Regulatory Divergence and Bank Capital Flows*

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Abstract

How does cross-country divergence in banking regulation shape domestic banking systems? We study whether an increase in host-country capital requirements significantly rebalances the competitive landscape toward global banks that are not subject to host regulation. Using novel Peruvian data on global bank lending that relies on representative offices, we uncover that this locally unregulated organizational form accounts for nearly 25% of corporate dollar credit. We find that higher host-country capital requirements significantly reshape credit allocation: banks outside host regulation expand by 7-10pp relative to locally regulated lenders, even for the same borrower.

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1 Introduction

"When we don't follow through on our commitments, for whatever reason, concerns about a level playing field rise in other jurisdictions, in an international "race to the bottom" on standards. This harms us all and makes U.S. banks less competitive"

- Michael S. Barr (Fed Governor), 2025.

In the wake of the Asian financial crisis, the costs of an uneven regulatory playing field became clear: divergent prudential regimes shaped cross-border flows and amplified vulnerability when funding reversed. However, as time passes and political economy pressures evolve, the salience of maintaining a level regulatory playing field can fade. Recent developments illustrate the challenge: U.S. banks expect to face the most significant deregulation post-financial crisis[1], while EU regulators delayed their Basel rollout amid uncertainty in other major jurisdictions, citing that "concerns regarding the international level playing field and the impact on EU banks remain high."[2]

Although concerns about an uneven regulatory environment were well documented and theoretically explored (Acharya (2003), Morrison and White (2009), and Bahaj and Malherbe (2024)), empirical evidence remains limited because because cross-country changes in capital standards often coincide with shifts in credit demand, macroeconomic conditions, and investment opportunities—making it difficult to credibly identify the effects of regulation in cross-country settings. In this paper, we make empirical progress by uncovering an economically sizable, parent-regulated organizational form in which global banks lend to host-country borrowers by relying on representative offices.[3] Because they operate alongside locally regulated banks in the same market, and even lend to the same borrower, this setting holds local demand largely fixed and allows us to identify the effects of relative changes in capital requirements.

[1] See for example https://privatebank.jpmorgan.com/nam/en/insights/markets-and-investing/ideas-and-insights/get-ready-bank-deregulation-now-has-washingtons-support

[2] For more details, see the press release of the European Commission available at https://ec.europa.eu/commission/presscorner/detail/en/ip_24_3981

[3] According to the Bank for International Settlements, over the past decade the relative importance of subsidiary operations—subject to host-country regulation—has declined by 10pp. In contrast, they are extending their footprint via alternative forms such representative offices, which have been understudied.

Using Peru as a unique empirical laboratory, we study whether raising host-country capital requirements has a significant impact on bank capital flows. In our setting, we observe dollar-denominated credit from representative-office–mediated global banks and host-regulated banks, where we show that this parent-regulated organizational form represents about 25% of dollar corporate credit and offers a competitive advantage by lending roughly 0.5pp cheaper. By analyzing the introduction of stricter host-country capital requirements adopted for prudential reasons, while controlling for demand, we find that after a 1pp rise in host capital requirements, parent-regulated global banks expanded their market share relative to host-regulated banks by 7-10pp.[4]

Our contribution is twofold. First, we establish that representative offices are economically important and confer a competitive lending advantage to parent-regulated global banks relative to host-regulated banks. Second, we measure the extent to which stronger host capital requirements impact the competitiveness of its banking system by estimating the market share shift from host-regulated to parent-regulated banks.

We begin by documenting that representative-office–mediated lending is significant in several markets. We hand-collected data on representative-office registrations from regulators in forty jurisdictions, which allows us to track the footprint of global bank expansion via representative offices. However, as such lending is not supervised by the host, its economic scale remains unknown. To shed light on its relevance, we use granular Peruvian registry data collected by the regulator from representative offices since 2018. This dataset is novel in academic research and offers the most comprehensive coverage of global banks' lending in a country compared to existing sources. For earlier periods, we use Dealscan data that covers only syndicated loans.[5]

The cross-country sample shows that, on average, there are four representative offices for every ten host-regulated banks. In addition, we find a positive relationship between

[4]Importantly, the events are unrelated to global capital market flows conditions, which is an issue raised by the literature. Prior work notes that regulations can adjust endogenously to conditions in global capital markets (e.g., Karolyi and Taboada (2015)). This concern is especially salient in advanced economies, where global banks are predominantly headquartered.

[5]While our analysis goes beyond this, the syndicated market provides relevant cases of representative-office–mediated lending. For instance, Japanese banks lend to Latin American firms even without having subsidiaries or branches. Our most detailed data includes all loan products from global banks: traditional, working capital, and international trade loans, as well as project finance, club deals, and syndicated loans.

the share of representative offices over host-regulated banks and measures of institutional quality, financial and economic development. Using Peruvian data, we estimate that lending intermediated through representative offices accounts for around 25% of corporate dollar loans, representing 13% of total corporate credit.

We establish that global banks relying on representative offices hold a competitive advantage. We document that they consistently offer cheaper dollar-denominated loans than host-regulated banks by 0.5-0.8pp, even when comparing loans with the same contractual terms to the same firm and controlling for bank characteristics that proxy for marginal lending costs and market power. Our findings indicate systematic loan pricing differences tied to the jurisdictional banking regime.

Next, we formally explore the impact of regulatory divergence. Conceptually, banks' competitive advantage hinges on the cost and stability of their funding, and capital regulation shapes their funding costs (Hanson, Kashyap, and Stein (2011); Baker and Wurgler (2015)). The capital cost mechanism implies that when the host jurisdiction tightens capital requirements but parent jurisdictions do not, host-regulated banks must fund a given loan with more equity, raising marginal funding costs that are passed through to loan rates, shifting borrowers toward parent-regulated banks that remain relatively cheaper. Quantifying the magnitude of the reallocation is the central empirical objective we address using a set of event studies.

The first event is a Peruvian reform that tightened capital requirements on dollar-denominated loans to borrowers exposed to exchange-rate risk. A supplementary capital surcharge was initially introduced at 0.25% of the loan amount in 2010. Later, the regulator adopted a revised framework that placed the surcharge on a pre-set phase-in path, with the rate rising to 0.40% in 2013, 0.60% in 2014, and 0.80% in 2015. We focus on the first step of this phase-in, as it precedes the entry of major global banks and lies beyond the aftermath of the global financial crisis. Importantly, the capital requirement is specific to emerging markets, generating a persistent divergence increase between host-regulated and parent-regulated banks.

We employ syndicated loan data to investigate such period. Consistent with the event acting as a treatment shock, we find that 100% of host-regulated banks scaled back their lending in the Peruvian market, while 77% of parent-regulated global banks raised their

participation. The empirical design is a difference-in-differences-in-differences (DDD) comparing parent against host-regulated banks' participation in Peru relative to other South American countries, before and after the regulation. Our estimates imply a 10pp relative expansion of parent-regulated global banks with respect to host-regulated banks after a 1pp capital requirement rise. Suggestively, we document that global banks reallocated their portfolio across countries to finance their relative expansion.

The second event is Peru's transition from Basel II to Basel III, which became effective in January 2023. Comparable adjustments for parent-regulated global banks occurred mainly before 2019, as advanced economies adopted Basel III earlier. Because COVID delayed Peru's implementation to 2023, the reform provides partially exogenous timing variation for our analysis. The two modifications implemented were the introduction of a capital conservation buffer and an adjustment in Tier 1 requirements. Overall, these modifications increased the observed capital adequacy ratio of the banking system by 2pp, which experienced a discrete jump at the time of implementation.

The evidence is consistent with the capital cost channel mechanism. We observe a sharp increase in the cheapness of parent-regulated global banks relative to host-regulated banks after the regulation, and it remains higher thereafter than before the event. To analyze quantities, we follow the standard Khwaja and Mian (2008) approach, comparing over time a similar borrower across two institutions—one affected by the requirement (host-regulated banks) and one unaffected (parent-regulated global banks). We estimate that after a rise of 1pp in host capital requirements, there is a relative increase of parent-regulated global bank lending by approximately 9pp. Moreover, average non-performing loans on corporate credit are below 0.5% and essentially unchanged.

A third complementary event we study is the transition of an institution that switched its status of a representative office to a subsidiary of a foreign bank. Behind the motives of its change was the expansion of its business to reach new (smaller) clients. This conversion shifted regulation from the parent-country authority to the host-country regulator, which increased their minimum capital requirement by 1.8pp. For identification, we compare the same borrower across lenders, assuming firm-specific credit demand and no anticipatory effects. We implement this using borrowers with an established relationship with the institution before the event. Our estimates imply that a 1pp rise in

capital requirements increases loan rates by 0.87pp and leads to a 12.2pp relative market contraction in lending. As firms more reliant on the transitioning institution face higher credit costs, we examine how this translates into real outcomes and find that it reduces labor by roughly 1.2pp and sales by 0.1pp.

Related literature. We provide empirical evidence on the effects of an uneven banking regulatory playing field, complementing a literature that has been exclusively theoretical. Prior work emphasizes divergent resolution regimes (Acharya (2003)), the trade-offs from harmonizing standards when regulatory quality differs (Morrison and White (2009)), and the cross-border reallocation of scarce bank equity under national capital requirements (Bahaj and Malherbe (2024)).

There is also a research body examining the macroeconomic effects of the introduction of modern financial regulation (e.g. Begenau and Landvoigt (2022), Corbae and D'Erasmo (2021)). The closest to our work are the ones analyzing the substitution between traditional and shadow banks where there is a debate about whether the impact of capital requirements is large (Lee, Lee, and Paluszynski (2024)) or not (Dempsey (2025)). Unlike these studies, we analyze the competitive dimension among banks subject to different regulatory jurisdictions by comparing the relative effects on host-regulated (locally incorporated) and parent-regulated (foreign-incorporated) banks. Also, we provide the first detailed evidence on global bank lending that relies on representative offices.

A related literature investigates the impact of regulation on the rise of non-traditional lending. The perspective posits that regulatory burdens, such as higher capital requirements or increased scrutiny, may reduce traditional banks' balance sheet capacity, leading to a shift of banking activities toward alternative intermediaries (see for example, Kashyap, Stein, and Hanson (2010), Acharya, Schnabl, and Suarez (2013), Harris, Opp, and Opp (2014), among others). The presence of regulatory requirements has been associated with the rise of fintechs (Buchak et al. (2018)), peer-to-peer (P2P) lending (De Roure, Pelizzon, and Thakor (2022)), non-bank funding in syndicated loans (Irani et al. (2021)). Our contribution lies in showing the expansion of an emerging form of global bank lending arising due to differences in international regulatory frameworks.

Our document also adds to the literature on regulatory arbitrage in cross-border banking. Prior studies employed a capital-stringency index to show that international

bank flows respond to relative regulatory tightness (e.g. Houston, Lin, and Ma (2012) and Karolyi and Taboada (2015)) and that domestic banks engage in risk taking in their portfolio abroad (e.g. Ongena, Popov, and Udell (2013)). However, Demirgüç-Kunt, Horváth, and Huizinga (2023) point out that most evidence of regulatory arbitrage pertains to the pre-GFC period, when many post-crisis rules were not yet in force. We extend the literature by showing that global bank lending through representative offices has a regulatory advantage over host-regulated banks even in the post-GFC period. Moreover, our main focus is the impact on the host-regulated banking system rather than global capital flows. Methodologically, we exploit a capital requirement that is exogenous to global capital flows—a common concern in the literature—and leverage granular data for identification. To the best of our knowledge, this is the first paper to combine comprehensive data on global bank lending through representative offices with host-regulated bank lending data.

Outline. The rest of the paper is organized as follows: Section 2 explains the institutional background. Section 3 describes the conceptual framework. Section 4 presents the data and shows evidence of the rise of global bank lending relying on representative offices and documents their pricing advantage. Section 5 analyzes the impact of regulatory divergence on credit allocation. We conclude in Section 6. Additional tables are presented in the Online Appendix.

2 Institutional Background

2.1 Representative Offices

2.1.1 Economic Rationale

Traditionally, representative offices were considered the initial step for global banks entering new markets as they help to expand their global footprint. They provide a cost-effective, low-risk way to assess a local market, establish relationships, and navigate a country landscape without committing to full-scale operations. While these offices often serve as entry points that can eventually lead to acquisitions, branches, or subsidiaries, several global banks have been operating solely through representative offices. This model has proven sufficient for maintaining a market presence and offering selective services for several banks, without the need to establish a branch or subsidiary.

Representative offices facilitate loan transactions between firms operating in the host country and their parent banks. They help guide the parent bank's loan decision-making process by offering insights into local market conditions, assessing the financial health of potential borrowers, and understanding specific business needs. These enable the parent bank to assess the risks of local businesses more accurately.

To provide a specific example, consider Mitsubishi UFJ Financial Group (MUFG), one of the largest financial institutions in the world, managing approximately USD 3 trillion. In South America, it operates primarily through representative offices. According to their corporate reports[6], the bank leverages its global expertise to provide specialized financing solutions, particularly for natural resource development in the region.

Lending via representative offices falls outside the host country's regulatory perimeter. Figure 1 summarizes which jurisdiction's rules apply to credit origination under each organizational form. On one side, the credit origination of a domestic bank or a foreign subsidiary is regulated by the host country, while an identical loan from a global bank relying on a representative office follows the rules of its parent-country regulator. Therefore, the existence of regulatory divergence implies that otherwise identical loans may be originated under different prudential rules.

2.1.2 Peruvian Context

In Peru, the Superintendency of Banking, Insurance, and Private Pension Fund Administrators (SBS) grants authorization to appoint a representative after evaluating its technical and economic soundness. The operations of representative offices of global financial institutions are governed by Articles 43-49 of the Banking Law[7] and supplementary regulations[8].

Under the law, these offices act as intermediaries by connecting domestic firms with their parent institutions abroad. More specifically, they can advertise the services of their parent institution to: (i) potential borrowers or recipients of external capital, (ii) entities interested in the purchase or sale of goods and services in foreign markets, and (iii) other financial institutions, to facilitate foreign trade and external financing. Importantly, they

[6] See https://mufg.jp/dam/ir/report/annual_report/backnumber/pdf/cr_all2010_ja.pdf for details

[7] *Ley General del Sistema Financiero y del Sistema de Seguros y Orgánica de la Superintendencia de Banca y Seguros - Ley 26702*.

[8] For instance, *Circular RE-003-2018*.

cannot directly carry out the operations themselves, nor can they receive deposits.

Several prominent large global banks have been established as representative offices in Peru, including Bank of America, Bladex, BNP Paribas, Cooperativa Rabobank, JP Morgan Chase Bank, MUFG Bank, Natixis, Sumitomo Mitsui, among others. Online Appendix A.1.1 includes a list of all representative offices operating as of September 2024. Moreover, we provide a detailed breakdown of market share by headquarters nationality, with France, Japan, the Netherlands, and the U.S. holding the largest shares.

2.2 Regulatory Framework in Peru

Peru's prudential regime broadly follows Basel standards for loan origination in several aspects: it applies the standardized risk-weighted grid, adheres to the three-pillar architecture (minimum capital requirements, supervisory review, market disclosure), and incorporates Basel buffers and liquidity metrics (conservation and countercyclical buffers, along with LCR and NSFR requirements).

However, it is tailored in two important aspects. First, the minimum capital ratio is about 10% of risk-weighted assets (RWA). According to the 2019 Bank Regulation and Supervision Survey, the average minimum capital ratio required under Pillar 1 was 10.2% in emerging economies and 8.3% in advanced economies. The higher emerging-market floor reflects efforts to bolster resilience amid greater shock vulnerability. Second, another distinctive feature is the treatment of foreign-exchange credit risk. Starting in 2005, banks are required to classify loans exposed to FX risk by modeling non-financial borrowers' repayment capacity under adverse FX movements. Loans are tested against a 20% depreciation, and if the borrower falls below creditworthiness thresholds under that shock, the exposure is classified as exposed to FX risk. This approach distinguishes between a dollarized portfolio and one exposed to exchange rate credit risk, recognizing that not all borrowers with foreign-currency debt pose a material default risk.[9]

The Peruvian regulator imposes an additional 0.8 percentage-point surcharge on loans deemed exposed to exchange-rate risk. As described in Gutierrez, Ivashina, and Salomao (2023), a $100 loan to an exposed borrower would require $0.80 in additional

[9]For instance, borrowers may be insulated from exchange rate risk if they generate revenues in foreign currency, maintain effective hedging strategies, or possess debt-to-income ratios that allow them to absorb a sustained and substantial real depreciation.

capital on top of the minimum \$10 (10%) requirement, bringing the total to \$10.80.

3 Conceptual Framework

3.1 Conceptual Motivation

Banks' competitive advantage rests heavily on the cost and stability of their funding base. Unlike many non-financial sectors where product differentiation, branding, or operational scale dominate, banking competition is unusually sensitive to the liability side of the balance sheet: inexpensive, reliable funding is the fulcrum on which performance turns (Hanson, Kashyap, and Stein (2011)). Capital regulation influences banks' private cost of capital and, hence, their funding costs (Baker and Wurgler (2015)). Consequently, our analysis links capital regulatory divergence to the pricing and market allocation of dollar-denominated credit.

When capital requirements rise in a given jurisdiction, banks subject to the tighter rule face a higher effective cost of capital than competitors operating under unchanged or more lenient regimes. Institutions facing the increase must back a given portfolio of loans with more equity, while banks not affected by the change can continue to finance similar portfolios with cheaper funding. This regulatory shift generates a wedge in marginal funding costs across banks, even when they compete for the same borrowers and extend credit in the same currency. From the borrowers' perspective, this widening cost gap creates pressure to shift borrowing toward the relatively cheaper lenders.

The simple model that follows formalizes the mechanism and shows how an increase in capital requirements translates into changes in loan pricing and market shares. An important aspect is that it provides a transparent mapping between observed outcomes and the underlying structural demand and supply parameters. Detailed proofs are provided in Online Appendix A.3.

3.2 Simple Analytical Model

3.2.1 Firm-Side Credit Demand

Let firms be indexed by $f \in \{1, ..., N_{fm}\}$. Each corporate firm f seeks to finance $Q_f > 0$. We model firms' choice of lender using a standard discrete-choice framework from the industrial-organization literature (Berry (1994); Berry, Levinsohn, and Pakes (1995); Nevo (2000)). In each period t, firm f chooses a bank $b \in \Theta_b$ to maximize its

indirect utility from borrowing.

The per-period utility flow that firm f obtains from borrowing from b at time t:

$$V_{fbt} = \beta_0 + \beta_1 r_{fbt} + \beta_2 X_{bt} + \xi_{bt} + \epsilon_{fbt}$$

where r_{fbt} denotes the interest rate charged by bank b to firm f. X_{bt} and ξ_{bt} are the vector of observable and unobservable bank–market–time characteristics, respectively. ϵ_{fbt} captures idiosyncratic heterogeneity in firms' preferences over banks and varies across firm–bank pairs. In line with standard modeling of loan demand, we assume $\beta_1 < 0$, so a higher interest rate lowers the utility from borrowing from a given bank.

Given these preferences, and under the standard assumption that ϵ_{fbt} is i.i.d. type-I extreme value, the probability that firm f selects bank b in period t is:

$$s_{fbt} = \frac{exp\left(\beta_0 + \beta_1 r_{fbt} + \beta_2 X_{bt} + \xi_{bt}\right)}{\sum_b exp\left(\beta_0 + \beta_1 r_{fbt} + \beta_2 X_{bt} + \xi_{bt}\right)} \tag{1}$$

Conditional on needing to finance Q_f, firm $f^{'}$s expected demand for credit from bank b at time t, C_{fbt}, is given by:

$$C_{fbt} \equiv Q_f s_{fbt}$$

Because $\beta_1 < 0$, this demand is downward sloping in the bank's interest rate, r_{fbt}: holding other characteristics fixed, a higher rate reduces s_{fbt} and therefore lowers C_{fbt}.

Considering that observed default in corporations is rare, we treat default risk as second order and abstract from modeling the default margin explicitly. Accordingly, our model can be interpreted as describing bank choice and loan demand conditional on repayment.

3.2.2 Bank-Side Credit Supply

We consider a fixed number of banks, divided into two types: one subject to host capital requirements, $b \in \Theta_{b^H}$, which we label a host-regulated bank, and other regulated by their parent jurisdiction, $b \in \Theta_{b^P}$, which we refer to as a parent-regulated global bank, with $\Theta_b = \Theta_{b^H} \cup \Theta_{b^P}$. Within each type, banks are modeled as identical.

Each bank b faces a minimum capital requirement: it must hold at least a fraction $\underline{K}_b \in (0,1)$ of the value of its loans as capital. We allow these fractions to differ by regulatory regime: $\underline{K}_b = \underline{K}_H$ for all $b \in \Theta_{b^H}$ and $\underline{K}_b = \underline{K}_P$ for all $b \in \Theta_{b^P}$, with $\underline{K}_H \neq \underline{K}_P$. We denote the total value of bank b capital by K_b and the marginal cost of supplying one unit of credit for bank b by mc_{bt}.

We assume Bertrand–Nash competition in loan rates: each bank chooses its loan rate r_{fbt}, taking firm-level demand C_{fbt} as given, to maximize profits subject to the capital requirement:

$$\max_{r_{fbt}} \ \Pi_b = \sum_f \left(r_{fbt} - mc_{bt}\right) C_{fbt}$$

$$\text{s.t. } \underline{K}_b \textstyle\sum_f C_{fbt} \leq K_b$$

Optimal price rule is then given by:

$$r_{fbt} = \underbrace{\lambda_b \underline{K}_b}_{\substack{\text{shadow value of} \\ \text{capital requirement}}} + \underbrace{mc_{bt}}_{\substack{\text{marginal} \\ \text{cost}}} - \underbrace{\frac{1}{\beta_1 \left(1 - s_{fbt}\right)}}_{\substack{\text{market} \\ \text{power}}} \tag{2}$$

Equation (2) decomposes the loan rate in three components: regulatory, technological, and market-power. The regulatory component, $\lambda_b \underline{K}_b$, represents the shadow value of the minimum capital ratio. Note that it is not only the level of the capital requirement that matters for loan pricing, but also how tightly it binds for each bank. The technological component is given by the marginal cost of funds mc_{bt}. Finally, a markup term reflects the bank's b market power in serving firm f.

3.3 Model Implications and Empirical Object of Interest

3.3.1 Central Prediction

Building on the above framework, we derive a testable predictions for the effects of cross-country divergence in capital regulation. In what follows, we analyze how an increase in host-country capital requirements affects market share of credit supplied by host-regulated banks relative to parent-regulated banks through the capital cost channel.

Proposition 1. *An increase in host-country capital requirements has a non-decreasing effect on the loan rates charged by host-regulated banks relative to parent-regulated global banks. Specifically, the impact is:*

$$\frac{d\left(r_{fb\in\Theta_{bH}} - r_{fb\in\Theta_{bP}}\right)}{d\underline{K}_{b\in\Theta_{bH}}} = \lambda_{b\in\Theta_{bH}} s_{fb\in\Theta_{bP}} s_{fb\in\Theta_{bH}} \geq 0$$

Under higher host capital requirements, host-regulated banks face a basic trade-off: either pass the cost to borrowers via higher loan rates or absorb it in thinner net interest margins. When the requirement binds, these banks must raise lending rates to offset the reduction in their lending capacity and the higher shadow cost of the capital constraint. Parent-regulated competitors, which are not directly affected by the host-country requirement, may also increase their prices to exploit their market power. However, in equilibrium, the loan rate of host-regulated banks increases relative to that of parent-regulated banks. Moreover, in our framework, the shadow cost of the host-country capital requirement and the credit shares from host-regulated and parent-regulated banks are sufficient statistics for the impact of regulatory divergence on relative loan rates.

Proposition 2. *An increase in host-country capital requirements has a non-increasing effect on the market share of host-regulated banks relative to that of parent-regulated global banks. Specifically, the impact is:*

$$\frac{dln\left(s_{fb\in\Theta_{bH}}\right)}{d\underline{K}_{b\in\Theta_{bH}}} = \beta_1 \lambda_{b\in\Theta_{bH}} s^2_{fb\in\Theta_{bP}} \leq 0$$

By Proposition 1, an increase in host-country capital requirements leads host-regulated banks to raise their loan rates relative to parent-regulated banks. Borrowers facing both options find parent-regulated banks cheaper and move borrowing toward them. In rate-sensitive loan markets, even small price increases can push demand toward cheaper lenders, reducing banks' market share. This reallocation of demand away from the now more expensive host-regulated banks causes their market share to fall. Our model decomposes the effect into three sufficient statistics: the sensitivity of borrower demand to loan rates, the shadow cost of the host-country capital requirement, and the credit share of parent-regulated banks. The magnitude of the effect is our central object of interest.

3.3.2 Discussion of Assumptions

First, our simple model abstracts from the impact of capital requirements on bank default. In practice, tighter requirements are designed to enhance banks' loss-absorbing capacity and the resilience of the banking system. Introducing this feature could imply that, in addition to raising lending costs, higher capital requirements reduce default risk, which in turn makes it cheaper for banks to lend. As a result, the net increase in banks' effective marginal cost is smaller, which dampens the magnitude of the effects in our proposition. However, since our application focuses on corporate firms, this effect is likely to be quantitatively small.

Second, we assume a fixed set of banks, so our analysis of how regulatory divergence affects market shares is conducted conditional on the extensive-margin dynamics of the banking sector. If we allowed for entry and exit, a higher host capital requirement would likely amplify the reallocation of credit toward parent-regulated institutions by making host-regulated banking less profitable and parent-regulated entry more attractive.

Third, we considered that banks within each type are identical. Allowing for heterogeneity within types would not overturn our baseline prediction, because the comparative statics with respect to host-country capital requirements operate at the type level: heterogeneity mainly redistributes market shares within bank types rather than changing the direction of credit reallocation across types.

4 The Rise of Global Bank Lending via Representatives

4.1 Data Description

4.1.1 Transaction Level Registry

Host-regulated banks are required to file monthly reports about their loan operations to the financial regulator. This information resembles a traditional credit registry, in that it is a stock, but it tracks all loan contract terms rather than only outstanding balances. We observe interest rates, currency, loan amounts, origination and maturity dates. The data have been collected by SBS since February 2020. Our sample covers the period from February 2020 to September 2024. Although this stock loan-level dataset has not been previously used for academic research, a previous flow version was used by Gutierrez, Ivashina, and Salomao (2023).

For global banks regulated by their parent regulators, representative offices in Peru report, on a quarterly basis, all the existing transactions carried out by their parent institutions in the country to the financial regulator. The information includes interest rates, currency, loan amounts, and residual maturity, grouped into five maturity buckets[10] plus one default bucket. Our data period spans from December 2018 to September 2024. Unlike existing sources, it represents the full universe of global bank lending that relies on representative offices in a given country. To the best of our knowledge, such granular information is novel in academic research.

Our sample of firms corresponds to those classified as corporate.[11] To ensure comparability and economic relevance, we restrict the sample to loans of at least US$1 million. We winsorize interest rates at the 1st and 99th percentiles.

4.1.2 Additional Peruvian Information

First, we employ credit registry data that record all outstanding credit balances between host-regulated banks and their clients. It follows the standard design of credit registries. The report contains monthly credit balances by currencies for each borrower–lender pair. Moreover, it also includes information about the risk classification of the borrower.[12] The advantage of using this data is that it spans further back than our loan-level registry. Our sample starts in July 2010 and ends in September 2024.

Second, due to the supervisory requirement, host-regulated banks are required to calculate and report whether their borrowers are exposed to exchange rate risk or not based on a counterfactual exchange rate depreciation of 20%. The sample covers all historical records, with data available from July 2010 onward.

Third, we use information on firms' industry classification and export status from the Peruvian Tax Regulator, *Superintendencia Nacional de Aduanas y de Administración Tributaria* (SUNAT). The industry categories correspond to the International Standard Industrial Classification (ISIC) Revision 4. The export-status variable denotes whether a firm is an exporter or not. We link these records via the firm tax identifier.

[10] Under 30, 30–90, 90–120, 120–360, and over 360 days

[11] These correspond to those firms classified by SBS as "*Corporativo*", which are firms with annual sales greater than 20 million soles (about 6.5 million dollars).

[12] Borrowers are classified as: normal (0 days past due), potential problem (1–60 days), deficient (61–120 days), doubtful (121–365 days), and loss (more than 365 days)

Fourth, we use balance-sheet data of all host-regulated banks reported to the financial regulator with monthly frequency since 2010. The information is also publicly available on the SBS website.

4.1.3 Cross-Country information

We hand-collect information on the presence of representative offices across a sample of forty jurisdictions where global banks are not primarily based using publicly available lists of institutions on the financial regulators' websites. While it would be ideal to have data on the operation volume or the total credit amount, such information is either unavailable or not publicly reported. Additionally, we obtain the number of total commercial banks for each country.

We complement our analysis with a set of country-level characteristics. We obtain the measures of financial development, economic development, and doing-business conditions from the World Bank, and the rule-of-law index from the Worldwide Governance Indicators. All variables are measured in 2004, with the sole exception of the Doing Business metric, which is taken from 2019 due to data availability.

4.1.4 Syndicated Loan Data

We employ data from the DealScan database, maintained by the Loan Pricing Corporation (LPC), which provides comprehensive information on syndicated loan transactions worldwide. The database contains detailed deal and facility level characteristics, including loan amounts, maturity, pricing terms, covenants, collateral requirements, industry, and borrower credit ratings. Each loan record includes information on the identity and roles of participating lenders, enabling the analysis of syndicate composition and lender relationships.

4.2 Cross-Country Evidence

To assess the relative magnitude of representative offices, we compare them with respect the number of host-regulated banks for each country in Figure 2. A higher value of the ratio implies a greater participation of representative offices. The average ratio for the sample is 0.43, indicating that there are at least 4 representative offices for every 10 host-regulated banks.

Following the literature on foreign bank participation and institutional development, we explore the correlation between the ratio of participation of representative offices and

four lagged variables: rule of law, financial development, ease of doing business, economic development (GDP). The variables together explain around 30% of the variation. Figure 3 displays the scatter-plots as well as the R-squared measures for each variable. The highest correlation is with past financial development, suggesting that representative offices tend to enter countries with higher financial development.

4.3 Economic Relevance

Using the granular information from Peru, we are able to measure the size and evolution over time of global bank lending that relies on representative offices, relative to host-regulated banks. Figure 4 - Panel A displays the relevance of representative-office–mediated lending. At the start of the sample period, they accounted for 8% of the total corporate credit, gradually increasing to 13% by the end. When measuring with respect to dollar credit, their share increased from 16% to 23%.

In emerging markets, the degree of loan dollarization is a metric used to assess the risks associated with the accumulation of dollar debt. As such, omitting parent-regulated global bank lending in the calculation underestimates the risk. The presence of representative offices increases the degree of dollarization because they only provide loans in dollars to firms whose revenues might not be in dollars. Figure 4 - Panel B shows the evolution of the dollarization of corporate loans considering the credit extended by representative offices. By including representative offices in the calculation, loan dollarization is, on average, 5pp higher than traditional measures.

4.4 Loan Pricing Advantage and the Role of Regulatory Jurisdiction

To assess whether global banks have a comparative lending advantage, we examine whether loan rates differ between host-regulated banks and parent-regulated global banks. To interpret these differences, and motivated by equation (2), we decompose each bank's lending rate into three components, so that cross-institution differences in loan rates for the same firm can be traced back to differences in these components:

$$\underbrace{r_{bft}}_{\text{loan rate}} = \underbrace{\lambda_{bt}\underline{K}_{bt}}_{\text{shadow value of capital requirement}} + \underbrace{mc_{bft}}_{\text{marginal cost}} + \underbrace{mpw_{bft}}_{\text{market power}} \tag{3}$$

We start by looking into the non-parametric comparison of interest rates on dollar-

denominated credit across both types of institutions. Table 1 summarizes the evolution of their average lending rates between 2020 and 2024. Parent-regulated global banks lend at lower rates, with an average differential of 0.47pp. They are consistently cheaper over time, indicating that this pattern reflects structural differences.

However, a simple rate comparison may reflect different bank features as described by equation (3), and the underlying loans may involve different firms or contractual characteristics, so we may end up comparing heterogeneous marginal costs and market power across borrowers. By contrast, comparing rates for similar firms across banks narrows the comparison to bank-side differences rather than borrower heterogeneity, because it removes the firm-specific component of marginal costs and market power.

To isolate the effect of differences in regulatory jurisdiction on loan pricing, we compare interest rates while controlling for differences in marginal costs and market power, and by comparing loans to the same firm or industry with comparable contract terms. Specifically, we estimate the following baseline regression:

$$r_{fbt} = \delta \cdot GBR_b + \alpha_0 mc + \alpha_1 mpw + X\varphi + \eta_{g(f)t} + v_{fbt} \tag{4}$$

where each observation represents a transaction, f the firm, b the bank, and t the time. r_{fbt} denotes the interest rate. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. δ aims to capture the shadow value of capital requirements. We include a G-SIB dummy to capture the higher capital requirements imposed on global systemically important banks. mc encompasses several factors: Fed funds rate (absorbed by time fixed effects), and bank characteristics such as size (scale-economy benefits), foreign-bank status (intragroup funding access), industry specialization, and the share of non-performing loans (higher risk premia). mpw is measured by the net interest margin, defined as the average bank rate minus the monetary policy rate in the bank's headquarters country. X is the set of loan controls such as the logarithm of the amount and tenor. $\eta_{g(f)t}$ denotes either the industry-time or firm-time fixed effects.

Table 2 displays the results of all our specifications. In Columns (1) to (4), we report results comparing similar borrowers (either within the same industry or the same firm) under comparable contractual terms. Columns (5) to (8) display results including bank

controls that proxy for the elements in our decomposition. We discuss their construction and interpretation in detail in Online Appendix A.2. The loan differential across institutions is about 0.5–0.8pp even after controlling for observable differences in marginal costs, market power, and contractual terms, a residual gap between bank type remains.

Although this exercise does not exploit exogenous variation, the estimate of δ may reflect differences tied to the jurisdictional banking regime. We verify in Online Appendix A.2 that the baseline results are robust to several alternative specifications: restricting the sample to foreign banks only, allowing for heterogeneous transmission of the federal funds rate, and controlling for the monetary policy rate in the bank's headquarters country. In the next section, we use an event-study design to isolate the capital cost mechanism more cleanly.

5 Credit Allocation under Regulatory Divergence

5.1 Evidence from a Capital Requirement to Dollar Loans

5.1.1 Event description

We study capital requirements for dollar-denominated lending. In 2010, the Peruvian regulator introduced a supplementary capital requirement for loans classified as exposed to exchange-rate risk. The initial surcharge was set at 0.25% of the amount.[13] Years after the regulation was adopted, the regulator revised the framework, setting a new schedule for regulatory surcharges, with predetermined increases to 0.40% in December 2013, 0.60% in December 2014, and 0.80% in December 2015.

We focus on the initial regulatory adjustment of the capital requirement for dollar-denominated loans in December 2013, as it offers a period uniquely suited for our analysis. This window precedes the entry of major global banks as representative offices in Peru—observed in 2015 and 2016—which could have reflected new market opportunities for global banks or substantial funding for expansion in the region.[14] It was also unaffected by the enduring effects of the global financial crisis that were still affect-

[13]The regulation applies even when a bank maintains a fully matched foreign currency position on its own balance sheet, as the underlying risk derives from the borrower's potential inability to service foreign currency debt following an exchange rate depreciation.

[14]Among the international banks that established a representative office are Bank of China, Caixabank, Banco Sabadell, and Banco General.

ing the syndicated loan market in the period around 2010. Notably, at the time of the adjustment, no other major policies were implemented.

There are two key advantages to using this policy instrument. First, the dollar-denominated capital requirement is specific to emerging markets, generating a persistent divergence increase between host-regulated and parent-regulated banks, whose headquarters are primarily located in advanced economies. During the period of this analysis (2013-2014), the minimum capital requirement was 8% of the risk-weighted assets for advanced economies, and 10% for emerging markets, and after the full implementation of the dollar-denominated requirement, it would increase to 10.8%. Second, prior work noted that regulations can adjust endogenously to conditions in global capital markets (e.g., Karolyi and Taboada (2015)). In contrast, the dollar capital requirement was introduced for prudential reasons and was unrelated to conditions in global capital markets.

5.1.2 Sample selection and variable construction

As our granular Peruvian data only covers the period after 2018, we rely on syndicated loan market data from Dealscan for our examination. We explore the lending behavior of banks participating in syndicated loans to South American countries in which host-regulated banks participate, chosen to ensure comparability of business opportunities and geographic specialization. We focus on banks serving as lead arrangers, as they typically hold the largest share of the facility and act as administrative agents, responsible for coordinating the syndicate and sharing borrower information.

The analysis is conducted at the bank–country–year level. Our first variable of interest is a bank's lending market share in a given country–year, computed as the ratio of the bank's loan volume in that country to total loan volume in that country–year, s_{bct}. Loan volume is measured by the loan amount, allocated pro rata across the lead arrangers. As a complementary metric, we construct a bank participation rate—defined as the number of syndicated loans in which a bank participates within a given country–year divided by the total number of syndicated loans in that country–year.

5.1.3 Bank participation and market share

We begin by showing the evolution of host-regulated banks' market share around the time of the event in Table 3. The average market share of a host-regulated bank in Peru declined from 9.8% in the pre-event period to 3.1% in the post-event period, a reduction

of 6.7 percentage points. By contrast, their activity in the other South American markets in which they operated was essentially unchanged: their average participation remained stable at approximately 4% across the event window.

We further evaluate the individual responses across institutional types induced by the event. We focus on institutions that participated at least once by providing syndicated loans to Peruvian firms over the sample period. Our analysis shows that 100% of host-regulated banks decreased their participation after the event, which is consistent with the interpretation of the event being a treatment. In contrast, 77% of parent-regulated global banks expanded their market participation.

Our analysis is formalized by using a difference-in-differences-in-differences (DDD) strategy comparing parent-regulated and host-regulated banks' lead-arranger participation in Peru relative to other countries, before and after the regulatory adjustment. Specifically, we compute:

$$s_{bct} = \beta \cdot GBR_b \times Peru_c \times Post_t + \alpha_{bt} + \alpha_{ct} + \alpha_{bc} + \epsilon_{bct} \tag{5}$$

where the period of analysis is denoted by $t \in \{2013, 2014\}$, the bank by b, and the country by c. s_{bct} is the lending market share measure. GBR_b equals one if the institution is a parent-regulated global bank and zero otherwise. $Peru_c$ is a dummy variable that denotes whether the country is Peru or not. $Post_t$ is a dummy variable that equals one in the post-regulation year and zero in the pre-regulation year. Country-time fixed effects (α_{ct}) control for country-specific demand conditions. Bank-time fixed effects (α_{bt}) capture time-variant bank characteristics such as risk appetite, while bank-country fixed effects (α_{bc}) absorb stable characteristics of each bank's operations within a given country.

The results of equation (5) are presented in Columns (1)–(2) of Table 4. Column (1) uses a loan-volume measure, whereas Column (2) uses a participation measure. For interpretation, we calculate the magnitudes of the elasticity response by dividing the regression estimates (measured in percentages) over the increase in capital requirements

(0.8pp).[15]

Our estimates imply that, after controlling for bank-time, country-time and bank-country specific effects, there is a 10pp relative market share expansion of parent-regulated global banks with respect to host-regulated banks after a 1pp capital requirement rise. Additionally, the participation results imply that parent-regulated global banks increase their involvement in syndicated loans by 17.5pp after a 1pp rise in capital requirements.

Although our findings are centered on global bank lending that relies on representative offices, the results also extend beyond it. In Columns (3)–(4), we display the results considering all parent-regulated global banks, that is, we also include global banks regulated by foreign jurisdictions operating without representative offices as the comparison group for host-regulated banks. The magnitudes are around the baseline estimates.

5.1.4 Cross-country capital flow reallocation

The relative market expansion of parent-regulated global banks will require additional funding, either by raising new funds or by reallocating existing resources across countries. We therefore analyze with our data whether global banks redirected resources to Peru at the expense of the other countries.

Specifically, we examine global banks' portfolio allocations and test whether the increase coincided with shifting funds toward Peru at the expense of non-Peruvian markets. Our dependent variable is then the loan portfolio share of bank b's portfolio that is allocated to country c at time t, ω_{bct}. Because this share is standardized by the bank's total loan supply, it is unaffected by shocks to the bank's overall lending capacity. Instead, it reflects the bank's geographic allocation of lending to prevailing economic conditions. We estimate a similar regression to equation (5) to assess this possibility:

$$\omega_{bct} = \vartheta \cdot GBR_b \times Peru_c \times Post_t + \alpha_{bt} + \alpha_{ct} + \alpha_{bc} + \epsilon_{bct}$$

[15]Note that this capital charge will only apply if the firm is exposed to exchange rate or become exposed at some point of the duration of the loan. As we discuss below, before the regulation firms classified as exposed to exchange-rate risk accounted for less than 3% of borrowing in the syndicated loan market, whereas one year after its implementation this share had risen to around 65%. Moreover, syndicated loans tend to have long maturities, so in our sample period they are fully exposed to the phase-in of the regulation. Considering these aspects, for a conservative estimate we considered a 0.8pp capital increase.

Table 4 shows the estimates. We compare parent-regulated global banks' and host-regulated banks' portfolios in Column (1). Because these results may reflect not only the incentives of parent-regulated global banks to expand but also the retrenchment of host-regulated banks, in Column (2) we introduce an alternative comparison group that is likely unaffected by the event: multilateral development banks. This allows us to tease out the incentives of parent-regulated global banks to expand. As a robustness, we also present the results with all South American countries.

Our results are statistically meaningful across specifications and indicate that, conditional on bank–time, country–time, and bank–country specific factors, parent-regulated global banks significantly shifted their lending toward the country that tightened its regulatory requirements. Overall, the results are consistent with a regulatory arbitrage view in which global banks expand their lending relying on representative offices after an increase in capital regulatory tightness.

5.1.5 Heterogeneous firm borrowing response

We analyze the heterogeneous implications of the capital cost channel. Specifically, we test whether firms exposed to exchange rate risk (more affected by the capital requirement) tend to borrow more from parent-regulated banks due to the capital regulatory constraint adjustment. Figure 5 depicts the fraction of borrowers labeled as exposed to exchange rate that participated in the syndicated loan market. Before the regulation changed, they accounted for at most 3% of borrowing, but in the year after the change their share jumped to about 65% and then stabilized at around 30% in subsequent years.

Although this evidence is consistent with a cost mechanism, another possible interpretation is related to targeting and extraction. Specifically, it could be that parent-regulated banks are actively targeting borrowers identified as exposed to exchange rate to earn higher profits, which would predict an increase in lending to such a group of firms. However, this would presuppose access to detailed information on borrowers' risk exposure, which they are unlikely to possess, as such data are collected mainly by host-regulated banks due to regulatory requirements and are absent from public or traditional balance sheets, where magnitudes are reported in an aggregated currency.

Beyond our event study, the credit registry lets us examine heterogeneous implications outside syndicated loans and in a later period (2018–2024). Table 13 in On-

line Appendix A.4.1 shows that exposed firms are 6pp more likely to borrow from parent-regulated global banks and receive a 2.5pp higher share of dollar funding from them, conditional on credit risk and the share of dollar borrowing. Moreover, in years of pronounced exchange-rate depreciation—when the regulation is expected to bind more tightly for host-regulated banks—exposed firms increase borrowing from parent-regulated global banks, consistent with borrowers shifting toward lower-cost (less-constrained) lenders and thereby partially mitigating the regulation's impact.

5.2 Evidence from a Regulatory Transition to Basel III

5.2.1 Event description and empirical setting

The Peruvian regulator revised capital requirements as part of the transition from Basel II to Basel III, with the changes taking effect in January 2023. Comparable adjustments for parent-regulated global banks occurred mainly prior to 2019, as advanced economies were early adopters. Because of the unexpected onset of COVID, Peru ultimately implemented the transition in 2023, which, to some extent, generates exogenous timing variation for our analysis. We interpret the reform as an increase in the effective regulatory constraint faced by host-banks relative to parent-regulated banks.

Two major changes were implemented during the transition to Basel III. The first was the introduction of a capital conservation buffer set at 2.5%[16] of Risk-Weighted Assets (RWA). This buffer, along with the existing economic cycle and market concentration buffers, must now be covered with Common Equity Tier 1 capital, aligning with Basel III standards. The second change restructured the capital framework: Tier 3 capital, originally introduced under Basel II, was eliminated, and Tier 1 capital was divided into two components—Common Equity Tier 1 and Additional Tier 1, for which the required rate under the new regulation is 6%, 1.5pp higher than under the previous regime.

Figure 8 of Online Appendix A.1.2 displays the capital adequacy ratio evolution and there is a discrete jump when the regulation was introduced. Overall, these changes raised the capital ratio by 2pp.

We analyze the host country's Basel III transition using granular loan registry data, observing their borrowing from both host-regulated and parent-regulated banks at a

[16] A three-year time frame was provided by the financial regulator to meet the requirement

quarterly frequency. Our primary outcome is loan amounts and, as a complementary margin, interest rates. We do not focus on default because it is quantitatively small for corporate firms[17]: the average bank-level non-performing loan ratio is about 0.5% and has remained at a similar after the regulatory change.

5.2.2 Loan prices

We begin by analyzing the impact on interest rates by estimating the time series of the differential in rates of host-regulated banks and parent-regulated global banks by including a time-varying dummy δ_t in equation (4). This strategy lets us trace the full dynamic path of rates around the event, analogous to an impulse response. Figure 6 illustrates the evolution of the differential across various specifications.

The evidence shows two important results that are consistent with the cost channel mechanism. First, we observe that immediately following the regulation's adoption there is a significant increase in the cheapness of parent-regulated global banks compared to host-regulated banks, which also coincides with the discontinuous jump observed in capital requirements. Second, the level of the average cheapness is persistently greater after the regulatory implementation compared to periods closer to the event.

5.2.3 Loan quantities

To analyze the impact on quantities, we follow the standard Khwaja and Mian (2008) approach. Specifically, we compare the same borrower across both types of institutions, one impacted by the implementation of the rule (host-regulated banks) and another not impacted (parent-regulated global banks). We compare the credit amounts before and after the introduction of the regulatory change as follows:

$$ln\left(c_{fbt}\right) = \vartheta \cdot CapReq_t \times GBR_b + \eta_{g(f)t} + X\beta + v_{fbt}$$

where c_{fbt} is the loan amount. $CapReq_t$ is a dummy equal to 1 after January 2023 and 0 otherwise. ϑ represents the change in the outcome following the regulatory modification. $\eta_{g(f)t}$ denotes either the industry-time or firm-time fixed effects. X contains the

[17]The impact of capital requirements on default is likely more relevant for smaller loans. Tighter requirements increase banks' loss-absorbing capacity and can reduce risk-taking at the margin, which may translate into lower default rates in segments where defaults are more common. In our context, however, corporate loan defaults are quantitatively small, so changes in capital requirements are unlikely to operate primarily through the default margin.

remaining interaction terms.

Table 6 summarizes the findings in Columns (1)-(3). The results imply that after the host transitioned towards Basel III there was a relative increase of lending by parent-regulated global banks. Comparing the same firm across its lenders, we estimate an increase of around 18%. This implies that after a rise of 1pp in host capital requirements, lending of parent-regulated global banks increases by approximately 7-9pp.[18] Overall, the estimate is sizable and aligns with our earlier elasticity results.

A potential concern is that our estimates may capture pre-existing differences in how banks adjust their portfolios when regulation tightens, rather than the causal effect of the capital-requirement increase. Some institutions may adjust lending more aggressively to changing conditions, and this behavior could be correlated with how strongly the new requirement applies to them. For instance, foreign banks may respond to domestic capital requirements by adjusting intragroup funding, so the observed effects can reflect their foreign status rather than the impact of the host-country reform itself. To address this possibility, we incorporate pre-shock bank characteristics such as size, foreign ownership, GSIB status, excess specialization, and non-performing loans. Columns (4)-(5) of Table 6 shows that the baseline results remain robust once these controls are included.

5.3 Evidence from a Bank Transition Across Regimes

5.3.1 Event description and sample selection

We also exploit the transition of a financial institution that switched its status from representative office to subsidiary of a foreign bank that took place within our sample period. This conversion shifted regulation from the parent-country authority to the host-country regulator, which increased its minimum capital requirement for lending by 1.8%.[19] The intermediary has a presence on several continents and it operated as a representative office in Peru for several years before changing its organizational form. A main motive for this change was the expansion of its business, particularly focusing on reaching smaller new clients. The new status also allows it to obtain funding in the host

[18] We compute the elasticities by dividing the estimated coefficient (18%) by either the observed increase in capital requirements (2%, yielding 9) or the size of the additional capital buffer (2.5%, yielding 7.2).

[19] During the sample of analysis the difference in minimum capital requirements between the host and the parent jurisdiction was 1pp. Considering the additional 0.8pp for dollar-denominated lending, it gives a total of 1.8pp. Thus, our back of the envelope elasticity is 0.87 (1.6/1.8).

market as a subsidiary, enabling it to to receive deposits.[20]

Due to the supervisory discretion during the process, the transition came as a surprise to both borrowers and competitors. Accordingly, it is unlikely that rivals preemptively responded or that borrowers shifted demand in anticipation. To support a causal interpretation, we limit the analysis to borrowers with pre-event credit relationships with the institution, for whom the transition decision is plausibly exogenous.

5.3.2 Loan quantities and prices evidence

We begin by estimating the evolution of interest rates and loan amounts following the switch in organizational status while controlling for time, firm and loan controls. More specifically, we compute the following regression:

$$y_{fbt} = \phi \cdot I_b \times Switch_t + \eta_{ft} + X\beta + v_{fbt}$$

where y_{fbt} is either the interest rate or the loan amount. I_b is a dummy variable equal to 1 for the institution involved in our event study, and 0 otherwise. $Switch_t$ is a dummy variable equal to 1 if the period is after the change in organization status, and 0 otherwise. The coefficient ϕ represents the change in the interest rate of the institution compared to other intermediaries after the change in the organizational form. η_{ft} are firm-time fixed effects. X contains the individual terms of I_b and $Switch_t$, which will be absorbed when fixed effects are included.

Table 7 summarizes the findings of our parametric approach. The results indicate that loan rates increased by at least 1.6% after the institution became a host-regulated bank, and the coefficients are robust across specifications. The magnitudes imply that a 1pp increase in capital requirements increases interest rates by 0.87pp. Consistent with the capital cost channel, we also observe that the increase translates into a decline in loan quantities. The conservative estimates indicate that firms borrowing from the

[20]Note that in general there is a tradeoff between operating as a representative office and as a subsidiary: a representative office offers a lighter, lower-cost presence but with tighter activity restrictions, while a subsidiary expands the scope of clients and local funding options (such as deposits) but entails higher operating costs and host-country governance and compliance requirements. For large global institutions (e.g., G-SIBs), a representative office can be preferable because they can rely on group-level funding and internal capital markets and can more easily reach a large client base. For smaller global institutions (e.g., regional banks), a subsidiary may be more attractive to access local deposits and expand their client base.

transitioned bank experienced a decline of around 22%, which implies that after a 1pp capital requirement rise, there is a 12.2pp market-relative contraction in lending.

5.3.3 Identification assumption discussion

Our identifying assumption requires that, after controlling for firm–time fixed effects, the transition of a representative office into a foreign subsidiary constitutes an exogenous supply shock that is orthogonal to borrower-specific demand conditions. Hence, within a given firm and period, variation in credit outcomes across its lenders can be interpreted as arising from differences in lenders' supply shock. We do not require exogenous assignment of the transition, nor equality in outcome levels between firms borrowing from the transitioning banks and those borrowing from other institutions.

Anticipation effects might threaten identification. However, due to the supervisory discretion exercised throughout the process, the shock was unanticipated by both borrowers and other banks. Moreover, for the transitioning institution, we detect no significant deviations prior to the shift, suggesting no anticipatory adjustment. Figure 9 of Online Appendix A.4.2 shows that no significant deviations occurred before the change.

Beyond establishing a supply shock, we assess the alternative view that the observed change reflects higher operating costs from setting up branches rather than an increase in capital requirements. We rule out this potential interpretation for three reasons: First, following its transition, the institution did not establish any new offices or create branches. Second, the share of administrative expenses and real estate investments relative to total assets did not change around the transition year. Third, even in short windows—when meaningful adjustments are unlikely—the effect remains significant, as shown in Columns (3) and (6) of Table 7.

5.3.4 Real effects

As our previous findings point out, firms reliant on the institution experienced higher credit costs and a contraction in lending due to the increase in capital requirements when the bank transitioned from parent-regulated to a host-regulated bank. We examine how this regulatory divergence shock, which raises credit costs, translates into changes in several real outcomes.

We examine the impact of regulatory divergence on several real outcomes. First, to study the impact on input demand, we analyze the number of workers and capital

stock. For labor data, we use information from the Private Pension Fund System (*Sistema Privado de Pensiones*), the primary retirement system for corporate employees. It tracks the number of workers with pension fund contributions, enabling us to measure the number of workers at the firm level. For capital, we use financial statement information of corporate loan debtors reported to banks, which is collected by the Peruvian financial regulator (SBS). These data allow us to construct measures of investment in tangible and intangible capital. From the same data source, we obtain information on firm sales.

Our empirical strategy consists of estimating the change in real outcomes after the event. Similar to our earlier analysis, we focus on firms that borrowed from the institution before its transition. We test whether, and to what extent, firms that borrowed more from the institution were more affected by the shock using the following regression:

$$o_{ft} = \beta \times Share_{f,pre} \times Post + \iota_f + \iota_t + \epsilon_{ft}$$

where o_{ft} denotes the outcome for firm f (in logs) at time t, such as the number of workers, physical and intangible capital, and sales. $Share_{f,pre}$ represents the borrowing share of firm f from the transitioning institution. *Post* is a dummy that takes the value of one after the organization transition and zero otherwise. ι_f and ι_t denote firm and time fixed effects. Our results are reported in Table 8.

The findings reveal a negative effect on employment, a statistically insignificant impact on capital, and a decline in sales. The estimates suggest that, following the regulatory divergence shock, a firm obtaining 50% of its borrowing from the transitioning institution reduced its labor demand by 2.2pp and experienced a 0.18pp decline in sales. A back-of-the-envelope calculation implies that an increase of 1pp in capital requirements reduces labor demand by 1.22pp and sales by 0.1pp.[21]

6 Concluding Remarks

This document analyzes the impact of regulatory divergence on a domestic banking system. Using granular Peruvian data, we show that global bank lending outside host-country regulation accounts for about 25% of corporate dollar-denominated credit. We study the implications of regulatory divergence on the competition between host-

[21] We calculate the estimates by dividing 2.2pp and 0.18pp over the rise in capital requirements of 1.8pp

regulated and parent-regulated global banks. Our main result implies that after a 1pp rise in host capital requirements, parent-regulated global banks expanded their market share by 7-10pp relative to host-regulated banks, even for the same borrower.

A central lesson of modern banking regulation is that international capital standards have become a cornerstone of global financial stability. Yet policy debates have persistently emphasized a second rationale: preserving a level playing field across countries. Even so, the competitive implications have been empirically underexplored in the academic literature. Our evidence shows this rationale is economically meaningful—when capital standards tighten in one jurisdiction but not in others, credit significantly shifts toward lenders operating outside that jurisdiction's regulatory perimeter.

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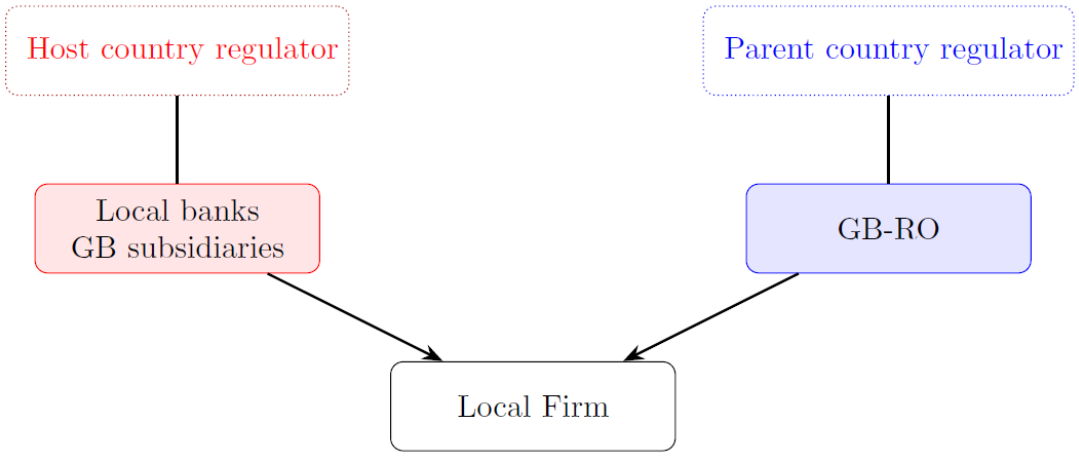
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Paravisini, Daniel, Veronica Rappoport, and Philipp Schnabl. 2023. "Specialization in bank lending: Evidence from exporting firms." *The Journal of Finance* 78 (4): 2049–2085.

7 Figures and Tables

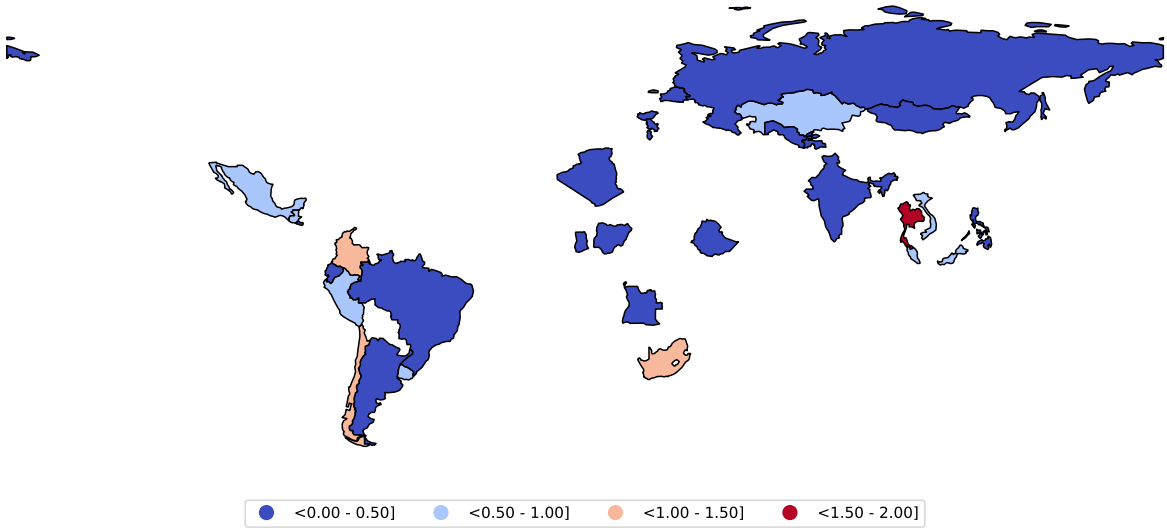
Figures

Figure 1: Regulatory Oversight by Bank Type



Note: The figure displays the regulatory oversight depending on the bank organization and ownership form.

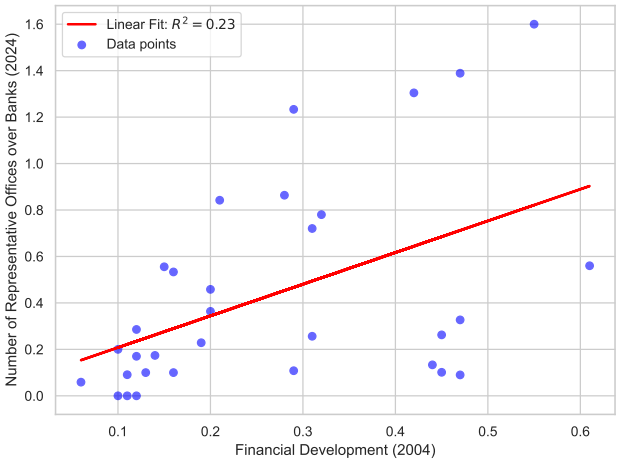
Figure 2: Ratio of the Number of Representative Offices over Banks



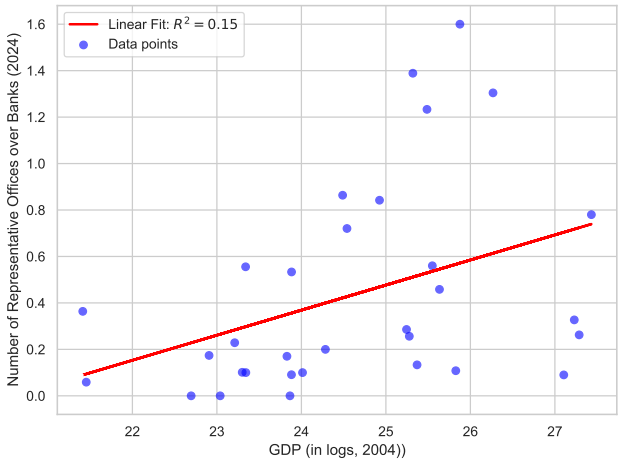
Note: The figure measures the number of representative offices over commercial banks for several countries in which global banks are not based. Every country that we report had at least one representative office. Data correspond to the early 2020s.

Figure 3: Representative Offices Presence and Country Characteristics

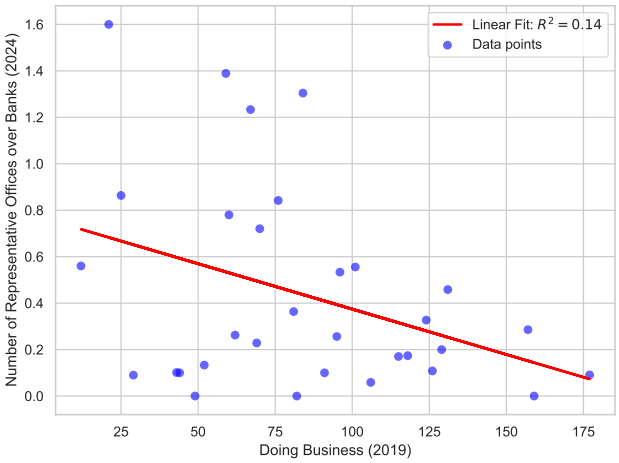
(a) Financial Development



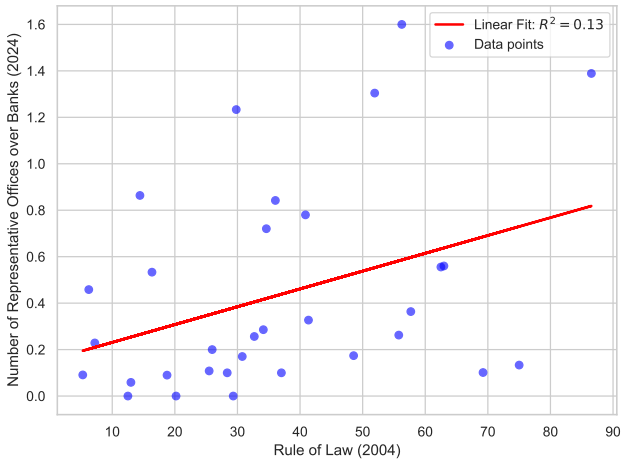
(b) Past Economic Development



(c) Doing Business



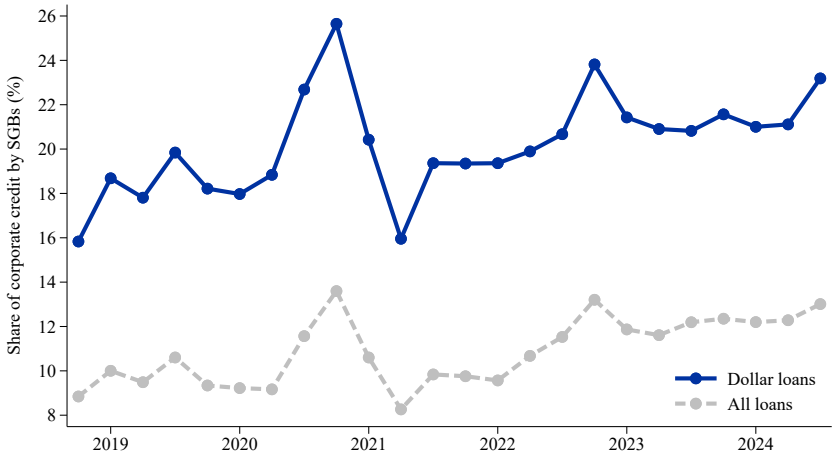
(d) Rule of Law



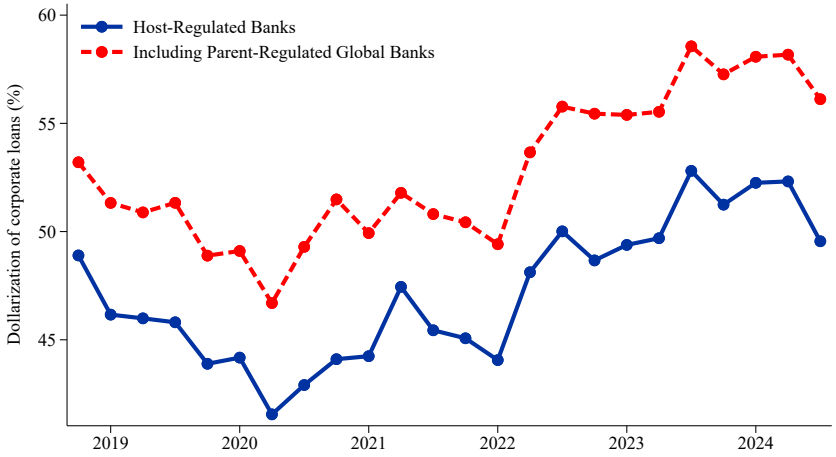
Note: The figures depict the correlation between the number of representative offices over commercial banks in each country and measures of financial development, economic development, doing business, and rule of law. The ratio measuring the presence of representative offices is computed for the early 2020s. Most explanatory variables are measured in 2004, with the sole exception of the Doing Business metric that is measured in 2019.

Figure 4: Relevance of Global Bank Lending Relying on Representative Offices

(a) Credit Participation

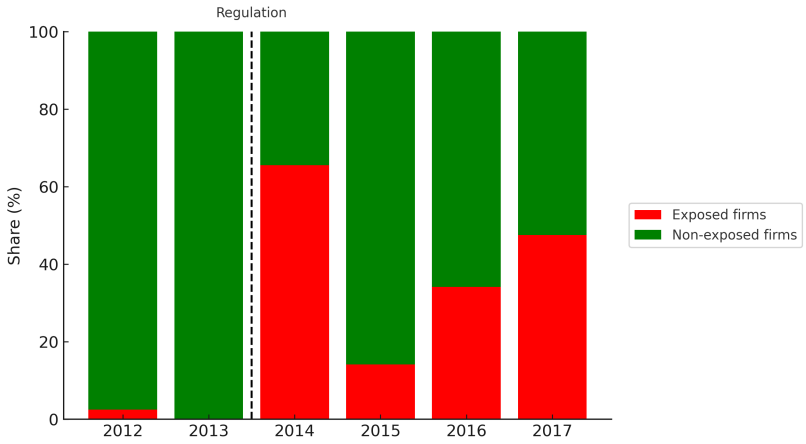


(b) Hidden Risk



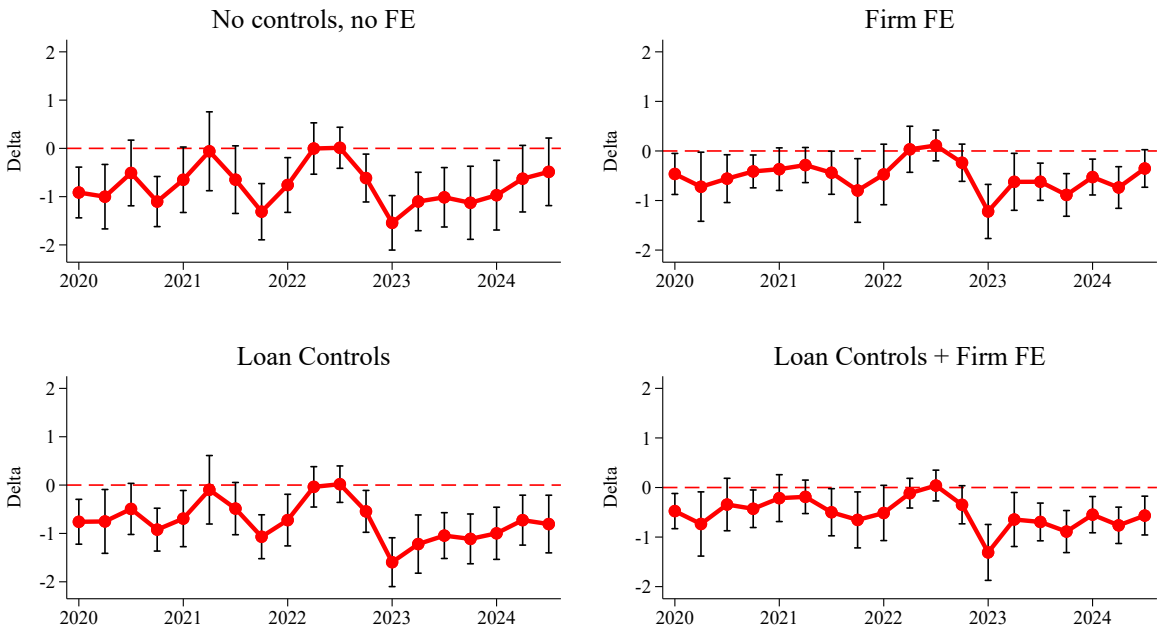
Note: These figures display the relevance of global bank lending that relies on representative offices. Panel (a) shows the share of dollar-denominated and total credit of corporate firms funded by parent-regulated global banks. Panel (b) depicts the dollarization of corporate loans after accounting for parent-regulated global bank lending. Data spans from 2018q4 to 2024q3.

Figure 5: Composition of the syndicated loan market by firm type



Note: The figure displays the share of borrowing from the syndicated loan market for Peruvian firms across firm types. We split the firms across those labeled as exposed to exchange rate risk in the previous year by host-regulated banks and those who were not. Data spans from 2012 to 2017.

Figure 6: Parent-regulated Global Bank Cheapness over Time



Note: These figures show the estimated δ_t coefficients from the following equation: $r_{fbt} = \delta_t \cdot SGB_b + X\beta + v_{fbt}$. We display the estimates using different controls and fixed-effect combinations. Data spans from 2020q1 to 2024q3.

Tables

Table 1: Interest Rate Differentials Across Institution Types

	Average difference in rates					
	2020	2021	2022	2023	2024	All periods
Parent-regulated global banks - Host-regulated banks	-0.165	-0.317	-0.324	-1.022	-0.535	-0.469
Parent-regulated global banks - Domestic banks	-0.189	-0.289	-0.295	-0.846	-0.325	-0.392
Parent-regulated global banks - Foreign subsidiaries	-0.143	-0.343	-0.357	-1.201	-0.760	-0.550

Note. This table presents the difference between average interest rates across parent-regulated global banks and host-regulated banks for different years. We also disaggregate host-regulated banks between domestic banks and foreign subsidiaries. Data spans from 2020q1 to 2024q3.

Table 2: Parent-Regulated Global Banks Cheapness

Dep. r_{fbt}	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GBR_b	-0.519***	-0.486***	-0.488***	-0.535***	-0.850***	-0.841***	-0.499***	-0.578***
	(-3.56)	(-3.55)	(-5.09)	(-5.83)	(-4.52)	(-4.86)	(-3.35)	(-3.76)
Bank size					-0.211***	-0.203***	-0.0481*	-0.0611**
					(-5.96)	(-6.22)	(-1.83)	(-2.37)
Foreign bank					-0.0821	-0.121**	-0.0930*	-0.134***
					(-1.35)	(-2.05)	(-1.80)	(-2.74)
GSIB					0.261	0.301*	0.473***	0.495***
					(1.63)	(1.96)	(3.22)	(3.42)
Excess Specialization					-0.00723*	-0.00579	0.00127	0.000240
					(-1.71)	(-1.56)	(0.44)	(0.09)
Share NPL					0.0299*	0.0410**	-0.00820	0.00437
					(1.95)	(2.25)	(-1.17)	(0.55)
Profitability					0.124***	0.101***	0.122***	0.0977***
					(4.01)	(3.50)	(5.15)	(4.34)
Industry × Time FE	✓	✓			✓	✓		
Firm × Time FE			✓	✓			✓	✓
Loan Controls		✓		✓		✓		✓
Num obs	26,709	26,387	25,883	25,576	26,709	26,387	25,883	25,576

Note. This table presents the results of estimating $r_{fbt} = \delta \cdot GBR_b + \theta \cdot Z_b + X\beta + v_{fbt}$, where f represents the firm, b the bank, and t the quarter-year. The unit of observation is a loan transaction. r_{fbt} is the interest rate. GBR_b equals 1 if the intermediary is a parent-regulated global bank and 0 otherwise. Z_b denotes a set of bank-level controls including: bank size, foreign bank dummy, GSIB dummy, excess specialization, non-performing loans, and aggregate profitability. X includes log loan amount and loan tenor as the set of loan controls and also either industry-quarter or firm-quarter fixed effects. The industry is 4-digit CIIU. Robust standard errors are clustered by firm. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Data spans from 2020q1 to 2024q3.

Table 3: Aggregate Response of Banks Around the Event

Statistic	Peru	Other Countries
Average market share of host-regulated banks before the event (%)	9.8%	3.7%
Average market share of host-regulated banks after the event (%)	3.1%	4.3%
Net variation (%)	-6.7%	+0.6%
Host-regulated banks decreasing their share (%)	100%	
Parent-regulated global banks increasing their share (%)	77%	

Note. This table shows the observed average market share of host-regulated banks in the syndicated loan market one year before and after the event. We split it across country groups: Peru and the other countries. We also report the share of host-regulated banks that experienced a decline in market share after the event and the share of parent-regulated global banks that registered an increase in the Peruvian syndicated-loan market. The data spans one year after and before the regulatory adjustment of December 2013.

Table 4: Market Share Impact of Regulatory Divergence

Dep. s_{bct}	Rep. Offices		All Parent-Regulated Global Banks	
	Lending Share (%)	Loan Participation (%)	Lending Share (%)	Loan Participation (%)
	(1)	(2)	(3)	(4)
$Peru_c \times GBR_b \times Post_t$	0.089**	0.145*	0.08***	0.161***
	(2.78)	(2.03)	(4.08)	(3.08)
Bank × Year FE	✓	✓	✓	✓
Country × Year FE	✓	✓	✓	✓
Bank × Country FE	✓	✓	✓	✓
Num obs	170	170	550	550

Note. This table presents the results of estimating $s_{bct} = \beta \cdot GBR_b \times Peru_c \times Post_t + \alpha_{bt} + \alpha_{ct} + \alpha_{bc} + \epsilon_{bct}$, where s_{bct} is the market share of bank b in country c at time t. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. $Peru_c$ is a dummy variable that denotes whether the country is Peru or not. $Post_t$ is one after the regulation took place. α_{ct} denotes country-time fixed effects, α_{bt} are the bank-time fixed effects, and α_{bc} absorb bank-country characteristics. Robust standard errors are clustered by bank. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The data spans one year after and before the regulatory adjustment of December 2013.

Table 5: Capital Reallocation in Response to Regulatory Divergence

Dep. ω_{bct}	Baseline Countries		All South American Countries	
	vs Host	vs Mult. Devel.	vs Host	vs Mult. Devel.
$Peru_c \times GBR_b \times Post_t$	0.419*	0.360***	0.412***	0.227***
	(2.00)	(3.02)	(2.00)	(2.06)
Bank × Year FE	✓	✓	✓	✓
Country × Year FE	✓	✓	✓	✓
Bank × Country FE	✓	✓	✓	✓
Num obs	170	140	272	300

Note. This table presents the results of estimating $\omega_{bct} = \beta \cdot GBR_b \times Peru_c \times Post_t + \alpha_{bt} + \alpha_{ct} + \alpha_{bc} + \epsilon_{bct}$, where ω_{bct} is the portfolio share of bank b in country c at time t. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. $Peru_c$ is a dummy variable that denotes whether the country is Peru or not. $Post_t$ is one after the regulation took place. α_{ct} denotes country-time fixed effects, α_{bt} are the bank-time fixed effects, and α_{bc} absorb bank-country characteristics. We display results using baseline countries, which are the ones in which the host-regulated banks participate, and also for all South American countries. Robust standard errors are clustered by bank. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The data spans one year after and before the regulatory adjustment of December 2013.

Table 6: Basel III Transition

Dep. $ln\left(c_{fbt}\right)$	(1)	(2)	(3)	(4)	(5)
$Cap.Req \times GBR$	0.303	0.223	0.183*	0.267*	0.210**
	(1.66)	(1.62)	(1.82)	(1.94)	(2.07)
Industry × Time FE		✓		✓	
Firm × Time FE			✓		✓
Cap.Req × Bank Controls				✓	✓
Remaining Interactions	✓	✓	✓	✓	✓
Num obs	27,983	27,788	27,096	27,727	27,071

Note. This table presents the results of estimating $ln\left(c_{fbt}\right) = \vartheta \cdot CapReq_t \times GBR_b + \eta_{g(f)t} + X\beta + v_{fbt}$, where c_{fbt} is the loan amount. $CapReq_t$ is a dummy equal to 1 after January 2023 and 0 otherwise. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. ϑ represents the change in the outcome following the regulatory modification. Bank controls, measured as 2022 pre-shock averages, include bank size (log corporate dollar credit portfolio), dummy of foreign ownership, dummy of GSIB, excess specialization, share of NPLs. $\eta_{g(f)t}$ are either industry-time or firm-time fixed effects. X contains the individual terms of the interaction and for Columns (4) and (5) includes the interaction between $CapReq_t$ and bank controls. Standard errors are clustered by bank. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 7: Change in Intermediary Status

	A. Interest Rates - r_{fbt}		*B. Quantities - $ln\left(c_{fbt}\right)$*	
	8 quarters	6 quarters	8 quarters	6 quarters
	(1)	(2)	(4)	(5)
$I_b \times Switch_t$	1.852***	2.000***	-0.229***	-0.265***
	(6.33)	(6.85)	(-2.84)	(-3.55)
Firm × Time FE	✓	✓	✓	✓
Remaining Interactions	✓	✓	✓	✓
Num obs	1,388	1,035	1,498	1,119

Note. This table presents the results of estimating $r_{fbt} = \beta \cdot I_b \times Switch_t + X\beta + \varepsilon_{fbt}$ and $ln\left(c_{fbt}\right) = \beta \cdot I_b \times Switch_t + X\beta + \varepsilon_{fbt}$. The unit of observation is a loan transaction. r_{fbt} and c_{fbt} are the rate of a loan and the credit amount, respectively. $Switch_t$ takes the value of 1 after the period in which the institution became a host-regulated bank. I_b takes the value of 1 for loans with the intermediary that switched status and 0 for other banks. X contains the individual terms of I_b and $Switch_t$, which will be absorbed when fixed effects are included. Our sample corresponds to the institutions that borrowed at least once from the institution that switched status before the event. We display results for event windows extending 6 and 8 quarters before and after the event. Standard errors are clustered by bank. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 8: Real Effects of Regulatory Divergence

	Number of Workers		Capital		Sales	
	(1)	(2)	(3)	(4)	(5)	(6)
$Share_{f,pre} \times Post$	-4.412**	-4.415**	-0.185	-0.163	-0.362**	-0.363**
	(-2.22)	(-2.22)	(-0.60)	(-0.53)	(-2.46)	(-2.41)
Firm FE	✓	✓	✓	✓	✓	✓
Time FE		✓		✓		✓
Remaining Interactions	✓	✓	✓	✓	✓	✓
Num obs	5,734	5,734	2,374	2,374	2,365	2,365

Note. This table presents the results of estimating $o_{ft} = \beta \times Share_{f,pre} \times Post + \iota_f + \iota_t + \epsilon_{ft}$, where o_{ft} denotes the outcome for firm f (in logs) at time t, such as the number of workers, value of physical and intangible capital, and sales. Frequency of workers is quarterly, while for capital and sales it is semiannual. $Share_{f,pre}$ represents the borrowing share of firm f from the transitioning institution. *Post* is a dummy that takes the value of one after the organization transition and zero otherwise. ι_f and ι_t denote firm and time fixed effects. We analyze two years before and after. Robust standard errors are clustered by firm. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

A Online Appendix

A.1 Institutional Background of Peru

This Appendix section provides further information regarding the institutional background of Peru. Subsection A.1.1 offers supplementary details about representative offices in Peru. Subsection A.1.2 lays out additional context regarding the Basel III transition.

A.1.1 Representative Offices

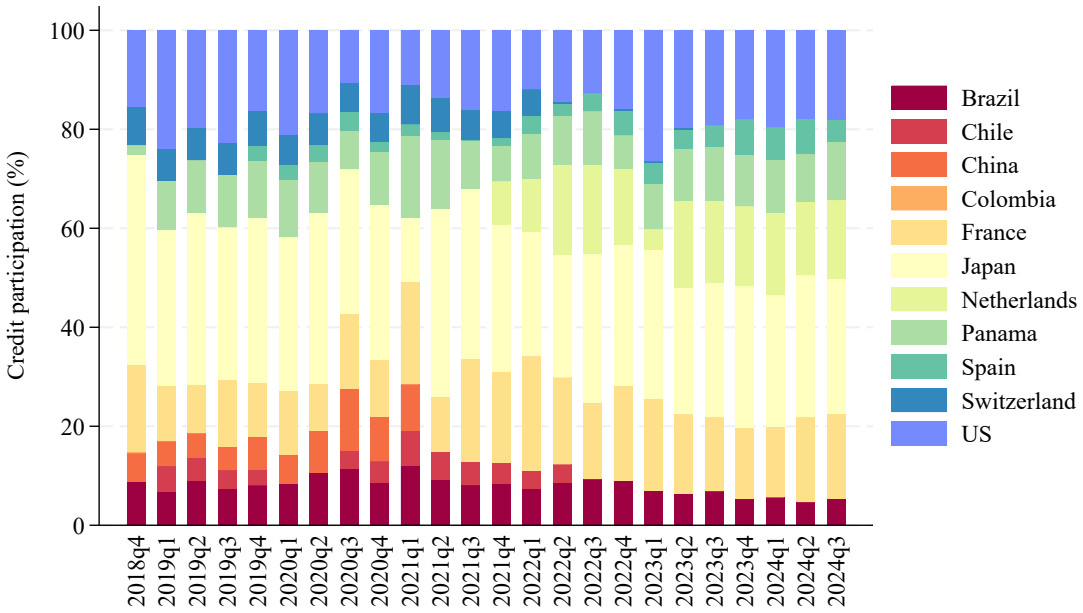
We present general information about representative offices operating in Peru. Table 9 shows the representative offices operating in Peru as well as their country of origin. Moreover, Figure 7 displays the participation by headquarter location.

Table 9: Detail about Representative Offices

Representative Offices of Global Banks	Country of Origin
Itaú Corpbanca	Brazil
BCI	Chile
Bank of China	China
BNP Paribas	France
Société Générale	France
Natixis	France
MUFG Bank, Ltd.	Japan
Sumitomo Mitsui	Japan
Cooperativa Rabobank	Netherlands
Atlantic Security	Panama
Bladex	Panama
Banco General S.A.	Panama
Banco de Sabadell	Spain
Credit Suisse AG	Switzerland
Bank of America	United States
HSBC Bank USA N.A.	United States
JP Morgan Chase Bank	United States

Note. This table presents the names and countries of the representative offices operating in Peru.

Figure 7: Participation of Parent-Regulated Bank Lending by Headquarters Origin

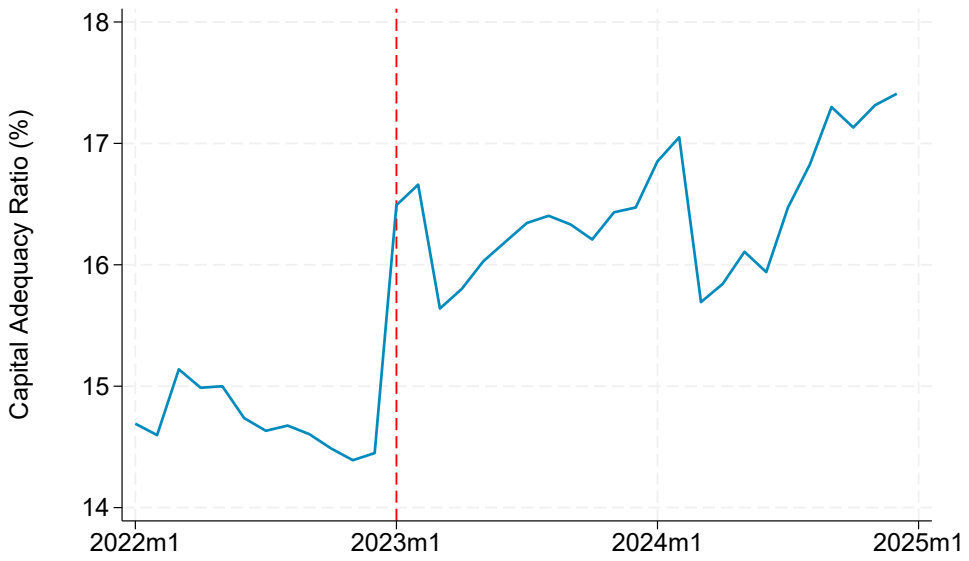


Note: This figure depicts the participation of representative offices by headquarters origin. The shares are computed with respect to the total USD credit to Peruvian firms by parent-regulated global banks in each period.

A.1.2 Basel III Transition

Peru's transition to Basel III became effective in 2023. Figure 8 displays the evolution of the capital adequacy ratio of the aggregate Peruvian banking system. At the time of the implementation, capital requirements increased from 14.45 (Dec-22) to 16.49 (Jan-23), which represents an increase of 2.04pp.

Figure 8: Capital Adequacy Ratio of Peruvian Banks



Note: This figure depicts the evolution of the capital adequacy ratio of Peruvian Banks between 2022m1-2024m12. The red line depicts the first time in which the regulation became effective.

A.2 Further Evidence of Parent-Regulated Bank Cheapness

In this Appendix section, we present several robustness exercises to our main findings regarding parent-regulated global bank cheapness. We explain in detail the role of several bank characteristics to explain the cheapness as shown in Table 2. Additionally, we conduct a series of robustness tests including: restricting the sample to foreign banks only, allowing for heterogeneous transmission of the federal funds rate, and controlling for the monetary policy rate in the bank's headquarters country.

Bank Specialization

We examine the role of bank specialization in explaining the cheapness. Parent-regulated global institutions may have specialized expertise in particular borrower segments or industries, which allows them to screen borrowers more effectively and, as a result, offer lower interest rates. For example, Banco Sabadell, at the launch of its representative office, announced its plans to finance major business groups and strategic infrastructure and energy projects in the country.[22] This highlights an advantage in serving infrastructure and energy firms, which might ultimately lead to lower interest rates compared to host-regulated banks that might be less specialized.

To assess the relevance of lending specialization, we employ the techniques used in the banking literature developed by Paravisini, Rappoport, and Schnabl (2023) and Blickle, Parlatore, and Saunders (2023). Specifically, we define the degree of specialization of bank b at time t in sector S, using the 4-digit International Standard Industrial Classification (ISIC) to measure industry excess specialization, as follows:

$$Specialization_{bt}^{S} = \frac{\sum_{f \in S} Loans_{fbt}}{\sum_{S} \sum_{f \in S} Loans_{fbt}} - \frac{\sum_{b} \sum_{f \in S} Loans_{fbt}}{\sum_{b} \sum_{S} \sum_{f \in S} Loans_{fbt}}$$

We test whether the difference in bank specialization among parent-regulated global banks and host-regulated banks helps explain the cheapness. Table 2 presents the marginal impact of bank specialization on the parent-regulated cheapness while con-

[22] For more details see https://www.fundssociety.com/es/noticias/negocio/banco-sabadell-abre-una-oficina-de-representacion-en-lima/

trolling for other bank characteristics, and we do not find a significant effect.

Credit Riskiness

An alternative reason might be that parent-regulated global banks prefer to maintain a safer portfolio than host-regulated banks. By targeting less risky borrowers, they face lower monitoring, screening or default costs, which allows them to offer cheaper credit. As previously shown, the cheapness holds even when comparing the same firm across both types of institutions. Moreover, we do not observe significant differences in loan default rates among institutions. In addition to comparing similar firms, Table 2 also incorporates a bank-level non-performing loan measure. The estimates are positive but not strongly significant across specifications.

Foreign Bank Ownership

Another explanation of the cheapness is that it may be attributable to bank ownership—foreign versus domestic—rather than to the regulator's country of jurisdiction. If foreign-owned banks benefit from parent support, cross-border funding advantages, or distinct portfolio strategies, these ownership characteristics could drive systematically lower costs, independent of the regulatory environment within the host country.

We examine whether the cost advantage stems from foreign ownership structure rather than regulatory jurisdiction by incorporating an indicator variable equal to one for foreign-owned banks (and zero for domestic banks) in Table 2. We find that foreign-owned banks offer loans at lower interest rates than domestically owned banks by at most 0.13pp, a difference that is modest relative to the overall observed discount but remains statistically significant. Additionally, in Table 10 we restrict the sample to foreign-owned banks from the same country of origin only, which includes representative offices and foreign-bank subsidiaries. The results show that the cheapness remains statistically significant even in this restricted sample. Taken together, this suggests that foreign ownership does not significantly explain the cheapness.

Table 10: Parent-Regulated Global Bank Cheapness - Sample of Foreign Banks

	Interest Rate (%)							
	A. All corporate firms				*B. Corporate firms borrowing from both institutions*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GBR_b	-0.978***	-0.892***	-0.888***	-0.926***	-1.006***	-0.834***	-0.888***	-0.890***
	(-4.97)	(-4.49)	(-4.46)	(-4.93)	(-4.25)	(-3.50)	(-4.43)	(-4.69)
Industry × Quarter FE	✓	✓			✓	✓		
Firm × Quarter FE			✓	✓			✓	✓
Loan Controls		✓		✓		✓		✓
Num obs	9,244	9,074	8,635	8,513	4,251	4,194	4,145	4,088

Note. This table presents the results of estimating $r_{fbt} = \delta \cdot GBR_b + X\beta + v_{fbt}$, where f represents the firm, b the bank, and t the quarter-year for the sample of banks with foreign ownership only. The unit of observation is a loan transaction. r_{fbt} is the interest rate. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. X includes log loan amount and loan tenor as the set of loan controls and also either industry-quarter or firm-quarter fixed effects. The industry is 4-digit CIIU. Robust standard errors are clustered by firm. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Data spans from 2020q1 to 2024q3.

Lending Scale and Market Power

Differences in bank lending size between parent and host-regulated banks could also help explain the observed difference in loan rates. Banks with larger loan portfolios may benefit from economies of scale in screening and monitoring, greater bargaining power with borrowers, and improved risk diversification. These advantages reduce their effective marginal cost of lending and can lead to lower loan rates. To evaluate this relationship, we construct a measure of corporate lending scale for each institution by adding its total loan amounts. Our results in Table 2 confirm the role of scale on lending, but the cheapness remains statistically significant.

Another potential explanation of the cheapness is that host-regulated banks have higher market power in the local market than parent-regulated global banks. Banks with more pricing power (e.g., dominant local position, strong relationships, niche specialization) can sustain larger markups over their marginal cost. We construct a bank-level markup profitability measure defined as the spread between the bank's average loan rate and its home monetary policy rate, which reflects the bank's pricing ability and market power. Table 2 displays its marginal impact on the cheapness. Banks with higher bank-level spreads charge higher loan rates, but its inclusion does not eliminate the statistical significance of the cheapness.

Monetary Policy Regimes and Bank Funding Conditions

Another potential factor driving the cheapness could be the monetary policy rate differentials at which banks can fund their operations. Due to the worldwide footprint of their operations, parent-regulated global banks might have an advantage in accessing dollar-denominated wholesale markets, while host-regulated banks do not. As dollar-denominated global wholesale markets tend to be significantly influenced by the Fed, its funds rate might explain the cheapness.

We test whether the different access to funding at the Fed funds rate for parent-regulated global banks explains the cheapness. Table 11 shows that it does not systematically explain the cheapness of parent-regulated global banks. The result is intuitive because host-regulated banks benefit from funding through local depositors with a strong preference for dollar assets. Gutierrez, Ivashina, and Salomao (2023) explored this idea using Peruvian data, showing that the preference for dollar savings and regulation helps explain why dollar credit is cheaper. Moreover, during our analysis period, the average Fed funds rate was 2.41% and the average dollar deposit rate was 2.0%. Thus, even if global banks funded their operations at the Fed funds rate, their costs would exceed those of host-regulated banks.

Table 11: Fed Funds Rate and Parent-Regulated Global Bank Cheapness

Dep. r_{fbt}	*A. All corporate firms*				*B. Corporate firms borrowing from both institutions*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$GBR_b \times$ *US MP Rate*	-0.0128	-0.0512	-0.0317	-0.0518	-0.0205	-0.0701	-0.0317	-0.0569
	(-0.26)	(-1.07)	(-0.68)	(-1.17)	(-0.39)	(-1.31)	(-0.68)	(-1.28)
GBR_b	-0.488**	-0.362*	-0.404**	-0.399***	-0.422*	-0.295	-0.404**	-0.382***
	(-2.43)	(-1.87)	(-2.56)	(-2.79)	(-1.83)	(-1.29)	(-2.54)	(-2.69)
Industry $\times$ Time FE	✓	✓			✓	✓		
Firm $\times$ Time FE			✓	✓			✓	✓
Loan Controls		✓		✓		✓		✓
Num obs	26,709	26,387	25,883	25,576	12,166	12,007	12,095	11,936

Note. This table presents the results of estimating $r_{fbt} = \delta \cdot GBR_b + \theta \cdot GBR_b \times FFR_t + X\beta + v_{fbt}$, where f represents the firm, b the bank, and t the quarter-year. The unit of observation is a loan transaction. r_{fbt} is the interest rate. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. FFR_t is the Fed funds rate in the country of origin of the bank. X includes the individual term of the interaction, FFR_t, as well as a set of loan controls, which includes: log loan amount and loan tenor. We also include industry-quarter or firm-quarter fixed effects in our specifications. The industry is 4-digit CIIU. Robust standard errors are clustered by firm. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Data spans from 2020q1 to 2024q3.

Another related, but alternative explanation is associated with the access of parent-regulated global banks to the wholesale markets in their country of origin. According to the banking literature, wholesale funding is sensitive to market conditions such as monetary policy rates. Thus, global banks may benefit from lower funding costs linked to monetary policy rates in their parent countries, which could account for their cheapness. As reported in Table 12 , the cheapness is still significant even after including this factor.

Table 12: Parent-Regulated Global Bank Cheapness and Host-Regulated Monetary Policy

	Interest Rate (%)							
	A. All corporate firms				*B. Corporate firms borrowing from both institutions*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GBR_b	-0.237*	-0.237**	-0.223***	-0.295***	-0.175	-0.234*	-0.240***	-0.331***
	(-1.80)	(-2.01)	(-2.82)	(-3.57)	(-1.38)	(-1.82)	(-2.78)	(-3.51)
Home MP $Rate_b$	0.760***	0.751***	0.544***	0.540***	0.726***	0.705***	0.576***	0.565***
	(14.68)	(14.95)	(10.92)	(10.98)	(13.14)	(12.02)	(10.64)	(10.43)
Industry × Quarter FE	✓	✓			✓	✓		
Firm × Quarter FE			✓	✓			✓	✓
Loan Controls		✓		✓		✓		✓
Other Bank Controls	✓	✓	✓	✓	✓	✓	✓	✓
Num obs	26,709	26,387	25,883	25,576	12,166	12,007	12,095	11,936

Note. This table presents the results of estimating $r_{fbt} = \delta \cdot GBR_b + \psi \cdot Parent\ MP + X\beta + v_{fbt}$, where f represents the firm, b the bank, and t the quarter-year. The unit of observation is a loan transaction. r_{fbt} is the interest rate. GBR_b equals 1 if the institution is a parent-regulated global bank and 0 otherwise. Z_b denotes a set of bank-level controls including: bank size, foreign bank dummy, GSIB dummy, excess specialization, non-performing loans, and aggregate profitability. X includes log loan amount and loan tenor as the set of loan controls and also either industry-quarter or firm-quarter fixed effects. The industry is 4-digit CIIU. Robust standard errors are clustered by firm. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. Data spans from 2020q1 to 2024q3.

A.3 Model of Capital Cost Channel

This Appendix presents the derivations of the simple model develop in Section 3.

A.3.1 Derivations of Propositions

The model generates the following predictions:

Proposition 1. An increase in host-country capital requirements has a non-increasing effect on the market share of host-regulated banks relative to that of parent-regulated global banks. Specifically, the impact is:

$$\frac{d\left(r_{fb\in\Theta_{bH}} - r_{fb\in\Theta_{bP}}\right)}{d\underline{K}_{b\in\Theta_{bH}}} = \lambda_{b\in\Theta_{bH}} s_{fb\in\Theta_{bP}} s_{fb\in\Theta_{bH}} \geq 0$$

Proof. First, we obtain the derivative of $r_{fb\in\Theta_{bH}}$ with respect to $\underline{K}_{b\in\Theta_{bH}}$ using equation (2):

$$\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = \lambda_{b\in\Theta_{bH}} - \frac{1}{\beta_1\left(1 - s_{fb\in\Theta_{bH}}\right)^2}\frac{ds_{fb\in\Theta_{bH}}}{d\underline{K}_{b\in\Theta_{bH}}}$$

Moreover, replacing $\frac{ds_{fb\in\Theta_{bH}}}{d\underline{K}_{b\in\Theta_{bH}}}$ using the chain rule, $\frac{ds_{fb\in\Theta_{bH}}}{d\underline{K}_{b\in\Theta_{bH}}} = \frac{ds_{fb\in\Theta_{bH}}}{d\underline{K}_{b\in\Theta_{bH}}}\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}}$, we get:

$$\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}}\left(1 + \frac{1}{\beta_1\left(1 - s_{fb\in\Theta_{bH}}\right)^2}\frac{ds_{fb\in\Theta_{bH}}}{dr_{fb\in\Theta_{bH}}}\right) = \lambda_b$$

Also, from standard logit demand properties we have $\frac{ds_{fb\in\Theta_{bH}}}{dr_{fb\in\Theta_{bH}}} = \beta_1 s_{fb\in\Theta_{bH}}\left(1 - s_{fb\in\Theta_{bH}}\right)$. Replacing the term and solving for $\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}}$ implies:

$$\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = \lambda_{b\in\Theta_{bH}}\left(1 - s_{fb\in\Theta_{bH}}\right)$$

Second, we obtain the derivative of $r_{fb\in\Theta_{bP}}$ with respect to $\underline{K}_{b\in\Theta_{bH}}$

$$\frac{\partial r_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = -\frac{1}{\beta_1\left(1-s_{fb\in\Theta_{bP}}\right)^2}\frac{ds_{fb\in\Theta_{bP}}}{d\underline{K}_{b\in\Theta_{bH}}}$$

To obtain $\frac{ds_{fb\in\Theta_{bP}}}{d\underline{K}_{b\in\Theta_{bH}}}$, we derived it from $s_{fb\in\Theta_{bP}} = s_{fb\in\Theta_{bP}}\left(r_{fb\in\Theta_{bP}}\left(\underline{K}_{b\in\Theta_{bH}}\right), r_{fb\in\Theta_{bH}}\left(\underline{K}_{b\in\Theta_{bH}}\right)\right)$, which following the chain rule implies the following:

$$\frac{\partial s_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = \frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bP}}}\frac{\partial r_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}} + \frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bH}}}\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}}$$

Replacing the expression derived for $\frac{\partial r_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}}$ and solving for $\frac{\partial s_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}}$ we get

$$\frac{\partial s_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = \frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bH}}}\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}} \times \left(1 + \frac{1}{\beta_1\left(1-s_{fb\in\Theta_{bP}}\right)^2}\frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bP}}}\right)^{-1}$$

From standard logit properties, we have $\frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bP}}} = \beta_1 s_{fb\in\Theta_{bP}}\left(1-s_{fb\in\Theta_{bP}}\right)$ and $\frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bH}}} = -\beta_1 s_{fb\in\Theta_{bP}} s_{fb\in\Theta_{bH}}$ or considering that there are only two types of banks that are symmetrical $\frac{\partial s_{fb\in\Theta_{bP}}}{\partial r_{fb\in\Theta_{bH}}} = -\beta_1 s_{fb\in\Theta_{bP}}\left(1-s_{fb\in\Theta_{bP}}\right)$. Moreover from previous results, we obtained $\frac{\partial r_{fb\in\Theta_{bH}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = \lambda_{b\in\Theta_{bH}}\left(1-s_{fb\in\Theta_{bH}}\right)$. Replacing all the terms we get:

$$\frac{\partial s_{fb\in\Theta_{bP}}}{\partial \underline{K}_{b\in\Theta_{bH}}} = -\beta_1 s^2_{fb\in\Theta_{bP}} s^2_{fb\in\Theta_{bH}} \lambda_{b\in\Theta_{bH}}$$

Finally, replacing into $\frac{\partial r_{fb\in\Theta_{b^P}}}{\partial \underline{K}_{b\in\Theta_{b^H}}}$ and simplifying gives:

$$\frac{\partial r_{fb\in\Theta_{b^P}}}{\partial \underline{K}_{b\in\Theta_{b^H}}} = \lambda_{b\in\Theta_{b^H}} s^2_{fb\in\Theta_{b^P}}$$

Third, we get

$$\frac{\partial r_{fb\in\Theta_{b^H}}}{\partial \underline{K}_{b\in\Theta_{b^H}}} - \frac{\partial r_{fb\in\Theta_{b^P}}}{\partial \underline{K}_{b\in\Theta_{b^H}}} = \lambda_{b\in\Theta_{b^H}} s_{fb\in\Theta_{b^P}} s_{fb\in\Theta_{b^H}}$$

Since $0 \leq s_{fb\in\Theta_{b^H}} \leq 1$, $0 \leq s_{fb\in\Theta_{b^P}} \leq 1$, and $\lambda_{b\in\Theta_{b^H}} \geq 0$, the expression is non-negative. Furthermore, under a binding constraint, $\lambda_{b\in\Theta_{b^H}} > 0$, $s_{fb\in\Theta_{b^H}} \neq 1$, and $s_{fb\in\Theta_{b^P}} \neq 1$, the derivative should be positive. □

Proposition 2. An increase in host-country capital requirements has a non-increasing effect on the market share of host-regulated banks relative to that of parent-regulated global banks. Specifically, the impact is:

$$\frac{dln\left(s_{fb\in\Theta_{b^H}}\right)}{d\underline{K}_{b\in\Theta_{b^H}}} = \beta_1 \lambda_{b\in\Theta_{b^H}} s^2_{fb\in\Theta_{b^P}} \leq 0$$

Proof. From the chain rule, we can decompose the derivative as follows:

$$\frac{dln\left(s_{fb\in\Theta_{b^H}}\right)}{d\underline{K}_{b\in\Theta_{b^H}}} = \frac{dln\left(s_{fb\in\Theta_{b^H}}\right)}{dr_{fb\in\Theta_{b^H}}} \frac{dr_{fb\in\Theta_{b^H}}}{d\underline{K}_{b\in\Theta_{b^H}}}$$

From the demand properties, we have:

$$\frac{dln\left(s_{fb\in\Theta_{b^H}}\right)}{dr_{fb\in\Theta_{b^H}}} = \beta_1 \left(1 - s_{fb\in\Theta_{b^H}}\right)$$

Substituting the term into the decomposition gives:

$$\frac{dln\left(s_{fb\in\Theta_{bH}}\right)}{d\underline{K}_{b\in\Theta_{bH}}} = \beta_1\left(1 - s_{fb\in\Theta_{bH}}\right)\frac{dr_{fb\in\Theta_{bH}}}{d\underline{K}_{b\in\Theta_{bH}}}$$

Similar to the proof of proposition 1, we can obtain the derivative of $\frac{dr_{fb\in\Theta_{bH}}}{d\underline{K}_{b\in\Theta_{bH}}}$. Replacing it into the previous expression gives:

$$\frac{dln\left(s_{fb\in\Theta_{bH}}\right)}{d\underline{K}_{b\in\Theta_{bH}}} = \beta_1\lambda_{b\in\Theta_{bH}}\left(1 - s_{fb\in\Theta_{bH}}\right)^2$$

Under a downward-sloping demand curve, $\beta_1 < 0$, the expression is non-negative as $\lambda_{b\in\Theta_{bH}} \geq 0$. Thus, with a binding constraint, $\lambda_{b\in\Theta_{bH}} > 0$, and $s_{fb\in\Theta_{bH}} \neq 1$, the derivative is negative. □

A.4 Additional Exercises

In this Appendix section we provide a set of different complementary results. Subsection A.4.1 presents evidence on the heterogeneous demand for parent-regulated global bank credit, using cross-sectional variation in firms' exposure to exchange-rate depreciation. Subsection A.4.2 provides evidence of parallel pre-trends for the organizational transition event study.

A.4.1 Heterogeneous Firm Borrowing

Our analysis focuses on the extensive margin of borrowing from a parent-regulated global bank and the share of dollar-denominated loans that they obtain from parent-regulated global banks. We exploit the cross-sectional variation in firms' exposure to exchange rate depreciation. More precisely, we estimate the following regression:

$$s_{ft}^{GBR} = \phi \times Exposed\ to\ FX_{ft-1} + X\beta + \epsilon_{ft}$$

where s_{ft}^{GBR} represents the share of the loans that firm f maintains with parent-regulated global banks at time t. $Exposed\ to\ FX_{ft-1}$ is the regulatory measure reported by host-regulated banks that denotes whether firm f is considered as exposed to exchange rate depreciation at time $t-1$. ϕ captures the average difference between the share of dollar-denominated funding from parent-regulated global banks between firms exposed and non-exposed to exchange rate depreciation. X includes the industry-time fixed effects and firm-level controls such as export status, credit rating, and the share of dollar borrowing.

Table 13 summarizes the findings in Columns (1)-(2) and (5)-(6). The results indicate that firms exposed to exchange rate depreciation exhibit a 6% higher likelihood of borrowing from global banks and a 2.5% greater share of dollar-denominated funding obtained from these institutions. Notably, the relationship holds even when we include the riskiness of the credit rating and the share of borrowing that is dollar-denominated. The significance after adjusting for dollar borrowing indicates that the effect arises from actual exposure to currency depreciation, not merely from carrying dollar debt.

Consistent with our hypothesis, we should expect firms to rely more on parent-regulated banks during periods of pronounced exchange-rate depreciation. The depre-

ciation makes the constraint more binding, increasing firms' incentive to seek parent-regulated credit. Within our sample period, we identified two years of significant exchange rate depreciation: 2020 and 2021. Over such years, the average annual exchange rate depreciation was 5.1% in 2020 and 11.1% in 2021, while for the remaining years, the depreciation was under 1.5%. These years were characterized by a combination of the Covid-19 crisis shock and political uncertainty surrounding an electoral period. Both episodes came as a surprise to financial and non-financial firms, whose predictions at the start of the year pointed to an appreciation of the local currency.

Using the identified years as periods of high depreciation, we split the sample to assess whether these years are driving our estimates. The results, shown in Columns (3)-(4) and (7)-(8) of Table 13, confirm that the high depreciation years are precisely the ones in which the relationship is stronger. This pattern is consistent with borrowers moving to less-constrained lenders in order to circumvent the regulation impact.

Overall this suggests that host-regulated banks not only lose market share, but also might be impacted by a risk externality: by funding firms exposed to exchange rate, parent-regulated global banks increase those firms' exchange rate risk, thereby elevating the default risk on host-regulated banks' pre-existing dollar loans. Thus, a potential unintended consequence of the rise of parent-regulated bank lending is that it could reduce the effectiveness of prudential policy and create hidden risk from host oversight.

Table 13: Heterogeneous Borrower Response

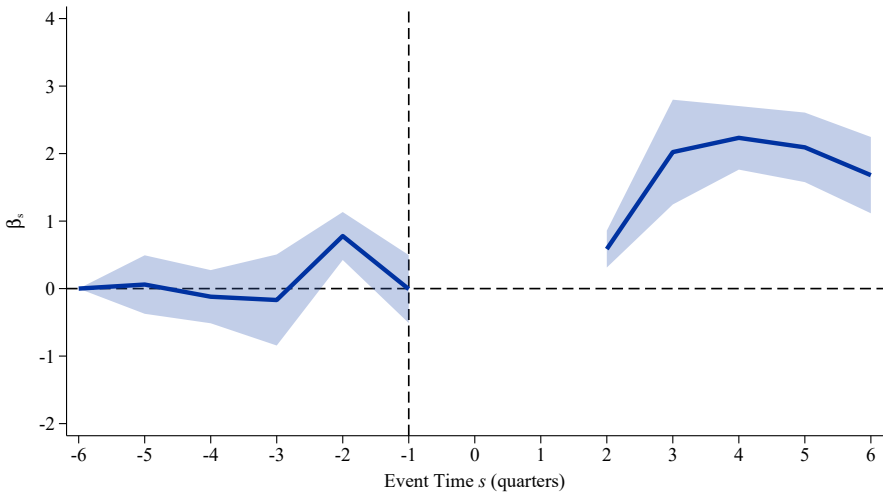
	$I(s_{ft}^{GBR} > 0)$*100				s_{ft}^{GBR}*100			
	All periods		High FX depreciation	Low FX depreciation	All periods		High FX depreciation	Low FX depreciation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exposed to $FX_{f,t-1}$	6.958***	5.362**	8.288***	4.224*	2.154***	2.032*	4.114**	1.155
	(4.61)	(2.45)	(2.84)	(1.84)	(3.11)	(1.89)	(2.45)	(1.08)
Industry × Quarter FE	✓	✓	✓	✓	✓	✓	✓	✓
Firm controls		✓	✓	✓		✓	✓	✓
Num obs	9,149	7,498	2,442	5,047	9,149	7,498	2,442	5,047

Note. This table presents the results of estimating $s_{ft}^{GBR} = \alpha_{st} + \phi \times \text{Exposed to FX}_{ft} + X\beta + \varepsilon_{fbt}$, where s_{ft}^{GBR} represents the share of the loans that firm f maintains with parent-regulated global banks at time t, Exposed to FX_{ft} is the regulatory measure reported by traditional banks that denotes whether firm f is considered as exposed to exchange rate at time t. X includes the industry-quarter fixed effects and firm-level controls. Alternatively, we measure the riskiness of the firm by using its credit risk classification. Economic sector is 4-digit ISIC. Robust standard errors are clustered by firm. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

A.4.2 Switching Status of a Representative Office

We explore the pre-trends in interest rates around the point at which the intermediary switches from a representative office to a foreign subsidiary.

Figure 9: Interest Rates Evolution of Intermediary Switching Status



Note: This figure shows the $\widehat{\phi}_t$ estimates obtained from $r_{fbt} = \phi_t \cdot I_b \times Switch_t + \eta_{ft} + X\beta + v_{fbt}$, where r_{fbt} is the interest rate. I_b is a dummy variable equal to 1 for the institution involved in our event study, and 0 otherwise. $Switch_t$ is a dummy variable equal to 1 if the period is after the change in organization status, and 0 otherwise. In quarter 0, the transitioning institution was not operating, and in quarter 1 no firm in our sample received credit from it.