973) and Shaw (1973) on the economic merits of liberalisation. Burgeoning studies have identified financial liberalisation as a key strategy to stimulating financial development, especially in developing economies. Financial liberalisation is the removal of government interference from the financial market (Bekaert et al., 2005). This implies giving full control of the market to the market participants with no repression by the government. Thus, it aims at opening the financial system to new local and foreign entrants, thereby boosting competition, and eliminating both political and bureaucratic bottlenecks that may sway credit allocation decisions.

On the one hand, it is generally proclaimed that financial liberalisation brings about market efficiency and reduces the burden of asymmetric information which affects cost of capital (Claessens & Van Horen, 2014). Also, it improves savings and increases the level of investment (Bekaert, Harvey, & Lundblad, 2006). On the other hand, Wei (2018) asserts that financial liberalisation may expose the local financial system to instability arising from global contagion. Notwithstanding, financial liberalisation promotes the presence of foreign banks in the local market and their corporate partnerships with the domestic ones. This increases the intensity of market competition among banks and lowers the cost of financial intermediation. Moreover, this provides avenue to internationalise local bank products, share knowledge, and transfer technology.

The implications for firms' access to finance remains equivocal in the literature. In some countries, credit constraints persist for firms, as state-owned banks often bridge the financing gap (Williams & Nguyen, 2005). Hence, increase in the presence of foreign banks and the subsequent cross-border flow of capital between countries may not translate to greater access to finance in the host country. Gopalan and Sasidharan (2020) empirically show that increase in the presence of foreign banks together with availability of information via financial statement audit, alleviates credit constraints in emerging market and developing economies. However, Mol-Gomez-Vazquez et al. (2020) find a U-shape relationship between the presence of foreign banks and intensity of discouraged borrowers in European countries. Their study suggests that financial liberalisation initially alleviates financial constraints but as ownership by foreign banks exceeds 34%, the effect of financial liberalisation on access to finance turns negative.

Equally, Claessens and Van Horen (2014) report a negative relationship between financial liberalisation and access to private credit, showing that this relationship is driven by ownership that is less than 50% in host country. The study tends to lend credibility to the argument of cherry-picking behaviours of foreign banks which could further restrict access to finance particularly for developing countries (Gormley, 2010).

The above studies show that the impact of financial liberalisation on firms' financing is not as direct as presumed. Our primary focus, nevertheless, is to test whether the presence of foreign banks can improve access to finance. Hence, we posit that:

Hypothesis 2: Financial liberalisation reduces financing constraints by firms.

Political Institutions, Financial Liberalisation, and Access to Finance

Lastly, we focus attention on the moderating relationship between political institutions and financial liberalisation. Since one of the goals of financial liberalisation is to reduce borrowing cost by boosting the presence of foreign banks in the domestic market, we explore whether the structure of political institutions encourage (or discourage) new entrants, testing a hypothesis of this interaction on firms' access to finance. Our conjecture is based on the notion that foreign banks may not deeply aware of the political intricacies of the host country and may downplay the need to be 'politically connected'. Hence, there's an asymmetry of information, which puts the domestic banks at a better position. This may further have pronounced impact on foreign banks' operations such as lending decisions.

Meanwhile, studies show that due to financial liberalisation, some countries, predominantly, least developed ones, scramble to attract foreign direct investments into their economies (Asiedu, 2002; Morrissey & Udomkerdmongkol, 2012) to foster economic development. In that case, it may be less important for foreign banks to be politically connected before they can efficiently perform their credit functions. This is, perhaps, because financial liberalisation in the host country emanates from conscious institutional reforms, thus it would be in the best interest of the institutions to ensure survival of the foreign banks. We therefore contend that, despite liberalisation policy, foreign banks prefer to establish presence in democratic countries that can guarantee the safety of their investments and sanctity of their

operations. Considering the foregoing, we hypothesise that the interaction of both political institutions and financial liberalisation can affect access to finance of firms.

Hypothesis 3: Financial liberalisation, in the presence or absence of democracy, can affect firms' access to finance.

DATA DESCRIPTION

Our data are gathered from various sources. In this section, we discuss the variables that come into the baseline regression analysis, except for dependent and main independent variables, for which we have also described the alternative measures employed for robustness purposes. For brevity, the description of all other variables used in this paper have been relegated to either when they come up or Appendix Table A1. We extract all our firm-level data from the World Bank's Enterprise Survey (WBES) database,[3] while we draw data on the country-level measures proxying financial liberalisation, democratic institutions, and macroeconomic conditions from other sources, including the Global Financial Development Database (GFDD), Polity IV project, and World Development Indicators (WDI).[4] After matching data from all four different sources, the final sample available for our analysis includes 63,503 firms from 75 countries and is based on surveys from 2006 to 2014.[5]

Dependent Variables

Measuring access to finance. According to our hypothesis, we require a measure to represent the extent of financial constraints on firms. The WBES data, which questionnaire is designed to recover information regarding the opportunities driving and the obstacles limiting business operations of firms, including questions on access to finance, is our primary source for this.[6] Thus, following prior research on access to finance (see, e.g., Asiedu, Kalonda-Kanyama, Ndikumana, & Nti-Addae, 2013; Dutta & Mallick, 2022; Gopalan & Sasidharan, 2020; Leon, 2015; Osei-Tutu & Weill, 2022), our main measure of financing constraints is based on WBES finance-associated questions. More specifically, we construct our baseline dependent variable, *Access to finance*, based on the following WBES survey question (*Question k.30*): "*To what degree is access to finance an obstacle to the current operations of this establishment?*"[7] The available responses are categorical, varying from 0 (no obstacle), 1 (minor

obstacle), 2 (moderate obstacle), 3 (major obstacle), to 4 (very severe obstacle), with higher values indicating, at least from the perspectives of owners/managers of firms, higher and more ubiquitous difficulties with obtaining the necessary finance to run their operations.[8] The left panel of Fig. 1 displays the histogram of these responses for our study sample. The distribution of the responses across the four available answers are less balanced; specifically, in terms of financing obstacles, 32.90% of firms face no obstacle, 21.15% minor obstacle, 22.28% moderate obstacle, 15.06% major obstacle, and 8.60% very severe obstacle. In presenting results from our baseline analysis, we construct a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle, and 0 otherwise. This is depicted in the right panel of Fig. 1, where we observe a relatively more balanced distribution with 54.75% of firms classified as facing no financial constraints, whilst the remaining 45.25% do.

"Please place Fig. 1 approximately here."

To check the robustness of our results, we further exploit the WBES database to construct additional measures to capture financing difficulties of firms in our sample. First, in place of a dummy variable measure, we use the ordinal measure ranking a firm's perception on the severity of constraints faced with finance directly, denoting this *Financing obstacle*. Second, we changed the threshold for defining *Access to finance*, constructing a new dummy variable, *Financial constraint*, equal to 1 if a firm perceives access to finance to be a major obstacle or very severe obstacle, and 0 otherwise.[9] Third, we define *Bank account* to be a dummy variable equal to 1 if a firm does not have an account, and 0 otherwise.[10] Fourth, we use another variable, denoted *Bank credit*, a dummy variable equal to 1 if a firm does not have a loan or overdraft with the bank, and 0 otherwise,[11] as a dependent variable. Fifth, we consider financial concerns that involve the availability of funds for working capital, by constructing a dummy variable equal to 1 if a firm does not have external financing of its working capital provided by a bank, denoted *Bank finance*.

Independent Variables

Our discussion in Section 2 reveals that we are interested in empirically investigating the effects that the presence of foreign bank interacted with the level of democracy have on access to finance. In this part, we present measures of these two individual explanatory variables.

Measuring financial liberalisation. A central independent variable in our paper is *Foreign bank presence*, which is defined as the share in percentage of the total domestic banking assets that are owned by foreign banks (from GFDD). This variable captures an important dimension of financial liberalisation (see, e.g., Bruno & Hauswald, 2014; Claessens & Van Horen, 2014; Clarke, Cull, & Peria, 2006; Detragiache, Tressel, & Gupta, 2008) and its use in our case has been justified in Section 2. In the top panel of Fig. 2, we display the average country-level share of foreign bank presence for the 75 countries in our study, with countries arranged alphabetically, from left to right. There appears to be well-defined and sizeable variations in asset share of foreign banks in countries across the world. As can be seen, some countries have very high presence of foreign banks in the fiscal years preceding the WBES survey years. For instance, Burkina Faso and Madagascar had 100% foreign bank asset ownership, Estonia 98.02%, and Jamaica 91%. There are also many countries with low foreign bank presence, including the Philippines (1%), China (2%), India (3%), and the Dominican Republic (7%). Moreover, a few countries have zero foreign bank presence, namely: Israel, Sri Lanka, Sweden, and Yemen.

"Please place Fig. 2 approximately here."

We also use the number in percentage of foreign banks to the total number of banks in a country, also from GFDD, as an alternative measure of foreign bank presence. In addition, we utilise two broad indexes of financial liberalisation for robustness tests and to further stress the importance of the dimension of entry and participation of foreign banks in a country, namely: (i) the financial openness index of Chinn and Ito (2008), an index measuring the degree of a country's capital account openness; and (ii) KOF's financial globalisation index (Gygli et al., 2019).

Measuring political institutions. Another central independent variable in our analysis is the level of democracy in a country. In the baseline regression analysis, we follow the trend in recent finance literature (see, e.g., Delis et al., 2020; Duong, Goyal, Kallinterakis, & Veeraraghavan, 2021; Nguyen & Tran, 2022) in measuring *Democracy* based on Polity IV project's institutional democracy index

(DEMOC). This variable has three interdependent features to it, namely: (i) the presence of institutions and procedures through which citizens can effectively show their preferences amongst alternative political leaders and policies; (ii) the existence of institutional checks and balances on the exercise of political power by the executive; and (iii) the pledge and protection of civil liberties in the daily lives of citizens and in their political undertakings. In the bottom panel of Fig. 2, we display the average country-level of democracy for the 75 countries in our study. Countries are again arranged alphabetically, from left to right, and there exists considerable variations in the level of democracy. Specifically, many countries have perfect or near perfect score for democracy in the fiscal years preceding the WBES survey years (e.g., Lithuania, Mauritius, Sweden, and Uruguay), whilst many other countries obtained low scores (e.g., Belarus, China, Jordan, and Nigeria).

Importantly, *Democracy* is institution-based, rather than perception-based (Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004), which is a preferred attribute for a measure of democracy to have, particularly in our study where the dependent variables are compiled from perception-based reports. Nevertheless, we have utilised alternative measures of democracy for robustness checks. These are the revised combined polity score from the Polity IV project, the dichotomous measure of democracy from Cheibub et al. (2010), with a recent update by Bjornskov and Rode (2020), and finally, the electoral democracy index from the Varieties of Democracy (V-Dem) project.

Control Variables

***Firm characteristics*.** At the firm level, we control for the log of firm age in years, dummy variables for medium and large-sized firms, the log of the number of years the top manager has been working in the firm's sector, proportion of assets held by the largest owner, and dummy variables for foreign ownership, state ownership, being an exporter, having annual financial statement checked and certified by an external auditor, possessing an international quality certificate, and binary indicators of a firm's legal status (e.g., publicly listed and privately held) in the baseline regressions. All variables are from WBES, and we select them based on existing literature (see, e.g., Asiedu et al., 2013; Clarke et al., 2006; Dutta & Mallick, 2022; Gopalan & Sasidharan, 2020; Leon, 2015; Osei-Tutu & Weill, 2022). We anticipate most of these firm-level controls to be negatively and probability importantly related to

financial constraints. For instance, older and larger firms, as well as firms that are foreign owned, publicly listed, and subsidiaries of larger firms are less likely to be financially constraint (see, e.g., Dutta & Mallick, 2022; Lee et al., 2015), although the relationship for being an exporter is yet to reach a consensus in the literature (Yang & Mallick, 2014).

***Country characteristics*.** At the country level, we control for the level of economic development and growth, using the log of GDP per capita, *GDP per capita*, and its yearly growth rates (*Income growth*), respectively, the level of financial development, measured as domestic credit provided to the private sector as a share of GDP, and annual inflation rate to reflect macroeconomic condition to the baseline regression analysis, as suggested by existing literature (see, e.g., Gopalan & Sasidharan, 2020; Leon, 2015). These variables are from WDI and adding them further helps to ease the problems of omitted variables. Further, all country-level control variables have been measured with a one-year lag to circumvent issues relating to contemporaneous bias.

Descriptive Statistics

Table 1 presents the sample distribution by year, industry, and country for selected key variables of interest. The statistics in panel A reveal that there is a fair amount of over time variations in the number of firms and countries represented in each year's survey between 2006 and 2014. Only one country in our sample (Uzbekistan) with 213 firms was surveyed in 2008 and the maximum number of countries recorded is 35 for 2013, with nearly 15000 firms represented. As shown, firms report highest challenge to accessing needed business financing in 2011 (67.7%); this can, however, be easily explained by the three countries (Rwanda, Sri Lanka, and Zimbabwe), whose 1210 firms were represented. The asset ownership of Foreign banks varies widely, ranging from 6.84% in 2012 to 50.38% in 2007. With regards to democracy level across countries in the sample, 2008 has the lowest value for democracy, whereas 2010 tops the charts for the most democratic year in our sample.

"Please place Table 1 approximately here."

The statistics in panel B is presented for our main measures across the eight sample industries. Manufacturing, Wholesale and retail trade, and Construction, with 24,057, 17,259, and 10,754 firms, respectively, are the most represented industries. Mining (7), Services (1551), and Finance, insurance

& real estate (2072) have the least representation. Besides, Mining firms express that they face less credit constraints (28.6%), compared to firms in the remaining industries, with the "Other" category having the most difficulty at 52.3%. The statistics in panel C are like the ones in panels A and B but are made available at the country level. The variations are wide across all measures. For example, 8,676 firms are surveyed in India, while we have 79 firms for Mauritania. Besides, some countries have high percentage of banks' asset owned by foreign banks (e.g., Burkina Faso, Estonia, and Mozambique; see Fig. 2, top panel) and others low foreign bank presence (e.g., Bangladesh and China). This cross-country variation is also observed for the level of democracy with some countries having a value of 0 (e.g., Belarus, China, and Mauritania; see Fig. 2, bottom panel), whilst there are countries with 10 (Chile, Lithuania, and Mauritius). The remaining statistics describing all firm-level variables that we employ in this paper are shown in Table 2, while Table 3 presents the equivalent descriptive statistics for the main variables at the average country level.

"Please place Tables 2 & 3 approximately here."

EMPIRICAL SETTING AND RESULTS

Building on existing literature, reviewed in Section 2, our conceptual framework motivates an analysis of the extent of financial constraints facing firms in a country, given a measure of foreign bank presence, democracy, and their interaction. Our argument is that complementarity exists between financial and political reforms. In Section 4.1, we begin our appraisal of this proposition by stating the empirical model for our research and highlighting the estimation strategy. In Section 4.2, we record our main findings, and in Section 4.3, we report the results from a battery of robustness checks.

Baseline Regression Specification

Our goal is to examine the effects of foreign bank presence and democracy on access to finance by firms. To do this, we estimate many variants of the following model:

$$\textit{Access to finance}_{ijkt} = \alpha + \beta_1\, \textit{Foreign bank presence}_{kt} + \beta_2\, \textit{Democracy}_{kt} + \beta_3\, (\textit{Foreign bank presence}_{kt} \times \textit{Democracy}_{kt}) + \beta_4\, \textit{Firm}_{ijkt} + \beta_5\, \textit{Country}_{kt} + \beta_6\, \textit{Fixed effects}_{jkt} + \varepsilon_{ijkt} \quad (1)$$

where the subscripts *i* stands for firm, *j* for industry, *k* for country, and *t* for year. In the above empirical model specification, the dependent variable, $\textit{Access to finance}_{ijkt}$, is a dummy variable capturing self-

reported perceptions of business owners/managers in relation to financing obstacles. The independent variables of interest to us are: *Foreign bank presence*$_{kt}$, the share of total banking assets owned by foreign banks; *Democracy*$_{kt}$, represented by the institutionalised democracy from Polity IV; and their interaction term, (*Foreign bank presence*$_{kt}$×*Democracy*$_{kt}$), which is the novel component introduced in our study. Specifically, the interaction term permits us to scrutinise the complementarities between foreign bank presence and the level of democracy in easing or exacerbating firms' access to finance.

Firm$_{ijkt}$ is a matrix of firm-level characteristics that are allowed for in our analysis, where the selection of these controls is driven by existing literature (see, e.g., Asiedu et al., 2013; Clarke et al., 2006; Dutta & Mallick, 2022; Gopalan & Sasidharan, 2020; Leon, 2015; Osei-Tutu & Weill, 2022), and they help to account for observable heterogeneities at the firm-level. Specifically, and in the baseline regressions, we include the following variables: the log of firm age, dummy variables for medium and large-sized firms, the log of manager's years of experience, share owned by largest owner, and binary indicators for foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate. Furthermore, relevant country-level controls are put in the matrix, *Country*$_{kt}$; these variables include GDP per capita, its growth rate, inflation, and a measure of financial development (domestic credit to the private sector as a percentage of GDP).[12]

Although the nature of the data does not permit us to apply firm-specific fixed effects, we are able to incorporate various other levels of fixed effects in our analysis, with the added benefits of being able to account for a broad array of omitted variables. This is achieved through the matrix of fixed effects, *Fixed effects*$_{jkt}$, where in the baseline regressions, the considered fixed effects are: *Fixed effects*$_{jkt}$ = γ_j + γ_k + γ_t, where γ_j stands for industry fixed effects, which helps to account for industry-specific heterogeneity, γ_k for country fixed effects, which helps to account for time-invariant country-specific features that may jointly impact on foreign bank presence, democracy, and access to finance, as well as cater to omitted variables such as geography, language, ethnic affiliation, religion or culture that may contrarily influence access to finance in different countries, and γ_t for year fixed effects, which, as

examples, can help to account for common global shocks in bank credit access and impacts of changes to methodological approaches to collecting perception-based firm data.

Given that our variable of utmost interest is an interaction term, we primarily estimate Equation (1) using ordinary least squares (OLS) because of issues relating to the interpretation of marginal effects from interaction terms in non-linear econometric specifications (Ai & Norton, 2003). For the robustness of our main results, we later apply other estimation strategies. Finally, we allow for within-firm correlation in the error term, ε_{ijkt}, by reporting *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level (Cameron & Miller, 2015; Petersen, 2009).[13]

Main Results

Our baseline estimation results are presented in Table 4. Whilst we care about the coefficients on *Foreign bank presence*, β_1, and *Democracy*, β_2, our main preoccupation is with the coefficient on (*Foreign bank presence*×*Democracy*), β_3. If democracy acts to complement entry and participation of foreign banks in a country, as we hypothesised, β_3 should be significantly positive. Anyhow, we commence our analysis of results with the model reported in columns (1) and (2), which show the respective impacts of foreign bank presence and democracy on access to finance, while controlling only for country, industry, and year fixed effects. The effects of both independent variables, when included separately is negative and insignificant at conventional levels. In column (3), we insert both foreign bank presence and democracy jointly along with the fixed effects for country, industry, and year. The results from this application validate the patterns in columns (1) and (2), and again, the coefficients are not significant. Contrary, therefore, to some results in the existing literature, these findings appear to be suggesting that neither the presence of foreign banks nor democratic political institutions have a significant direct effect on alleviating the problems of access to finance by firms. Meanwhile, as implicit in our conceptual framework, it is reasonable that the average effects shown in columns (1)-(3) are supressing indispensable differential effects. For instance, there may be a complementarity between foreign bank presence and democracy. We investigate this in the remaining columns of Table 4.

"Please place Table 4 approximately here."

In column (4), we estimate a variant of our empirical model that nests the specifications in columns (1)-(3) by including the interaction term between foreign bank presence and democracy. As can be seen, the findings confirm our hypothesis of an interaction effect between foreign bank presence and democracy for access to finance, which is highly statistically significant and positive. Besides, the coefficients on both foreign bank presence and democracy remain negative but are now also statistically significant. We note that the results in column (4) only accounted for fixed effects. Thus, in column (5), we first augment the model in column (4) by entering firm-level control variables, and in column (6), the model is extended to account for country-level control variables. As explained before, these variables (firm- and country-level controls) have been chosen because existing literature have suggested their relevance for explaining within-country and between-country differences in financial obstacles faced by firms. Finally, we report, in column (7), our full baseline specification that regresses access to finance on foreign bank presence, democracy, their interaction term, matrices of firm-level and country-level control variables, as well as country, industry and year fixed effects.

Across all empirical specifications involving (*Foreign bank presence×Democracy*), we find a positive and statistically significant estimates of the interaction parameter, β_3, as well as negative direct effects of foreign bank presence and democracy, which are likewise observed consistently in all specifications. To sum up: the estimated positive and statistically significant value of β_3 validates our hypothesis in Section 2, and is the main contribution of our paper, indicating that democracy and foreign bank presence are complements when it comes to firms in a country (not) having access to finance.

Next, we gauge how the heterogeneousness in the entry and participation of foreign banks combine with cross-country heterogeneousness in the level of democracy to explain part of the variance in access to finance by firms. We do this by computing the marginal effects of foreign bank presence and democracy on access to finance, using, respectively, the following definitions:

$$\partial Access\ to\ finance_{ijkt}/\partial Foreign\ bank\ presence_{kt} = \beta_1 + \beta_3\ Democracy_{kt} \quad (2)$$

$$\partial Access\ to\ finance_{ijkt}/\partial Democracy_{kt} = \beta_2 + \beta_3\ Foreign\ bank\ presence_{kt} \quad (3)$$

where $\beta_3 > 0$ is implied by our hypothesis, but the sign and significance of the calculated marginal effects rest on the combined effect of β_1 and $\beta_3 Democracy_{kt}$ for Equation (2) and of β_2 and $\beta_3 Foreign\ bank\ presence_{kt}$ for Equation (3). More specifically: β_3 in Equation (2) determines how the level of democracy influences the relationship between foreign bank presence and access to finance, whereas β_3 in Equation (3) determines how the level of foreign bank presence influences the relationship between democracy and access to finance. Hence, $\beta_3 = \partial(\partial Access\ to\ finance_{ijkt}/\partial Foreign\ bank\ presence_{kt})/\partial Democracy_{kt} = \partial(\partial Access\ to\ finance_{ijkt}/\partial\ Democracy_{kt})/\partial Foreign\ bank\ presence_{kt}$.

We show a graphical analysis of the results from Equations (2) and (3), using the estimates from our full model specification in column (7) of Table 4. Fig. 3 plots the marginal effects of the interaction between foreign bank presence and democracy, where the solid lines represent the marginal effects and the green/red lines the +/- 5% confidence bands. Specifically, the left panel displays the marginal effect of foreign bank presence given the level of democracy, while the right panel depicts the marginal effect of democracy given the share of asset owned by foreign banks in a country. In congruence with the documented estimate in Table 4 column (7), the interaction term, β_3, exhibits an upward shaped gradient. We observe that with low democracy (foreign bank presence), there is a negative effect of foreign bank presence (democracy) on firms' access to finance. As democracy becomes more entrenched, represented by higher values of institutionalised democracy, the negative effect of foreign bank presence diminishes, turning positive at very high levels of democracy. To be more concrete, the effect of foreign bank presence on firms' access to finance is negative for democracy scores up to around 7, whilst the effect of foreign bank presence on firms' access to finance is positive for democracy scores closer to the highest value of 10. The story of the marginal effect of democracy conditional on foreign bank presence in the right panel can be told analogously.

"Please place Fig. 3 approximately here."

To wrap up this section, we now turn our attention to the control variables included in columns (5)-(7). As expected, based on existing literature, we observe that the following firm-level control variables have statistically significant and negative coefficients attached to them: firm age, medium- and large-

sized firms (with small firms as the reference category), asset share of largest owner, and dummy indicators for publicly listed, privately held, foreign ownership and possessing internationally recognised quality certificate. All these estimates are significant at the 1% level, expect for being a private firm, which obtains significance at the 10% level. On the other hand, manager's experience in years and dummy indicators for state ownership, being an exporter, having been audited by an external organisation, and being a subsidiary of a larger firm are all insignificant to raising, or reducing, access to finance of firms in our sample. With regards to the country-level control variables included, we find that GDP per capita growth and financial development are both good for improving access to finance of firms, with coefficient estimates that are negative and statistically significant at the 5% and 1% levels, respectively. We, however, do not find any important effects of the log of GDP per capita and inflation financing constraints faced by firms. Reassuringly, our results that the effects of foreign bank presence and democracy are significantly heterogenous remain robust, regardless of adjusting for additional variables and accounting for numerous sources of unobserved heterogeneity at country, industry, and year levels.

Robustness Checks

Alternative levels of clustering standard errors. Our baseline empirical strategy specified in Equation (3) employs clustering of standard errors at the firm level. To check whether our main findings are robust to alternative clustering of standard errors, we rerun our baseline regression model, changing the clustering levels and/or combinations, and present the results in Table 5. In column (1), we cluster standard errors at the industry level, finding that the estimated coefficient of β_1 remains negative and statistically significant at the 1% level and the equivalent estimate of β_2 also remains negative and significant at the 1% level. Regarding the interaction term, the estimated coefficient of β_3 is positive and statistically significant at the 1% level, which similarly mirrors the results shown for the baseline analysis. Hence, our main results are robust to clustering standard errors by industry. Then, in columns (2), (3), (4), and (5), we carry out the same exercise, swapping the clustering type to country only, country-year, industry-year, and country-industry, respectively. In all these models, we find, as in the baseline results, that $\beta_1 < 0$, $\beta_2 < 0$, and $\beta_3 > 0$, with all estimates being highly statistically significant.[14]

With this observation, we conclude that the significant effects of foreign bank presence, democracy, and their interaction on access to finance is not driven by our clustering of standard errors at the firm level.

"Please place Table 5 approximately here."

Alternative estimation methods. We have opted to perform the estimation of our baseline analysis by OLS because of ease of interpretation, particularly in relation to a non-linear interaction model. Nevertheless, as the dependent variable is a dummy variable, one might wonder if the results would change if we were to apply alternative estimation methods. Specifically, we estimate our model in Equation (1) using logit and probit models, documenting the results in columns (1)-(2) and (3)-(4) of Table 6, respectively. As shown, the results are incredibly comparable to our previous findings, with the coefficients of *Foreign bank presence* and *Democracy* being negative and statistically significant in all four columns, and the coefficient on the interaction term is positive and statistically significant. These findings, regardless of the estimation methodology, continue to confirm our hypothesis that there is a complementarity in the impacts that foreign bank presence and democracy has on access to finance.

"Please place Table 6 approximately here."

Alternative measures of key variables. We next consider whether our baseline results on the effects of foreign bank presence, democracy, and their interaction on access to finance is sensitive to alternative definitions and/or proxies for the key dependent and independent variables. We begin with the dependent variable. Recall that our main measure of difficulties that firms face regarding financing business operations is *Access to finance*, a dummy variable constructed from a categorical measure, *Financing obstacle*. In Table 7, Panel A, columns (1)-(2) we now use *Financing obstacle*. We find, applying OLS again in column (1), that the effects of our key independent variables on this measure of access to finance are still significant, having signs resembling baseline results. An advantage of using *Financing obstacle* is that we can also employ ordered probit method, a further alternative estimation approach to validate our baseline results.[15] We implement this and report the results in column (2), which are also supportive of our previous findings. In column (3) of Table 7, we define access to finance as a dummy variable equal to 1 if a firm perceives access to finance to be a major obstacle or very severe obstacle, and 0 otherwise, labelling it *Financial constraint*; and in columns (4), (5), and (6), we, respectively, use the following measures of access to finance: *Bank account*, a dummy variable equal to

1 if a firm does not have an account and 0 otherwise; *Bank credit*, a dummy variable equal to 1 if a firm does not have a loan or overdraft with the bank and 0 otherwise; and *Bank finance*, a dummy variable equal to 1 if a firm does not have external financing of its working capital supplied by a bank. For each alternative measure of access to finance, we observe that the coefficients on *Foreign bank presence*, *Democracy*, and their interaction term remain significant with negative signs, except for their interaction term that is positive. We note that these results further corroborate our baseline finding.

"Please place Table 7 approximately here."

Turning to the independent variables, another proxy for the entry and participation of foreign banks that has been used in related literature is the percentage share of the number of foreign banks to total banks in an economy. So, we next use this variable, *Foreign bank number*, to capture the presence of foreign banks in a country in column (1), panel B of Table 7. On this occasion, we find that our proxy for financial liberalisation is not significant, albeit it retains its expected sign. We are not surprised by this result, given that the number share of foreign banks in total number of banks has been suggested not to an adequate representation of foreign bank entry and participation in a country (Gopalan & Sasidharan, 2020). Besides, our hypothesis is formed around a specific dimension of financial liberalisation—the presence of foreign banks in a country. One may be curious to enquire whether our most important result that there is a complementarity between foreign bank presence and democracy will hold, were we to use a more encompassing definition of financial liberalisation. To this end, we replace *Foreign bank presence* with *Financial openness index* (Chinn & Ito, 2008) in column (2), panel B of Table 7, and *Financial globalisation index* (Gygli et al., 2019) in column (3). The coefficient estimates in column (2) are of the right signage; however, only the result regarding the interaction term survives, being positive and significant at the 10% level. In column (3), meanwhile, we see that the results are all in the ballpark of the baseline estimates.

Finally, we consider three alternative measures of democracy in columns (4)-(6), panel B of Table 7. Specifically, we use the *Polity* score in column (4), the dichotomous measure of the quality of democratic institutions (Bjornskov & Rode, 2020; Cheibub et al., 2010) in column (5), and the electoral democracy index from Varieties of Democracy (V-Dem) project (Coppedge et al., 2021). As can be seen on the table, the results are consistent with the baseline results reported in Table 4. More specifically,

we find that the estimated coefficients on the variables of interest and their interaction term, are statistically significant at the 1% level, and with the expected sign.

Addressing endogeneity. One could raise the concern that endogeneity issues may be plaguing our results on three grounds. First is the argument of reverse causation if the outcome variable of interest, *Access to finance*, can raise the probability that foreign banks will establish their operation in a country and/or the country will become more democratic. It is easy to appreciate why this is almost improbable in our case, given that it is highly implausible for credit demands of an individual (mostly small- and medium-sized) firm to lure foreign banks into a country or to instigate a countrywide democratic transition.[16] Second is the argument of excluded potentially critical fourth factor, which may be strongly associated with access to finance, foreign bank presence, and democracy. However, we are unable to apply the instrumental variables approach to deal with omitted factors in our analysis due to the lack of credible instruments for foreign bank presence, democracy, and their interaction term. Meanwhile, the use of country fixed effects helps to mitigate this issue with regards to the time-invariant omitted variables. In terms of time-varying omitted factors, our attempt at handling this is by controlling for numerous other firm-, city-, industry-, and country-level covariates in our regression analysis. We show in Appendix Table A3 that our baseline results survive the inclusion of several additional control variables.[17] Third is the argument relating to the problem of measurement error. As we have mentioned already, letting our empirical specifications and model estimations account for country, industry, and year fixed effects helps in constraining the scales of these types of errors.

Sample size and outliers. In this robustness test, we check whether our results are sensitive to sample construction and potential outliers in five different ways. First, we exclude all countries with less than 250 firms from our sample. Second, we exclude all firms with more than 1000 employees. Third, we repeat our analysis by focussing on the sub-sample of low-income countries. Fourth, we redo the estimation by concentrating on the sub-sample of high-income countries. Fifth, we apply the iteratively reweighted least squares (IRLS) regressions. These various tasks are carried out to reduce any undue influences that small number of observations, inclusion of large firms, income classification

of countries, and outliers may be exerting on our analysis. The results presented in Appendix Table A4 shows that our baseline findings are immutable to all these points.

Further Results

Components of democracy. So far, we have established that the presence of foreign banks interacted with the level of democracy will increase the constraints on firms in accessing external financing for their business operations. In this sub-section, we take a peep inside the composite measure of democracy to investigate which components are driving the results we presented in Section 4. According to Marshall and Gurr (2020, pp. 20-28), the democracy score's coding of the Polity IV project is computed from six component variables, with three relating to how the chief executives are recruited (regulation of executive transfers, competitiveness of executive selection, and openness of executive recruitment), one relating to how independent the chief executives are in their decision-making (institutionalised constraints on the powers of chief executives to make decisions), and two relating to acts of participation (regulation of participation and competitiveness of political participation). The results of treating each component of polity as our proxy for *Democracy* is presented in Table 8. As before, *Foreign bank presence* continues to negatively affect access to finance, with analogous effects also registered for components of democracy. Turning to the interaction effect, we find that all components behave similarly to the aggregate measure, positively and significantly affecting access to finance, except the interaction of foreign bank presence and regulation of political participation in column (5), which is positive but insignificant. These results suggest that almost all components of democracy are complements to foreign bank presence in aggravating access to finance by firms.

"Please place Table 8 approximately here."

Heterogeneity by firm characteristics. Further, we present results in Table 9 to show that our main results are retained when we carry out the analysis by considering firm characteristics such as sectors and sizes of firms (see, e.g., Beck & Demirguc-Kunt, 2006; Fang, Goh, Roberts, Xu, & Zeufack, 2022). The existing literature suggests that firms from all sectors and of different sizes face financial obstacles. So, we check for this and additionally consider whether ownership of firms, delineated based on domestic *vs.* foreign organisations, matters for the baseline results. We inspect the sectoral heterogeneity

of the relationship between *Foreign bank presence*, *Democracy*, their interaction, and *Access to finance* by performing the baseline estimation for the sample of firms in the manufacturing sector (column (1) of Table 9), whilst we do the same for the firms in the services' sector in column (2). We then undertake size heterogeneity by running the same baseline regressions for firms based on three size classifications: small firms (columns (3)), medium firms (columns (4)), and large firms (columns (5)). Finally, we examine ownership heterogeneity in columns (6) and (7) for domestic and foreign ownership types, respectively, by again redoing the baseline regressions. Exploiting these various sub-samples, we find that the interaction of foreign bank presence and democracy continues to hold positive and significant.

"Please place Table 9 approximately here."

Moderating effects of banking sector characteristics. This final part investigates whether the nexus of political institutions, financial liberalisation, their interaction, and access to finance is moderated by the characteristics of a country's banking sector. The existing literature has shown the importance of banking sector's market power/competition and intermediation costs on access to finance by firms (Carbo-Valverde, Rodriguez-Fernandez, & Udell, 2009; Hauswald & Marquez, 2006; Leon, 2015).[18] The findings are presented in Table 10, where the banking sector measures that we use are the share of banking system assets held by the three largest banks in a country in column (1), Lerner index in column (2), Boone index in column (3), interest spread in column (4), and bank overhead in column (5). As shown, all banking sector features are statistically significant, having expected signs. Specifically, the three-bank concentration ratio, interest spread, and bank overhead are all negatively related to access to finance, whilst Lerner index and Boone indicator are both positively related. With the interaction of foreign bank presence and each banking sector characteristic, we observe that the three-bank concentration ratio, interest spread, and bank overhead are moderating the effect of foreign bank presence on access to finance. Whereas the Lerner index and Boone indicator are amplifying the influence of financial liberalisation on access to finance. Similar results are obtained for the interaction of banking characteristics with democracy, except that the interaction of democracy with the Boone indicator is not significant. Lastly, it is realised that three-bank concentration ratio, interest spread, and bank overhead (Lerner index and Boone indicator) are moderating (amplifying) the interaction effect of foreign bank presence and democracy on access to finance.

"Please place Table 10 approximately here."

CONCLUSION AND POLICY IMPLICATIONS

Over the years, access to finance has been a major obstacle to firms' growth. It has increasingly prevented businesses from pursuing positive net present value projects and embarking on innovative processes. In this study, we provide evidence on how political institutions, proxied by the level of democracy in a country, and financial liberalisation, proxied by the entry and participation of foreign banks impact on firms' access to finance. To test our hypotheses, we used an international sample of over 63,000 firms in 75 countries surveyed over the 2006-2014 period. Controlling for firm and country characteristics, our baseline regressions reveal that neither the presence of foreign banks nor democratic political institutions has a significant direct effect on improving access to finance. However, these initial results do not hold when both foreign bank presence and democracy are interacted.

Our subsequent findings demonstrate that differences in the level of democratic institutions are critical components to the success of financial liberalisation. Hence, the interaction between the duo has a significant effect on alleviating firms' credit constraints. Our findings are coherent with existing theories in this area. The evidence of conditional relationship between democracy and foreign bank presence is consistent with the views of political economy and financial liberalisation theories which emphasise the distributional implications of government-controlled financial resources. Apart from the main proxies employed in the baseline results, we also deployed various measures of political institutions, financial liberalisation, and access to finance. Our findings are not materially different from the initial findings and are thus, robust, and useful for generalisation purposes.

Our findings have vital implications for relevant stakeholders in academia, industry, and government. From an academic perspective, we contribute to the scores of studies that have investigated factors affecting firms' financing. Distinct from prior studies, we account for various econometric and sampling issues that may affect the substance of our results. While existing studies document the separate impact of political institutions and financial liberalisation on access to finance using different proxies, we contribute to the literature by showing that access to finance can be significantly impacted in the face of an interaction between democratic institutions and foreign bank presence. More

importantly, we extend the debate using cross-country firm level data and provide novel understanding to the debate.

For industry practitioners, our results are important to the functioning of the financial system. Whilst government intervention in the market seeks to combat self-serving behaviour of financial institutions, we contend that politically induced allocation of resources affects the efficiency of credit market due to information asymmetry and rent-seeking tendencies. This poses huge problems to both the borrowing firms and the lender (financial institutions). A legitimate way to address this is to allow the financial market to operate independently of government. This would increase transparency and encourage new entrants into the market.

Finally, our findings are important for policy making, especially in developing economies. Firms are essential economic agents that must be supported with adequate finance. The prevalence of credit constraints faced by firms have serious consequences on a nation's economic growth and development. It discourages capital formation, prevents creation of jobs, and reduces tax revenues of government. Given the evidence of positive conditional relationship between strong democratic institutions and foreign bank presence, policies must be put in place to prevent government's control of the allocation of financial resources and to restrict interest groups from hijacking the democratic dividends of financial deregulation. This is with a view to boosting foreign participation and improving access to finance.

Our findings also create a framework for future research. We explore the impact of political institutions and financial liberalisation on firms' access to finance. Future studies may explore the impact of these variables on firms' innovation or research and development (R&D). Exploring this lacuna would be beneficial to the academic literature and important to firms' prosperity. Besides, we are constrained by the availability of data as our foreign bank presence data are only available till 2013. We leave it for subsequent studies to utilise the methodology of Claessens & Van Horen (2014) in extending this to match the more up to date WBES survey data and improve the current findings in our study. Another avenue for future research is to improve the dataset to include more countries and firms if data

is available. They may also explore other methodologies to enrich and validate, or otherwise, the current findings in our study.

References

Ai, C., & Norton, E. C. (2003). Interaction terms in logit and probit models. *Economics letters*, *80*(1), 123-129.

Asiedu, E. (2002). On the determinants of foreign direct investment to developing countries: is Africa different?. *World development*, *30*(1), 107-119.

Asiedu, E., Kalonda-Kanyama, I., Ndikumana, L., & Nti-Addae, A. (2013). Access to credit by firms in Sub-Saharan Africa: How relevant is gender?. *American Economic Review*, *103*(3), 293-297.

Bhattacharyya, S., & Hodler, R. (2014). Do natural resource revenues hinder financial development? The role of political institutions. *World Development*, *57*, 101-113.

Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different?. *Journal of financial economics*, *89*(3), 467-487.

Beck, T., Demirguc-Kunt, A., & Peria, M. S. M. (2007). Reaching out: Access to and use of banking services across countries. *Journal of financial economics*, *85*(1), 234-266.

Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth?. *Journal of Financial economics*, *77*(1), 3-55.

Bekaert, G., Harvey, C. R., & Lundblad, C. (2006). Growth volatility and financial liberalization. *Journal of international money and finance*, *25*(3), 370-403.

Bjørnskov, C., & Rode, M. (2020). Regime types and regime change: A new dataset on democracy, coups, and political institutions. *The Review of International Organizations*, *15*, 531-551.

Bose, U., Mallick, S., & Tsoukas, S. (2020). Does easing access to foreign financing matter for firm performance?. *Journal of Corporate Finance*, *64*, 101639.

Brown, J. R., Cookson, J. A., & Heimer, R. Z. (2019). Growing up without finance. *Journal of Financial Economics*, *134*(3), 591-616.

Bruno, V., & Hauswald, R. (2014). The real effect of foreign banks. *Review of Finance*, *18*(5), 1683-1716.

Cameron, A. C., & Miller, D. L. (2015). A practitioner's guide to cluster-robust inference. *Journal of human resources*, *50*(2), 317-372.

Carbo-Valverde, S., Rodriguez-Fernandez, F., & Udell, G. F. (2009). Bank market power and SME financing constraints. *Review of Finance*, *13*(2), 309-340.

Cheibub, J. A., Gandhi, J., & Vreeland, J. R. (2010). Democracy and dictatorship revisited. *Public choice*, 67-101.

Chinn, M. D., & Ito, H. (2008). A new measure of financial openness. *Journal of comparative policy analysis*, *10*(3), 309-322.

Claessens, S., Feijen, E., & Laeven, L. (2008). Political connections and preferential access to finance: The role of campaign contributions. *Journal of financial economics*, *88*(3), 554-580.

Claessens, S., & Van Horen, N. (2014). Foreign banks: Trends and impact. *Journal of Money, Credit and Banking*, *46*(s1), 295-326.

Clarke, G. R., Cull, R., & Peria, M. S. M. (2006). Foreign bank participation and access to credit across firms in developing countries. *Journal of comparative economics*, *34*(4), 774-795.

Coppedge, M., Gerring, J., Knutsen, C. H., Krusell, J., Medzihorsky, J., Pernes, J., ... & Lindberg, S. I. (2019). The methodology of "varieties of democracy"(V-Dem). *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, *143*(1), 107-133.

Cornaggia, J., & Li, J. Y. (2019). The value of access to finance: Evidence from M&As. *Journal of Financial Economics*, *131*(1), 232-250.

Cull, R., & Xu, L. C. (2005). Institutions, ownership, and finance: the determinants of profit reinvestment among Chinese firms. *Journal of Financial Economics*, *77*(1), 117-146.

Delis, M. D., Hasan, I., & Ongena, S. (2020). Democracy and credit. *Journal of Financial Economics*, *136*(2), 571-596.

Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The journal of finance*, *53*(6), 2107-2137.

Detragiache, E., Tressel, T., & Gupta, P. (2008). Foreign banks in poor countries: Theory and evidence. *The Journal of Finance*, *63*(5), 2123-2160.

Duong, H. N., Goyal, A., Kallinterakis, V., & Veeraraghavan, M. (2022). Democracy and the pricing of initial public offerings around the world. *Journal of Financial Economics*, *145*(1), 322-341.

Dutta, N., & Mallick, S. (2022). Gender and Access to Finance: Perceived Constraints of Majority-Female-owned Indian Firms. *British Journal of Management*.

Erel, I., & Liebersohn, J. (2022). Can FinTech reduce disparities in access to finance? Evidence from the Paycheck Protection Program. *Journal of Financial Economics*, *146*(1), 90-118.

Fang, S., Goh, C., Roberts, M., Xu, L. C., & Zeufack, A. (2022). Female entrepreneurs and productivity around the world: Rule of law, network, culture, and gender equality. *World Development*, *154*, 105846.

Gerschenkron, A. (1962). *Economic backwardness in historical perspective: A book of essays* (Vol. 584). Cambridge, MA: Belknap Press of Harvard University Press.

Girma, S., & Shortland, A. (2008). The political economy of financial development. *Oxford economic papers*, *60*(4), 567-596.

Glaeser, E. L., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). Do institutions cause growth?. *Journal of economic Growth*, *9*, 271-303.

Gopalan, S., & Sasidharan, S. (2020). Financial liberalization and access to credit in emerging and developing economies: a firm-level empirical investigation. *Journal of Economics and Business*, *107*, 105861.

Gormley, T. A. (2010). The impact of foreign bank entry in emerging markets: Evidence from India. *Journal of Financial Intermediation*, *19*(1), 26-51.

Gygli, S., Haelg, F., Potrafke, N., & Sturm, J. E. (2019). The KOF globalisation index–revisited. *The Review of International Organizations*, *14*, 543-574.

Hauswald, R., & Marquez, R. (2006). Competition and strategic information acquisition in credit markets. *The Review of Financial Studies*, *19*(3), 967-1000.

Ho, C. Y., Huang, S., Shi, H., & Wu, J. (2018). Financial deepening and innovation: The role of political institutions. *World Development*, *109*, 1-13.

Hope, O. K., Thomas, W., & Vyas, D. (2011). Financial credibility, ownership, and financing constraints in private firms. *Journal of International Business Studies*, *42*, 935-957.

House, F. (2022). Freedom in the World 2022 Methodology INTRODUCTION-HISTORY OF FREEDOM IN THE WORLD.

Huang, Y. (2010). Political institutions and financial development: an empirical study. *World Development*, *38*(12), 1667-1677.

Krueger, A. O. (1974). The political economy of the rent-seeking society. *The American economic review*, *64*(3), 291-303.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). Government ownership of banks. *The Journal of Finance*, *57*(1), 265-301.

Lee, N., Sameen, H., & Cowling, M. (2015). Access to finance for innovative SMEs since the financial crisis. *Research policy*, *44*(2), 370-380.

Leon, F. (2015). Does bank competition alleviate credit constraints in developing countries?. *Journal of Banking & Finance*, *57*, 130-142.

Malkiel, B. G. (2003). The efficient market hypothesis and its critics. *Journal of economic perspectives*, *17*(1), 59-82.

Marshall, M. G., & Gurr, T. R. (2020). POLITY5: Dataset users' manual. *Center for Systemic Peace*.

McKinnon, R. I. (1973). Money and capital in economic development (Washington, DC: Brookings Institution, 1973). *McKinnonMoney and Capital in Economic Development1973*.

McLean, R. D., & Zhao, M. (2014). The business cycle, investor sentiment, and costly external finance. *The Journal of Finance*, *69*(3), 1377-1409.

Mol-Gómez-Vázquez, A., Hernández-Cánovas, G., & Koëter-Kant, J. (2020). Do foreign banks intensify borrower discouragement? The role of developed European institutions in ameliorating SME financing constraints. *International Small Business Journal*, *38*(1), 3-20.

Morrissey, O., & Udomkerdmongkol, M. (2012). Governance, private investment and foreign direct investment in developing countries. *World development*, *40*(3), 437-445.

Murphy, K. M., Shleifer, A., & Vishny, R. W. (1993). Why is rent-seeking so costly to growth?. *The American Economic Review*, *83*(2), 409-414.

Nguyen, T. T. M., & Tran, Q. T. (2022). Democracy and dividend policy around the world. *The North American Journal of Economics and Finance*, *62*, 101713.

Osei-Tutu, F., & Weill, L. (2022). Democracy favors access to credit of firms. *European Journal of Political Economy*, 102312.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *The Review of financial studies*, *22*(1), 435-480.

Qi, S., & Nguyen, D. D. (2021). Government connections and credit access around the world: Evidence from discouraged borrowers. *Journal of International Business Studies*, *52*, 321-333.

Rajan, R. G., & Zingales, L. (2003). The great reversals: the politics of financial development in the twentieth century. *Journal of financial economics*, *69*(1), 5-50.

Rowley, C., Tollison, R. D., & Tullock, G. (Eds.). (2013). *The political economy of rent-seeking* (Vol. 1). Springer Science & Business Media.

Sapienza, P. (2004). The effects of government ownership on bank lending. *Journal of financial economics*, *72*(2), 357-384.

Sasidharan, S. (2020). Does financial liberalisation ease firms' credit constraints? 1. In *Complexities of Financial Globalisation* (pp. 145-172). Routledge.

Shaw, E. S.. 1973, Financial deepenmg m economic development (Oxford University Press, New York).

Wei, S. J. (2018). *Managing financial globalization: Insights from the recent literature* (No. w24330). National Bureau of Economic Research.

Williams, J., & Nguyen, N. (2005). Financial liberalisation, crisis, and restructuring: A comparative study of bank performance and bank governance in South East Asia. *Journal of Banking & Finance*, *29*(8-9), 2119-2154.

Williams, K. (2017). Does democracy dampen the effect of finance on economic growth?. *Empirical Economics*, *52*(2), 635-658.

World Bank Group. (2013). *Global financial development report 2014: Financial inclusion* (Vol. 2). World Bank Publications.

Yang, Y., & Mallick, S. (2014). Explaining cross-country differences in exporting performance: The role of country-level macroeconomic environment. *International Business Review*, *23*(1), 246-259.

Table 1
Sample distribution – by year, industry, and country.
This table presents the mean of the measures of access to finance, financial liberalisation, and democracy per year, industry, and country, including the number of firms and the years the World Bank Enterprises Surveys (WBES) are carried out for each country. Definitions of variables and data sources are provided in Appendix Table A1.

Panel A: Statistics by year

Year	Number of firms	Number of countries	Access to finance	Financing obstacle	Foreign bank presence	Foreign bank number	Democracy
2006	7419	17	0.518	1.586	47.527	43.680	7.364
2007	5419	10	0.387	1.537	50.383	41.376	6.291
2008	213	1	0.620	1.836	19	52	0
2009	7903	20	0.522	1.625	42.455	46.476	6.526
2010	9118	19	0.523	1.558	44.516	47.190	8.134
2011	1210	3	0.677	2.202	20.764	21.464	2.945
2012	5701	2	0.350	1.152	6.836	19.791	3.022
2013	14948	35	0.449	1.414	47.267	49.687	6.593
2014	11572	5	0.367	1.251	7.284	14.975	8.116

Panel B: Statistics by industry

Industry	Number of firms	WBES year of survey	Access to finance	Financing obstacle	Foreign bank presence	Foreign bank number	Democracy
Mining	7	2009, 2012	0.286	1.143	13.571	18.857	5.429
Construction	10754	2006 - 2014	0.459	1.483	35.741	38.129	6.665
Manufacturing	24057	2006 - 2014	0.446	1.452	30.598	33.751	6.915
Transportation and utilities	2398	2006 - 2014	0.482	1.518	41.048	43.736	6.671
Wholesale and retail trade	17258	2006 - 2014	0.437	1.376	39.857	42.838	6.551
Finance, insurance & real estate	2072	2006 - 2014	0.432	1.370	35.873	40.657	6.715
Services	1551	2006 - 2014	0.409	1.274	36.246	37.182	7.073

Other	5406	2006 - 2014	0.523	1.711	34.895	37.648	6.610

Panel C: Statistics by country

Country	Number of firms	WBES year of survey	Access to finance	Financing obstacle	Foreign bank presence	Foreign bank number	Democracy
Albania	279	2013	0.262	0.832	90	85	9
Armenia	340	2013	0.385	1.721	83	80	5
Bangladesh	1,366	2013	0.619	1.815	3	3	6
Belarus	516	2008, 2013	0.463	1.399	27.221	60.808	0
Benin	124	2009	0.782	2.516	92	78	7
Bolivia	802	2006, 2010	0.562	1.631	29.813	43.367	7.673
Botswana	346	2006, 2010	0.503	1.650	91.306	60.980	8
Brazil	1,123	2009	0.760	2.298	22	38	8
Bulgaria	1,405	2007, 2009, 2013	0.402	1.192	76.454	68.243	9
Burkina Faso	324	2009	0.914	3.031	100	100	2
Burundi	244	2006, 2014	0.684	2.246	57.836	36.475	7
Cameroon	335	2009	0.839	2.475	82	73	1
Chile	928	2010	0.462	1.366	37	43	10
China	2,255	2012	0.213	0.843	2	21	0
Colombia	1,854	2006, 2010	0.591	1.744	16.762	27.709	7
Costa Rica	467	2010	0.702	2.103	38	22	10
Croatia	881	2007, 2013	0.414	1.293	90	41.855	9
Czech Republic	419	2009, 2013	0.432	1.313	82.332	65.332	9
Dominican Republic	305	2010	0.498	1.508	7	5	8
Ecuador	911	2006, 2010	0.557	1.604	11.735	16.839	5.632
El Salvador	891	2006, 2010	0.594	1.727	66.194	73.303	7.345
Estonia	460	2009, 2013	0.172	0.504	98.022	75	9
Eswatini	66	2006	0.455	1.485	80	80	0

Georgia	311	2013	0.322	1.019	64	77	7
Ghana	921	2007, 2013	0.796	2.608	65.560	59.560	8
Guatemala	935	2006, 2010	0.497	1.486	22.320	35.937	8
Honduras	664	2006, 2010	0.494	1.526	35.050	44.980	7
Hungary	521	2009, 2013	0.217	0.691	62.977	83.983	10
India	8,676	2014	0.339	1.166	3	12	9
Israel	464	2013	0.144	0.519	0	0	7
Jamaica	258	2010	0.543	1.729	91	75	9
Jordan	423	2013	0.667	1.974	25	40	2
Kenya	1,030	2007, 2013	0.462	1.549	37.973	28.617	8
Kyrgyz Republic	226	2013	0.389	1.208	76	83	7
Latvia	275	2013	0.389	1.164	60	57	8
Lebanon	467	2013	0.589	1.732	29	36	6
Lithuania	206	2013	0.282	0.942	94	67	10
Madagascar	706	2009, 2013	0.521	1.608	100	100	5.755
Malawi	478	2009, 2014	0.611	2.002	33.228	25	6
Mali	531	2007, 2010	0.670	2.309	37.966	49.311	7
Mauritania	79	2006	0.709	2.500	3	14	0
Mauritius	320	2009	0.559	1.897	66	64	10
Mexico	2,529	2006, 2010	0.474	1.467	77.785	40.914	8
Moldova	286	2013	0.234	0.731	39	50	9
Montenegro	203	2009, 2013	0.340	1.044	85.611	88	9
Morocco	314	2013	0.462	1.357	19	36	1
Mozambique	321	2007	0.601	2.097	99	90	5
Nepal	821	2009, 2013	0.464	1.548	12.853	10.853	6.426
Nicaragua	732	2006, 2010	0.425	1.342	34.643	51.398	8.422
Nigeria	2,776	2007, 2014	0.332	1.628	15.118	23.795	4
North Macedonia	336	2013	0.440	1.310	66	67	9

Pakistan	1,672	2007, 2013	0.411	1.336	49.529	36.624	3.057
Paraguay	829	2006, 2010	0.498	1.532	57.210	60.456	8.386
Peru	1,516	2006, 2010	0.448	1.313	49	61.872	9
Philippines	953	2009	0.270	0.895	1	15	8
Poland	731	2009, 2013	0.421	1.298	76.834	76.583	10
Russian Federation	4,250	2009, 2012	0.477	1.480	10.568	19.189	5
Rwanda	243	2006, 2011	0.551	1.720	24.984	47.086	0
Senegal	252	2007	0.635	2.171	68	77	8
Serbia	657	2009, 2013	0.475	1.434	76	66.991	9
Slovak Republic	417	2009, 2013	0.424	1.257	83.813	70.875	10
Slovenia	514	2009, 2013	0.399	1.249	26	37.062	10
South Africa	678	2007	0.243	0.792	21	22	9
Sri Lanka	485	2011	0.546	1.685	0	0	4
Sweden	519	2014	0.152	0.615	0	1	10
Tanzania	807	2006, 2013	0.688	2.232	56.273	65.696	2
Trinidad and Tobago	336	2010	0.586	1.771	56	67	10
Turkey	1,098	2013	0.204	0.714	12	35	9
Uganda	537	2013	0.592	1.879	81	83	1
Ukraine	740	2013	0.446	1.349	36	44	6
Uruguay	1,081	2006, 2010	0.491	1.447	64.843	78.016	10
Vietnam	947	2009	0.353	1.058	2	14	0
Yemen, Rep.	645	2010, 2013	0.532	1.676	0	0	1.912
Zambia	605	2013	0.623	1.950	99	94	7
Zimbabwe	541	2011	0.834	2.832	41	31	3

Table 2

Descriptive statistics – firm-level variables.

This table presents descriptive statistics of all the firm-level variables used in the regression analysis. Our base sample consists of 63,503 firms across 75 countries from the World Bank Enterprises Surveys (WBES) carried out between 2006 and 2014. Definitions of variables and data sources are provided in Appendix Table A1.

Variables	Obs.	Mean	Std. Dev.	Min	P25	Median	P75	Max
Access to finance	63,503	0.45	0.50	0	0	0	0	1
Financing obstacle	62,534	1.45	1.31	0	0	0	0	4
Financial constraint	63,432	0.24	0.43	0	0	0	0	1
Bank account	61,915	0.10	0.30	0	0	0	0	1
Bank credit	60,660	0.41	0.49	0	0	0	0	1
Bank finance	61,831	0.61	0.49	0	0	0	0	1
Firm age	63,503	2.65	0.77	0	0	0	0	5.37
Small sized firm	63,503	0.45	0.50	0	0	0	0	1
Medium sized firm	63,503	0.35	0.48	0	0	0	0	1
Large sized firm	63,503	0.20	0.40	0	0	0	0	1
Manager's experience	63,503	2.65	0.73	0	0	0	0	4.09
Largest owner asset share	63,503	0.78	0.27	0	0	0	0	1
Foreign ownership	63,503	0.07	0.25	0	0	0	0	1
State ownership	63,503	0.01	0.08	0	0	0	0	1
Exporter	63,503	0.15	0.35	0	0	0	0	1
Subsidiary	63,503	0.17	0.37	0	0	0	0	1
Audited	63,503	0.53	0.50	0	0	0	0	1
Quality certification	63,503	0.26	0.44	0	0	0	0	1
Publicly listed	63,503	0.04	0.20	0	0	0	0	1
Privately held	63,503	0.44	0.50	0	0	0	0	1
Sole proprietorship	63,503	0.34	0.47	0	0	0	0	1
Partnership	63,503	0.08	0.27	0	0	0	0	1
Limited partnership	63,503	0.08	0.27	0	0	0	0	1
Female participation	61,816	0.32	0.47	0	0	0	0	1
Sales growth	49,173	1.89	26.1	-100	-100	-100	-100	100
Employment growth	59,057	4.70	16.6	-96.6	-96.6	-96.6	-96.6	100
Labour productivity growth	47,902	-2.41	26.6	-100	-100	-100	-100	100

Table 3

Descriptive statistics – country-level variables.

This table presents descriptive statistics of the main country-level variables used in the regression analysis, including their alternative measures or components. The statistics reported are at the macro-level for the 75 countries in our sample. Definitions of variables and data sources are provided in Appendix Table A1.

Variables	Obs.	Mean	Std. Dev.	Min	P25	Median	P75	Max
Foreign bank presence	75	48.7	33.2	0	0	0	0	100
Foreign bank number	75	48	27.9	0	0	0	0	100
Financial openness index	73	0.49	0.50	0	0	0	0	1
Financial globalisation index	75	56.7	14.6	23.0	23.0	23.0	23.0	85.6
Democracy	75	6.53	3.21	0	0	0	0	10
Polity	75	5.49	5.09	-9	-9	-9	-9	10
Regulation of executive recruitment	75	2.63	0.51	1	1	1	1	3
Competitiveness of executive recruitment	75	2.36	0.92	0	0	0	0	3
Openness of executive recruitment	75	3.65	1.06	0	0	0	0	4
Constraints on executive authority	75	5.55	1.66	2	2	2	2	7
Regulation of political participation	75	2.81	1.09	2	2	2	2	5
Competitiveness of political participation	75	3.60	1.05	0	0	0	0	5
Democratic regime, BR	75	0.71	0.46	0	0	0	0	1
Electoral democracy index, V-Dem	75	0.58	0.22	0.098	0.098	0.098	0.098	0.91
GDP per capita	75	8.10	1.20	5.40	5.40	5.40	5.40	10.9
Income growth	75	3.04	3.70	-4.86	-4.86	-4.86	-4.86	18.1
Inflation	75	6.57	4.14	-0.94	-0.94	-0.94	-0.94	23.1
Financial development	75	3.43	0.76	2.00	2.00	2.00	2.00	4.93

Table 4

Financial liberalisation, democracy, and access to finance: main results.

This table presents the main regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Dependent variable:	Access to finance						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Foreign bank presence	-0.0000		-0.0000	-0.0054***	-0.0052***	-0.0077***	-0.0075***
	(-0.066)		(-0.036)	(-6.220)	(-6.003)	(-7.239)	(-7.062)
Democracy		-0.0006	-0.0006	-0.0414***	-0.0378***	-0.0696***	-0.0658***
		(-0.150)	(-0.140)	(-5.810)	(-5.332)	(-7.771)	(-7.389)
Foreign bank presence×Democracy				0.0008***	0.0008***	0.0011***	0.0011***
				(7.114)	(6.976)	(8.336)	(8.199)
Firm age					-0.0186***		-0.0189***
					(-6.498)		(-6.597)
Medium sized firm					-0.0178***		-0.0178***
					(-3.904)		(-3.918)
Large sized firm					-0.0574***		-0.0576***
					(-9.245)		(-9.265)
Manager's experience					-0.0007		-0.0006
					(-0.249)		(-0.221)
Largest owner asset share					-0.0355***		-0.0353***
					(-4.544)		(-4.522)
Foreign ownership					-0.0820***		-0.0816***

					(-10.320)		(-10.265)
State ownership					-0.0071		-0.0072
					(-0.308)		(-0.314)
Exporter					0.0037		0.0039
					(0.632)		(0.656)
Audited					-0.0062		-0.0061
					(-1.366)		(-1.342)
Publicly listed					-0.0304***		-0.0300***
					(-2.903)		(-2.859)
Privately held					-0.0104*		-0.0096*
					(-1.844)		(-1.697)
Quality certification					-0.0368***		-0.0368***
					(-7.398)		(-7.408)
Subsidiary					-0.0084		-0.0085
					(-1.499)		(-1.522)
GDP per capita						-0.0773	-0.0540
						(-0.957)	(-0.671)
Growth						-0.0050**	-0.0052**
						(-2.147)	(-2.237)
Inflation						-0.0008	-0.0010
						(-0.445)	(-0.529)
Financial development						-0.1515***	-0.1552***
						(-4.549)	(-4.682)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	63,503	63,503	63,503	63,503	63,503	63,503	63,503
Adjusted R^2	0.100	0.100	0.100	0.101	0.109	0.101	0.109

Table 5

Robustness checks with alternative clustering of standard errors.

This table presents the main regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the industry level in column (1), country level in column (2), country-year level in column (3), industry-year level in column (4), and country-industry level in column (5); *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. For brevity, the coefficients of firm and country characteristics are not reported. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Clustering level:	Industry	Country	Country-year	Industry-year	Country-industry
Dependent variable:			Access to finance		
	(1)	(2)	(3)	(4)	(5)
Foreign bank presence	-0.0075***	-0.0075***	-0.0075***	-0.0075***	-0.0075***
	(-8.770)	(-2.934)	(-3.989)	(-4.966)	(-4.426)
Democracy	-0.0658***	-0.0658***	-0.0658***	-0.0658***	-0.0658***
	(-10.683)	(-2.729)	(-3.777)	(-4.874)	(-4.447)
Foreign bank presence×Democracy	0.0011***	0.0011***	0.0011***	0.0011***	0.0011***
	(16.823)	(3.263)	(4.559)	(7.953)	(5.077)
Firm characteristics	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	63,503	63,503	63,503	63,503	63,503
Adjusted R^2	0.109	0.109	0.109	0.109	0.109

Table 6

Robustness checks with alternative estimation methods.

This table presents the main regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by a logic model in columns (1)-(2) and a probit model in columns (3)-(4), with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. For brevity, the coefficients of firm and country characteristics are not reported. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Estimation method:	Logit	Logit (marginal effect)	Probit	Probit (marginal effect)
Dependent variable:	Access to finance			
	(1)	(2)	(3)	(4)
Foreign bank presence	-0.0348***	-0.0086***	-0.0217***	-0.0086***
	(-7.459)	(-7.458)	(-7.602)	(-7.602)
Democracy	-0.2935***	-0.0726***	-0.1816***	-0.0718***
	(-7.722)	(-7.721)	(-7.739)	(-7.739)
Foreign bank presence×Democracy	0.0047***	0.0012***	0.0029***	0.0012***
	(8.417)	(8.416)	(8.424)	(8.424)
Firm characteristics	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	63,503	63,503	63,503	63,503
Pseudo-R^2	0.086		0.086	

Table 7

Robustness checks with alternative measures for key variables.

This table presents the main regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, except for column (2) of panel A for which we used ordered probit, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. In panel A, the outcome variables are: Financing obstacle: ordinal measure ranking a firm's perception on the severity of constraints faced with finance [0 = no obstacle, 1 = a minor obstacle, 2 = a moderate obstacle, 3 = a major obstacle, or 4 = very severe obstacle] in columns (1)-(2), Financial constraint: a dummy variable equal to 1 if a firm perceives access to finance to be a major obstacle or very severe obstacle; 0 otherwise (no obstacle, minor obstacle, or moderate obstacle), Bank account: a dummy variable equal to 1 if a firm does not have an account and 0 otherwise, Bank credit: a dummy variable equal to 1 if a firm does not have a loan or overdraft with the bank and 0 otherwise, and Bank finance: a dummy variable equal to 1 if a firm does not have external financing of its working capital supplied by a bank. The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. In panel B, the outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are alternative proxies for financial liberation and democracy: Foreign bank number—the proportion of foreign banks among total banks in a country in column 1 of panel B, Financial openness index— an index measuring a country's degree of capital account openness in column (2), Financial globalisation index—the degree of globalisation of financial flows in a country in column (3), Polity— an additive 21-point scale constructed by deducting the autocracy score from the democracy score in column (4), Democracy (BR)—a dichotomous measure of democracy from Cheibub et al. (2010) [and updated by Bjornskov and Rode (2020)] in column (5), and Democracy (V-Dem)—electoral democracy index from the Varieties of Democracy. The control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. For brevity, the coefficients of firm and country characteristics are not reported. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Panel A: Alternative proxies for access to finance

Dependent variable:	Financing obstacle: ordinal measure		Financial constraint	Bank account	Bank credit	Bank finance
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign bank presence	-0.0112***	-0.0085***	-0.0039***	-0.0021***	-0.0012	-0.0091***
	(-3.761)	(-3.360)	(-3.994)	(-2.747)	(-1.320)	(-10.676)
Democracy	-0.1449***	-0.1179***	-0.0357***	-0.0363***	-0.0170**	-0.0328***

	(-6.128)	(-5.833)	(-4.580)	(-6.016)	(-2.306)	(-4.209)
Foreign bank presence	0.0026***	0.0021***	0.0008***	0.0004***	0.0002*	0.0012***
×Democracy	(7.398)	(6.957)	(6.964)	(4.791)	(1.904)	(10.999)
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	62,534	62,534	63,432	62,697	61,353	62,569
Adjusted R^2	0.134		0.114	0.170	0.261	0.223
Panel B: Alternative proxies for financial liberalisation and democracy						
Dependent variable:	Access to finance					
Financial liberalisation is:	Foreign bank number	Financial openness index	Financial globalisation index	Baseline measure of financial liberalisation: foreign bank presence		
Democracy is:	Baseline measure of democracy			Polity	Democracy (BR)	Democracy (V-Dem)
Financial liberalisation	-0.0021	0.0107	-0.0387***	-0.0032***	-0.0049***	-0.0094***
	(-1.411)	(0.126)	(-8.693)	(-4.416)	(-6.676)	(-6.509)
Democracy	-0.0201**	-0.0007	-0.2026***	-0.0264***	-0.4698***	-0.8645***
	(-2.242)	(-0.123)	(-7.371)	(-4.782)	(-9.039)	(-5.178)
Financial liberalisation	0.0003**	0.0244*	0.0039***	0.0005***	0.0064***	0.0156***
×Democracy	(2.063)	(1.831)	(7.133)	(6.265)	(9.264)	(7.164)
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	66,786	69,689	71,308	63,503	66,295	64,236
Adjusted R^2	0.108	0.110	0.110	0.109	0.107	0.109

Table 8

Financial liberalisation, democracy, and access to finance: components of polity.

This table presents the regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The baseline control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. The header of each column shows the components of Polity being considered. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Dependent variable:	Access to finance					
Components of Polity IV:	Executive recruitment			Executive authority	Political participation	
	Regulation	Competitiveness	Openness	Constraints	Regulation	Competitiveness
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign bank presence	-0.0091***	-0.0032***	-0.0038***	-0.0036***	-0.0018*	-0.0076***
	(-6.705)	(-3.566)	(-3.333)	(-2.889)	(-1.728)	(-4.224)
Components of Polity IV	-0.0165	-0.0557**	-0.0615***	-0.0325***	-0.1617***	-0.2374***
	(-0.630)	(-2.354)	(-3.047)	(-3.043)	(-6.938)	(-9.078)
Foreign bank presence	0.0031***	0.0012***	0.0010***	0.0007***	0.0004	0.0019***
×Components of Polity IV	(6.835)	(4.199)	(3.851)	(3.406)	(1.178)	(4.233)
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	63,503	63,503	63,503	63,503	63,503	63,503
Adjusted R^2	0.109	0.109	0.109	0.109	0.109	0.110

Table 9

Financial liberalisation, democracy, and access to finance: heterogeneity by firm characteristics.

This table presents the regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The baseline control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. The header of each column shows the different firm heterogeneities being considered. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Dependent variable:	Access to finance						
	Manufacturing	Services	Small	Medium	Large	Domestic	Foreign
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Foreign bank presence	-0.0080***	-0.0141***	-0.0086***	-0.0061***	-0.0031	-0.0073***	-0.0043
	(-5.775)	(-4.460)	(-5.899)	(-3.155)	(-1.105)	(-6.411)	(-1.287)
Democracy	-0.0702***	-0.1351***	-0.0710***	-0.0549***	-0.0422*	-0.0655***	-0.0601*
	(-6.033)	(-6.096)	(-5.500)	(-3.513)	(-1.836)	(-6.952)	(-1.875)
Foreign bank presence	0.0011***	0.0020***	0.0011***	0.0010***	0.0008**	0.0011***	0.0009**
×Democracy	(6.599)	(5.572)	(5.978)	(4.171)	(2.206)	(7.504)	(2.339)
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	40,036	23,467	28,470	22,503	12,530	57,791	5,662
Adjusted R^2	0.120	0.0990	0.120	0.0993	0.103	0.111	0.106

Table 10

Financial liberalisation, democracy, and access to finance: moderating effect of banking sector characteristics.

This table presents the regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The baseline control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. The header of each column shows the different banking sector characteristics being considered. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Bank characteristic:	3-bank concentration ratio	Lerner Index	Boone indicator	Interest spread	Bank overhead
Dependent variable:	Access to finance				
	(1)	(2)	(3)	(4)	(5)
Foreign bank presence	-0.0123***	-0.0072*	-0.0052***	-0.0301***	-0.0513***
	(-3.013)	(-1.866)	(-4.752)	(-5.918)	(-9.513)
Democracy	-0.4921***	0.0093	-0.0707***	-0.1418***	-0.3702***
	(-16.986)	(0.234)	(-6.344)	(-3.378)	(-10.346)
Foreign bank presence×Democracy	0.0023***	0.0010**	0.0009***	0.0018***	0.0063***
	(4.264)	(1.964)	(6.152)	(3.688)	(9.637)
Bank characteristic	-0.0526***	6.9910***	0.7767***	-0.2248***	-0.6610***
	(-16.875)	(4.688)	(3.294)	(-4.472)	(-9.502)
Foreign bank presence	0.0002***	-0.0367**	-0.0694***	0.0024***	0.0093***
×Bank characteristic	(3.237)	(-2.398)	(-7.943)	(4.583)	(8.585)
Democracy	0.0067***	-0.9446***	0.0238	0.0159***	0.0730***
×Bank characteristic	(15.047)	(-4.634)	(0.434)	(3.182)	(8.875)
Foreign bank presence	-0.0000***	0.0060***	0.0060***	-0.0001**	-0.0011***
×Democracy×Bank characteristic	(-4.387)	(2.719)	(5.928)	(-2.137)	(-8.096)

Firm characteristics	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes
Country fixed effect	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	63,503	57,398	63,503	47,251	63,503
Adjusted R^2	0.114	0.116	0.113	0.106	0.111

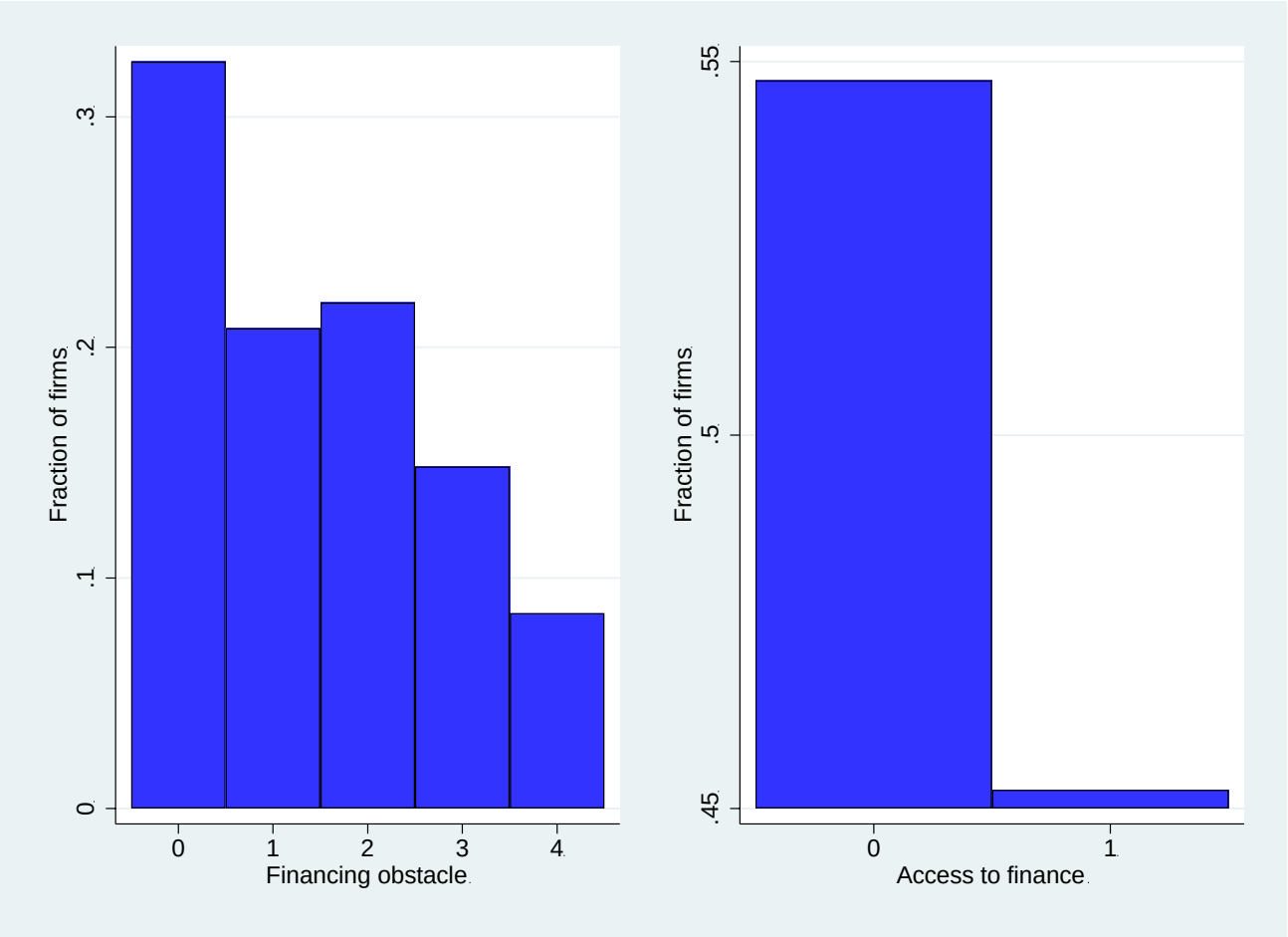

Fig. 1. Histograms of financial obstacle and access to finance.
This figure displays: (a) Left panel: the histogram of financing obstacle, an ordinal measure ranking a firm's perception on the severity of constraints faced with finance [0 = no obstacle, 1 = a minor obstacle, 2 = a moderate obstacle, 3 = a major obstacle, or 4 = very severe obstacle]; and (b) Right panel: the histogram of our main dependent variable, Access to finance, a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). Access to finance is constructed from Financing obstacle. Definitions of variables and data sources are provided in Appendix Table A1.

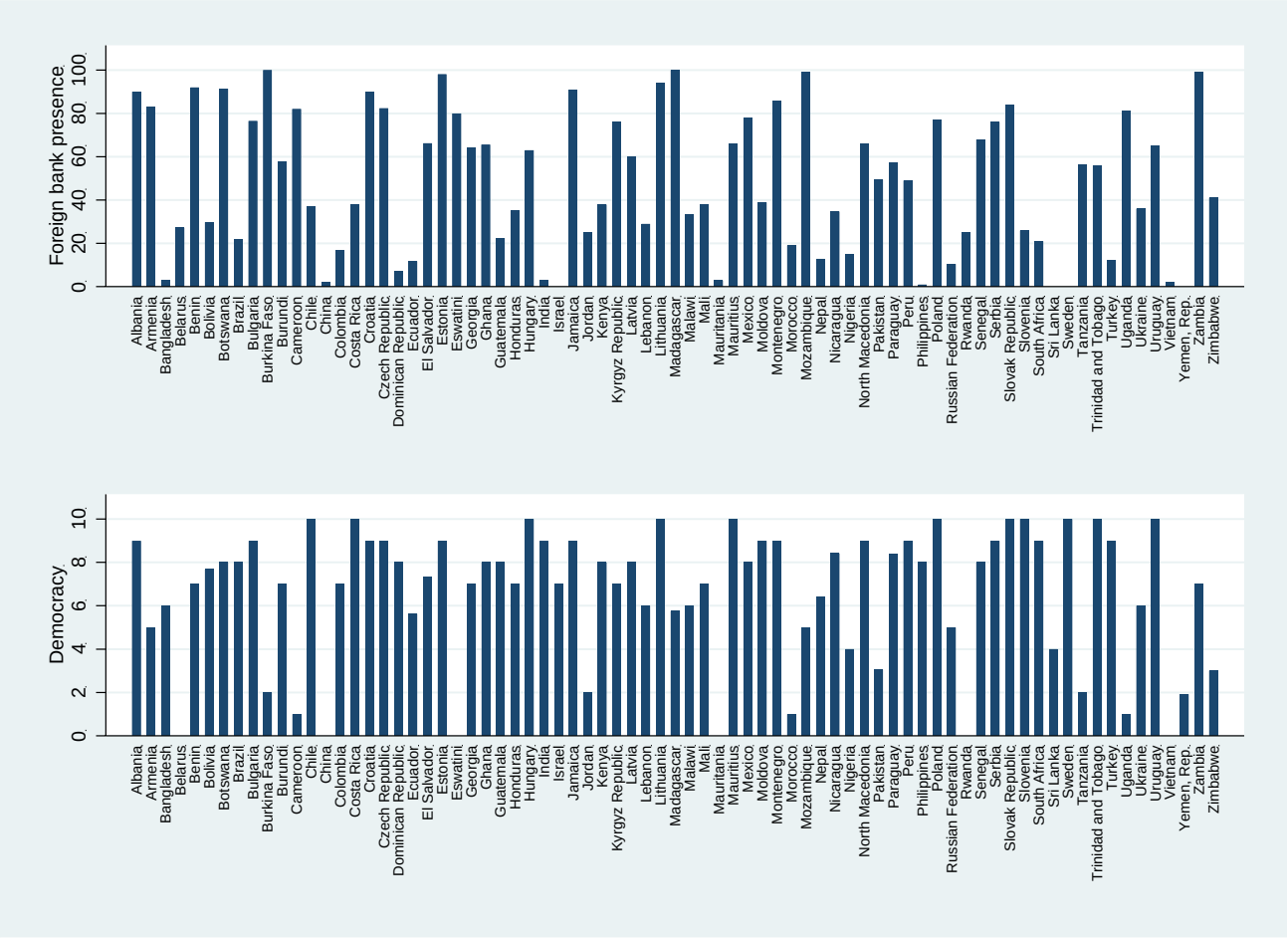

Fig. 2. Country-level averages of foreign bank presence and democracy.
This figure displays: (a) Top panel: the bar chart of country average of foreign bank presence; and (b) Bottom panel: the bar chart of country average of institutionalised democracy. Definitions of variables and data sources are provided in Appendix Table A1.

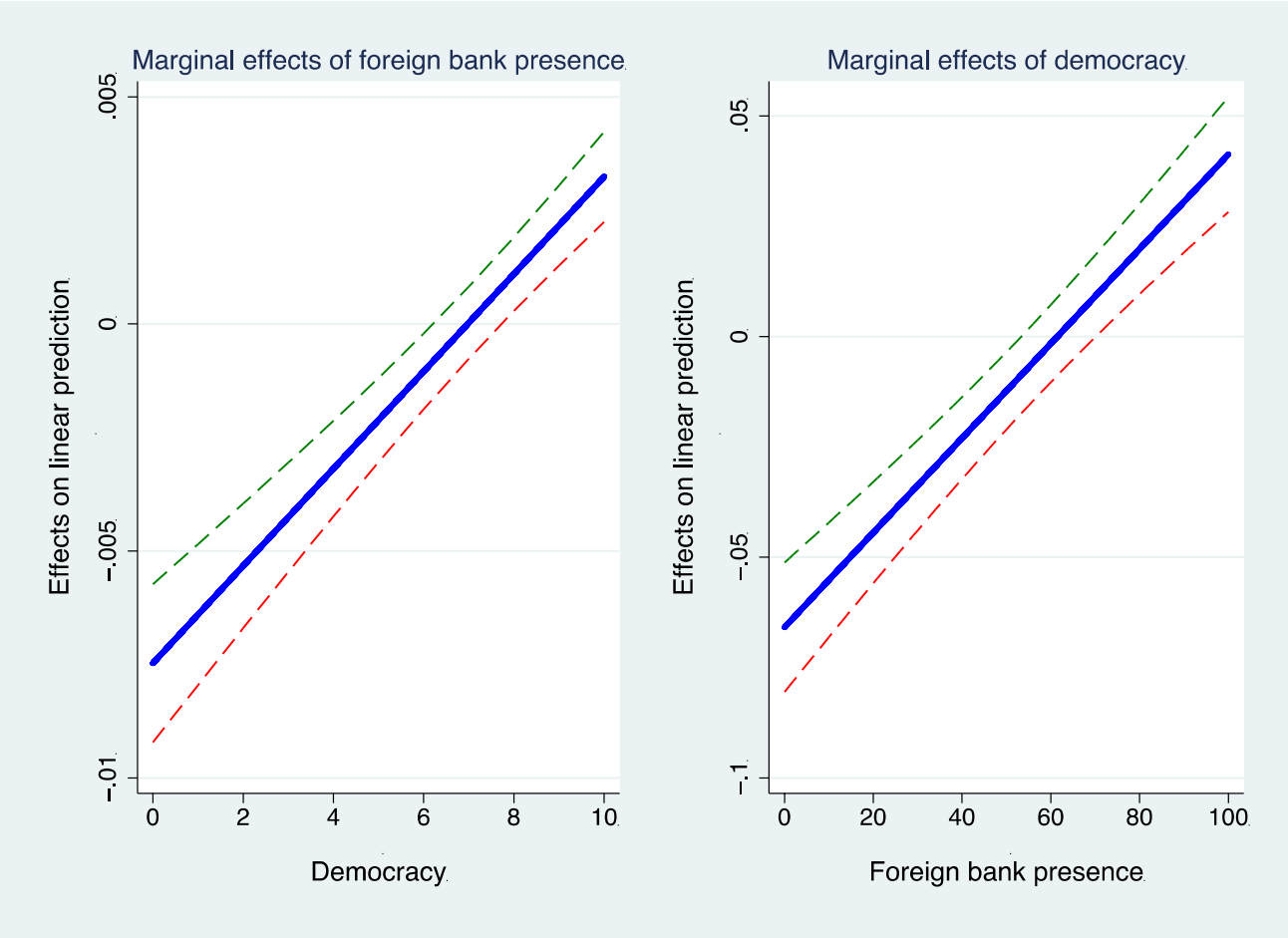

Fig. 3. Marginal effects of estimates in column (7) of Table 4.
This figure displays: (a) Left panel: the estimated marginal effects of the interaction of foreign bank presence and democracy on access to finance, corresponding to Equation (2); and (b) Right panel: the estimated marginal effects of the interaction of foreign bank presence and democracy on access to finance, corresponding to Equation (3). The green and red dashed lines are capturing the +/− 5% confidence bands of the composite effect, and is given by $\partial Access\ to\ finance_{ijkt}/\partial KIV_{kt}$ $+/-z_{1-s*0.5}\times SE$, where the key independent variable, KIV_{kt}, is foreign bank presence or democracy, and SE=sqrt[$var(\beta_1/\beta_2)+(KIV_{kt})^2\times var(\beta_3)+ 2\times KIV_{kt}\times covar(\beta_1/\beta_2,\beta_3)$]. Definitions of variables and data sources are provided in Appendix Table A1.

Appendix

Table A1
Definitions of variables and data sources.

Variable	Description
A. Outcome variables	
Access to finance	A dummy variable that equals to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise. Source: World Bank Enterprises Surveys.
Financing obstacle	An ordinal variable that equals to 0 if a firm perceives access to finance to be no obstacle, 1 (minor obstacle), 2 (moderate obstacle), 3 (major obstacle), and 4 (very severe obstacle). Source: As above.
Financial constraint	A dummy variable that equals to 1 if a firm perceives access to finance to be a major obstacle or very severe obstacle; 0 otherwise. Source: As above.
Bank account	A dummy variable that equals to 1 if a firm does not have an account; 0 otherwise. Source: As above.
Bank credit	A dummy variable that equals to 1 if a firm does not have a loan or overdraft with a bank; 0 otherwise. Source: As above.
Bank finance	A dummy variable that equals to 1 if a firm does not have external financing of its working capital provided by a bank; 0 otherwise. Source: As above.
B. Independent variables	
Foreign bank presence	The percentage of the total banking assets that are held by foreign banks. A foreign bank is a bank where 50 percent or more of its shares are owned by foreigners. Source: Claessens & Van Horen (2014), downloaded from Global Financial Development Database.
Foreign bank number	The percentage of the number of foreign owned banks to the number of the total banks in a country. A foreign bank is a bank where 50 percent or more of its shares are owned by foreigners. Source: As above.
Financial openness index	An index measuring a country's degree of capital account openness. The variable is based on the binary dummy variables that codify the tabulation of restrictions on cross-border financial transactions documented in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER). Source: https://web.pdx.edu/~ito/Chinn-Ito_website.htm, Chinn and Ito (2008).

Financial globalisation index	The degree of globalisation of financial flows in a country. Source: Gygli et al., 2019.
Democracy	An additive 11-point scale [0-10] measure of institutionalised democracy. Source: Polity V project.
Polity	The revised combined Polity score, computed as democracy score minus autocracy score, yielding an additive 21-point scale [-10, 10] indicator. Source: As above.
Regulation of executive recruitment	The extent to which a polity has institutionalized procedures for transferring executive power. Source: As above.
Competitiveness of executive recruitment	The extent that prevailing modes of advancement give subordinates equal opportunities to become superordinates. Source: As above.
Openness of executive recruitment	The extent that all politically active population has an opportunity, in principle, to attain the position through a regularised process. Source: As above.
Constraints on executive authority	The extent of institutionalized constraints on the decision-making power of chief executives, whether individuals or collectivities. Source: As above.
Regulation of political participation	The extent that there are binding rules on when, whether, and how political preferences are expressed. Source: As above.
Competitiveness of political participation	The extent to which alternative preferences for policy and leadership can be pursued in the political arena. Source: As above.
Democratic regime, BR	A dichotomous measure of democracy. Source: Cheibub et al. (2010); Bjornskov & Rode (2020).
Electoral democracy index, V-Dem	Electoral democracy index from the Varieties of Democracy Project. Source: Coppedge et al. (2021).
C. Firm-level characteristics	
Firm age	Log of firm age in years. Source: World Bank Enterprises Surveys.
Small-sized firm	A dummy variable that equals to 1 if a firm has less than 20 employees; 0 otherwise. Source: As above.

Medium-sized firm	A dummy variable that equals to 1 if a firm has between 20 and 99 employees; 0 otherwise. Source: As above.
Large-sized firm	A dummy variable that equals to 1 if a firm has 100 or more employees; 0 otherwise. Source: As above.
Manager's experience	Log of the number of years the top manager has been working in the firm's sector. Source: As above.
Largest owner asset share	Proportion of assets held by the largest owner. Source: As above.
Foreign ownership	A dummy variable that equals to 1 if 50% or more of a firm is owned by a foreign entity; 0 otherwise. Source: As above.
State ownership	A dummy variable that equals to 1 if 50% or more of a firm is owned by the government; 0 otherwise. Source: As above.
Exporter	A dummy variable that equals to one if 10% or more of a firm's sales are exported; 0 otherwise. Source: As above.
Subsidiary	A dummy variable that equals to 1 if a firm is part of a larger establishment; 0 otherwise. Source: As above.
Audited	A dummy variable that equals to 1 if the annual financial statement of a firm is checked and certified by an external auditor; 0 otherwise. Source: As above.
Quality certificate	A dummy variable that equals to 1 if a firm holds internationally recognised quality certification; 0 otherwise. Source: As above.
Publicly listed	A dummy variable that equals to 1 if a firm has the legal status of publicly listed company; 0 otherwise. Source: As above.
Privately held	A dummy variable that equals to 1 if a firm has the legal status of privately held limited liability company; 0 otherwise. Source: As above.
Sole proprietorship	A dummy variable that equals to 1 if a firm has the legal status of sole proprietorship; 0 otherwise. Source: As above.
Partnership	A dummy variable that equals to one if a firm has the legal status of partnership; 0 otherwise. Source: As above.
Limited partnership	A dummy variable that equals to one if a firm has the legal status of limited partnership; 0 otherwise. Source: As above.

Female participation	A dummy variable that equals to one if a female is involved in the ownership of the firm; 0 otherwise. Source: As above.
Sales growth	Real annual sales growth. Source: As above.
Employment growth	Annual employment growth. Source: As above.
Labour productivity growth	Annual labour productivity growth. Source: As above.
D. Industry indicators	
Industry dummies	A vector of dummy variables that equals to 1 if a firm indicates the industry of operation is Mining (or Construction or Manufacturing or Transportation & utilities or Wholesale & retail trade or Finance, insurance & real estate or Services or Other); 0 otherwise. Source: World Bank Enterprises Surveys.
E. Country-level controls	
GDP per capita	Log of GDP per capita in constant 2010 US$. Source: World Development Indicators.
Income growth	Annual GDP per capita growth rate. Source: As above.
Inflation	Annual change in consumer prices. Source: As above.
Financial development	Domestic credit to the private sector as a percent of GDP. Source: As above.
Institutional quality	Average value of six governance indicators: voice and accountability, control of corruption, government effectiveness, political stability, rule of law, and regulatory quality. Source: World Governance Indicators.
Control of corruption	The extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Source: As above.
Government effectiveness	The quality of public services, the quality of civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Source: As above.
Political stability	The likelihood of political instability and/or politically motivated violence, including terrorism. Source: As above.

Rule of law	The extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. Source: As above.
Regulatory quality	The ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Source: As above.
Primary school enrolment	The ratio of children of official school age who are enrolled in primary school to the population of the corresponding official school age. Source: World Development Indicators.
Population density	The midyear population divided by land area in square kilometers. Source: As above.
Share of urban population	The proportion of people living in urban areas. Source: As above.
Trade openness	The sum of exports and imports of goods and services measured as a share of gross domestic product. Source: As above.
CPIA accountability	The extent to which the executive can be held accountable for its use of funds and for the results of its actions by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for administrative decisions, use of resources, and results obtained. Source: Country Policy and Institutional Assessment, World Bank.
Property rights	The extent to which private economic activity is facilitated by an effective legal system and rule-based governance structure in which property and contract rights are reliably respected and enforced. Source: As above.
Disclosure index	The index of business extent of disclosure. Source: Doing Business Report, World Bank.
Legal rights	The degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders. Source: As above.
Contract enforcement	The time and cost for resolving a commercial dispute through a local first-instance court and the quality of judicial processes, evaluating whether each country has adopted a series of good practices that promote quality and efficiency in the court system. Source: As above.
Resolving insolvency	The time, cost and outcome of insolvency proceedings involving domestic entities as well as the strength of the legal framework applicable to judicial liquidation and reorganisation proceedings. Source: As above.
Minority investors	The protection of minority investors from conflicts of interest. Source: As above.

Getting credit	The strength of credit reporting systems and the effectiveness of collateral and bankruptcy laws in facilitating lending. Source: As above.
Credit information	The coverage, scope, and accessibility of credit information available through either a public credit registry or a private credit bureau. Source: As above.
F. Bank characteristics	
3-bank concentration ratio	Assets of the three largest commercial banks as a share of total commercial banking assets in a country. Source: Global Financial Development Database.
Lerner index	A measure of market power in the banking market, which compares output pricing and marginal costs (that is, markup). Source: As above.
Boone indicator	A measure of the degree of competition based on profit-efficiency in the banking market, which is calculated as the elasticity of profits to marginal costs. Source: As above.
Interest spreads	The difference between lending rate and deposit rate. Source: As above.
Bank overhead	Operating expenses of a bank as a share of the value of all its assets. Source: As above.

Table A2

Descriptive statistics – additional country-level variables.

This table presents descriptive statistics of the remaining country-level variables used in the regression analysis. The statistics reported are at the macro-level for the 75 countries in our sample. Definitions of variables and data sources are provided in Appendix Table A1.

Variables	Obs.	Mean	Std. Dev.	Min	P25	Median	P75	Max
Institutional quality	75	-0.18	0.66	-1.56	-1.56	-1.56	-1.56	1.81
Control of corruption	75	-0.26	0.70	-1.37	-1.37	-1.37	-1.37	2.29
Government effectiveness	75	-0.14	0.69	-1.51	-1.51	-1.51	-1.51	1.91
Political stability	75	-0.31	0.87	-2.33	-2.33	-2.33	-2.33	1.15
Rule of law	75	-0.25	0.71	-1.82	-1.82	-1.82	-1.82	1.97
Regulatory quality	75	-0.036	0.73	-2.07	-2.07	-2.07	-2.07	1.91
Primary school enrolment	62	88.3	11.3	57.7	57.7	57.7	57.7	99.4
Population density	75	131	173	2.93	2.93	2.93	2.93	1,160
Share of urban population	75	52.5	20.8	9.38	9.38	9.38	9.38	93.3
Trade openness	73	80.1	34.6	27.3	27.3	27.3	27.3	162
Accountability	32	3.03	0.49	1.50	1.50	1.50	1.50	4
Property rights	32	3.08	0.49	1.50	1.50	1.50	1.50	3.50
Disclosure index	58	5.53	2.15	1	1	1	1	10
Legal rights	66	5.42	2.64	0	0	0	0	10
Contract enforcement	66	56.3	10.8	32.3	32.3	32.3	32.3	81.1
Resolving insolvency	66	39.2	15.3	0	0	0	0	77.7
Minority investors	58	52.1	12.7	30	30	30	30	80
Getting credit	66	51.5	23.7	6.30	6.30	6.30	6.30	93.8
Credit information	66	2.82	2.40	0	0	0	0	6
3-bank concentration ratio	75	63.6	19.1	21.5	21.5	21.5	21.5	100
Lerner index	70	0.27	0.092	0	0	0	0	0.49
Boone indicator	75	-0.11	0.29	-1.30	-1.30	-1.30	-1.30	0.75
Interest spread	63	8.16	7.11	0.26	0.26	0.26	0.26	35.6
Bank overhead costs	75	4.52	2.48	1.01	1.01	1.01	1.01	12.5

Table A3

Robustness checks with additional controls.

This table presents the regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The baseline control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. The header of each column shows the additional control variable used to test for robustness. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Dependent variable:	Access to finance			
Additional control:	Female ownership	Sole proprietorship, partnership, and ltd. partnership	Sales growth	Employment growth
	(1)	(2)	(3)	(4)
Foreign bank presence	-0.0068***	-0.0075***	-0.0087***	-0.0074***
	(-6.172)	(-7.055)	(-7.059)	(-6.660)
Democracy	-0.0652***	-0.0658***	-0.0781***	-0.0680***
	(-7.196)	(-7.381)	(-7.414)	(-7.312)
Foreign bank presence×Democracy	0.0011***	0.0011***	0.0013***	0.0011***
	(7.778)	(8.205)	(8.231)	(7.969)
Observations	61,816	63,503	49,173	59,057
Adjusted R^2	0.105	0.109	0.111	0.110
Additional control:	Labour growth	Institutional quality	Control of corruption	Government effectiveness
	(5)	(6)	(7)	(8)
Foreign bank presence	-0.0086***	-0.0079***	-0.0076***	-0.0077***

	(-6.830)	(-7.318)	(-7.111)	(-7.293)
Democracy	-0.0778***	-0.0693***	-0.0656***	-0.0864***
	(-7.259)	(-7.644)	(-7.360)	(-9.197)
Foreign bank presence×Democracy	0.0013***	0.0011***	0.0011***	0.0012***
	(7.988)	(8.449)	(8.239)	(9.110)
Observations	47,902	63,503	63,503	63,503
Adjusted R^2	0.112	0.109	0.109	0.110
Additional control:	Political stability	Rule of law	Regulatory quality	Primary school enrolment
	(9)	(10)	(11)	(12)
Foreign bank presence	-0.0054***	-0.0073***	-0.0078***	-0.0020
	(-4.443)	(-6.936)	(-7.225)	(-1.038)
Democracy	-0.0346***	-0.0536***	-0.0681***	-0.0222**
	(-2.796)	(-5.719)	(-7.541)	(-2.032)
Foreign bank presence×Democracy	0.0008***	0.0010***	0.0011***	0.0005**
	(5.093)	(7.509)	(8.193)	(2.233)
Observations	63,503	63,503	63,503	52,532
Adjusted R^2	0.110	0.110	0.109	0.108
Additional control:	Population density	Share of urban population	Trade openness	CPIA Accountability
	(13)	(14)	(15)	(16)
Foreign bank presence	-0.0073***	-0.0063***	-0.0118***	-0.0157***
	(-6.892)	(-5.911)	(-9.058)	(-7.393)
Democracy	-0.0540***	-0.0390***	-0.0856***	-0.2320***
	(-5.844)	(-4.180)	(-8.853)	(-8.101)
Foreign bank presence×Democracy	0.0011***	0.0009***	0.0016***	0.0029***
	(8.602)	(6.518)	(10.066)	(8.112)
Observations	63,503	63,503	62,522	28,827
Adjusted R^2	0.110	0.111	0.111	0.134
Additional control:	Disclosure index	Legal rights	Contract enforcement	Resolving insolvency
	(17)	(18)	(19)	(20)

Foreign bank presence	-0.0037	-0.0039***	-0.0064***	-0.0062***
	(-1.448)	(-3.391)	(-5.593)	(-5.527)
Democracy	-0.1286***	-0.0653***	-0.0623***	-0.0631***
	(-5.471)	(-5.370)	(-5.116)	(-5.194)
Foreign bank presence×Democracy	0.0016***	0.0010***	0.0012***	0.0012***
	(4.552)	(7.755)	(8.648)	(8.947)
Observations	56,084	38,790	38,790	38,790
Adjusted R^2	0.123	0.115	0.115	0.115
Additional control:	Property rights	Minority investors	Getting credit	Credit information
	(21)	(22)	(23)	(24)
Foreign bank presence	-0.0157***	-0.0051	-0.0044***	-0.0048***
	(-7.277)	(-1.616)	(-4.038)	(-4.415)
Democracy	-0.3350***	-0.1479***	-0.0671***	-0.0668***
	(-8.942)	(-5.448)	(-5.520)	(-5.477)
Foreign bank presence×Democracy	0.0039***	0.0019***	0.0011***	0.0011***
	(8.711)	(4.686)	(8.194)	(8.215)
Observations	28,827	56,084	38,790	38,790
Adjusted R^2	0.134	0.123	0.115	0.115
Firm characteristics	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes

Table A4

Robustness checks with sample size and outliers.

This table presents the regression results for the relation between our measures of financial liberalisation and institutional democracy in a country and access to finance by firms in that country. Estimation is performed by OLS, with *t*-statistics computed using standard errors robust to heteroskedasticity and clustered at the firm level; *t*-statistics in parentheses. The outcome variable is Access to finance: a dummy variable equal to 1 if a firm perceives access to finance to be a moderate obstacle, major obstacle, or very severe obstacle; 0 otherwise (no obstacle or minor obstacle). The key explanatory variables are foreign bank presence: asset share of foreign-owned banks among total bank assets in a country, democracy: an additive 11-point scale [0-10] measure of institutionalised democracy, and their interaction. The baseline control variables are gathered under two groups: i) Firm characteristics—firm age, medium and large sized firms, manager's years of experience, share owned by largest owner, foreign ownership, state ownership, exporter, audited, publicly listed, privately held, and having international quality certificate; and ii) Country characteristics—GDP per capita, its growth rate, inflation, and a measure of financial development. All country-level controls are measured with a one-year lag. The header of each column shows the sample restriction or outlier being considered. IRLS is iteratively reweighted least squares. All regressions control for country fixed effects, industry fixed effects, and year fixed effects as well as an intercept term, but their coefficients are not reported. Based on two-digit SIC codes, industries are classified using binary indicators for each of the following categories: Mining, Construction, Manufacturing, Transportation & utilities, Wholesale & retail trade, Finance, insurance & real estate, Services, and Other. *** implies significance at 0.01 level, **0.05, *0.1. Definitions of variables and data sources are provided in Appendix Table A1.

Dependent variable:	Access to finance				
	Exclude countries with <250 firms	Exclude firms with >1000 employees	Restrict to sample of low-income countries	Restrict to sample of high-income countries	IRLS regressions
	(1)	(2)	(3)	(4)	(5)
Foreign bank presence	-0.0042***	-0.0073***	-0.0088***	-0.0161*	-0.0082***
	(-3.838)	(-6.846)	(-4.821)	(-1.938)	(-7.123)
Democracy	-0.0515***	-0.0645***	-0.1435***	-0.0730*	-0.0734***
	(-5.570)	(-7.167)	(-6.899)	(-1.752)	(-7.700)
Foreign bank presence×Democracy	0.0009***	0.0011***	0.0017***	0.0021**	0.0012***
	(6.862)	(8.034)	(6.207)	(2.124)	(8.535)
Firm characteristics	Yes	Yes	Yes	Yes	Yes
Country characteristics	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	62,909	62,190	31,321	32,182	62,909
Adjusted R^2	0.112	0.108	0.127	0.0979	0.112

[1] An exception is the recent paper by Osei-Tutu & Weill (2022).

[2] In Section 3 and Appendix Table A1, we provide full description of these variables.

[3] For more detailed descriptions, see https://www.enterprisesurveys.org/data.

[4] For more detailed descriptions, see their websites: https://databank.worldbank.org/source/global-financial-development, https://www.systemicpeace.org/polityproject.html, and https://databank.worldbank.org/source/world-development-indicators.

[5] We have used the July 18, 2022, release of the WBES firm-level data, which primarily contains information on 180,067 firms from 154 countries, with the surveys carried out from 2006 to 2021. However, because of data unavailability for one of our key independent variables (foreign banks from GFDD) beyond 2014, we restrict our analysis to the period spanning 2006 to 2014. We have also not considered the WBES data prior to 2006 because the questionnaire format and methodology only got homogenised for surveys implemented since 2006—this is when cross-firm, cross-industry, and cross-country comparisons became empirically more feasible.

[6] The other main areas covered in WBES include questions relating to access to land, business licensing and permits, corruption, courts, crime, customs and trade regulations, electricity, inadequacy of workers' education, labour regulations, political instability, impacts of informal sector, tax administration, tax rates, and transportation.

[7] This question seeks to reveal information on access to credit, given that the WBES definition of access to finance is about the availability and cost of finance, which encompasses interest rates, fees, and collateral requirements.

[8] Despite this and perhaps the need to interpret the results cautiously due to potential measurement error that could arise due to misreporting by firms, Beck et al. (2006) argues convincingly for the reliability of employing these self-reported data.

[9] Note that *Access to finance*, *Financing obstacle*, and *Financial constraint* are all constructed based on WBES survey *Question k.30*.

[10] This is based on the following WBES survey question (*Question k.6*): "*At this time, does this establishment have a checking and/or savings account?*" and is coded to be No = 1 and Yes = 0 to facilitate the interpretation of results in a way akin to our baseline measure.

[11] This is based on the following WBES survey questions—(*Question k.7*): "*At this time, does this establishment have an overdraft facility?*" and (*Question k.8*): "*At this time, does this establishment have a line of credit or loan from a financial institution?*"

[12] All variables have been discussed in the previous section, with further definitions of variables and data sources provided in Appendix Table A1.

[13] In a robustness exercise, we have experimented with and reported estimates from alternative specifications (combinations) of fixed effects. Further, we have also employed alternative clustering of standard errors to check the robustness of our results.

[14] In unreported results, we have also used a triple clustering by country-industry-year, with results qualitatively identical to those tabulated in Table 5.

[15] Nonetheless, our preferred dependent variable remains *Access to finance* dummy, primarily because it gives a more balanced distribution of survey responses, thereby reducing the probability that individual firm responses may bias the results (Barth et al., 2006); see Fig. 1 for the distribution of these variables.

[16] Specifically, our paper explores the effects of country-level measures of financial liberalisation and political institutions on individual firms, which limits the possibility for endogeneity issues being of concern, when compared to a typical cross-country empirical investigation.

[17] In Table A3, we attempt to deal with plausible alternative explanations of our results that may emanate from country-level features by augmenting our baseline specifications with various country-year variables to capture the overall economic, social, financial, and institutional development, as well as measures reflecting policy/bureaucratic capability of countries. Specifically, we sequentially control for the following variables: Female ownership participation, sole proprietorship, partnership and limited partnership, sales growth, employment growth, labour growth, institutional quality, control of corruption, government effectiveness, political stability, rule of law, regulatory quality, primary school enrolment, population density, share of urban population, trade openness, CPIA accountability, disclosure index, legal rights, contract enforcement, resolving insolvency, property rights, minority investors, getting credit, and credit information. In all cases, our main findings remain unaffected, even after controlling for all these variables.

[18] In unreported results, we have also used a public credit registry and private credit bureau to capture the information sharing characteristics of the banking system, with results qualitatively identical to those tabulated in Table 10.