NBER WORKING PAPER SERIES

CULTURAL STEREOTYPES OF MULTINATIONAL BANKS

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Working Paper 30710
http://www.nber.org/papers/w30710

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
December 2022, revised May 2024

Part of this work was undertaken while Orkun was visiting UC Berkeley, whose hospitality is gratefully acknowledged. In addition to participants at various conferences and seminars, we especially thank our discussants, Michela Altieri, Thorsten Beck, Matteo Crosignani, Claudia Girardone and Alberto Manconi as well as our colleagues, Bo Becker, Michael Ben-Gad, Matilde Bombardini, Travers B. Child, Rui Esteves, José M. Martín Flores, Yuriy Gorodnichenko, Jens Hagendorff, Sean Higgins, Gergely Hudecz, Matti Keloharju, April Knill, Nicola Limodio, Camelia Minoiu, Sergey Mityakov, Andrea Presbitero, Vesa Pursiainen, Paola Sapienza and Guo Xu for helpful comments. Uğur Buğra İlhan and Max Elias Buchs provided valuable research assistance. All interpretations, errors, and omissions are our own. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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JEL No. F0,G0

ABSTRACT

Cultural trust biases (i.e., stereotypes) play an important role in shaping multinational banks' cross-border exposures. Combining European regulatory data on banks' sovereign debt portfolios with existing and new surveys across 30 European countries, we show that multinational banks are more likely to lend to the government of a country when the residents of the countries where they operate exhibit more trust in the residents of that country. This result is robust to saturating our models with time-varying fixed effects at bank and country-pair levels, controlling for financial, informational, political and cultural linkages, and instrumenting trust via genetic and somatic similarities. Bank-level trust similarly drives corporate lending across borders and tilts banks' sovereign portfolios towards long-term maturities. Its role is amplified when governments are hit by salience shocks such as Eurozone crises and the Brexit referendum. As potential transmission channels of stereotypes from foreign bank branches to headquarters, we provide evidence consistent with internal transfers of culturally biased information and human capital.

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1. Introduction

Financial markets run on trust and stumble in its absence. Complete contracts are a textbook abstraction. Legal adjudication is time consuming and unpredictable. For transactions to be sustained, counterparties must be trusted (Arrow, 1974). This is why the historical accounts observe concentrations of commercial and financial transactions among individuals with common cultural backgrounds who share extra-economic links, values and trust (see e.g. Greif 1989, 1991). Despite advances in technology enhancing the availability of hard information, it is plausibly why cultural distance between nations is associated with less frequent corporate acquisitions (Kogut and Singh, 1988), diminished bond/equity issuance by firms (Siegel, Licht & Schwartz, 2011), lower syndicated bank loans (Giannetti and Yafeh, 2012), reduced merger volumes (Ahern, Daminelli and Fracassi, 2015), and smaller institutional portfolio holdings across borders (Karolyi, 2016).

In this paper, we show that cultural trust biases (i.e., stereotypes) play an important role in shaping multinational banks' cross-border investments. We combine regulatory data on banks' investments in European sovereign debt with existing and newly collected survey data for 30 European countries on how much residents of European nations trust one another. By exploiting branch networks, we construct bank-specific measures of trust that differ across target countries of potential investment and implement an identification strategy that simultaneously exploits within country-pair-time variation and within bank-time variation. This enables us to abstract from potential confounders at the country and bank levels.

Specifically, when the residents of the countries where a multinational bank operates exhibit higher trust in the residents of another country, a bank is more likely to hold sovereign claims on that other country. This relationship holds both when we focus on whether a bank holds any bonds of the country in question and, alternatively, when we focus on a continuous measure of the value of bonds held by the bank. We present several suggestive but distinct pieces of evidence for both an information and a human capital channel of cultural transmission within banks to justify our bank-level measure of trust. In particular, our results are consistent with local branch managers' tendency to communicate biased information up in a bank's hierarchy, and with banks' tendency to hire *internally* across borders for high-level managerial positions.

To our knowledge, this is the first evidence of the transmission of cultural biases via banks' branch networks and of their role in bank lending to governments.[2]

Sovereign bonds are incomplete contracts, as amply demonstrated by the history of default, restructuring and repudiation. Multiple countries make for multiple courts with uncertain jurisdiction. Governments enjoy a degree of sovereign immunity, casting doubt on the existence of judicial solutions. Such considerations may heighten reliance on trust as an alternative to legal contract enforcement. Such cultural stereotypes, defined in our context as how trustworthy the residents of one nation view the residents of another, apply directly to sovereign bonds, since these are claims on governments representing specific nationalities.

As motivation, we consider the correlation between average levels of bilateral trust between countries on the one hand and banks' cross-border sovereign debt portfolios on the other. We utilise both historic data from Eurobarometer and newly collected survey data to capture how much residents of one country trust the residents of another. We control for various observable relationships between the bank's home country and the target country of investment, such as geographical distance between their capital cities and past merger behaviour between their banks. The results confirm that country-level bilateral trust is highly correlated with cross-border bank investment.

The limitation of such country-level evidence – which is why we relegate it to an online appendix – is that average levels of trust are almost certainly to be correlated with unobserved characteristics of country pairs.[3] To rule out such latent factors, we construct a bank-specific

[2] In popular usage, the word "stereotype" is often invoked in derogatory context: a stereotype is a fixed image of a type of person but also an oversimplified and misleading image. We do not take a stance on the oversimplified and misleading part. What is important for our argument and analysis is the time-invariant nature of the image, as well as its variation across different viewers. Alternate usage might be the term "bias," defined as a tendency to feel or show inclination for or against someone or something. However, this term is similarly invoked in derogatory context, as a tendency to prejudicially show inclination for or against someone or something. Again, we do not take a stance on the prejudicial part. Bordalo, Gennaioli and Shleifer (2018) use the somewhat more convoluted term "diagnostic expectations" to avoid these implications.

[3] This creates an empirical challenge that the previous literature has long been aware of. In one of the first quantitative studies of cultural distance and cross-border firm outcomes, Kogut and Singh (1988) conclude: "Unquestionably a scale measuring the cultural characteristics at the firm level would be preferable. Yet, the collection of such data appears formidable at this time." (page 427).

measure of trust.[4] Our main analysis thus focuses on banks operating in and lending to multiple countries. It assigns to bank branches operating in a country that country's trust biases towards other countries. We aggregate this measure to the bank level by calculating a weighted average, where weights are the share of host-country branches in the network of the multinational bank. We do this for each target country, across which host-country trust biases differ. Our measure of bank-level trust biases is therefore specific to both the bank and target country of potential investment.

This framework has advantages from the vantage point of identification. Trust in a potential country of investment differs across banks headquartered in the same country insofar as they have branches in different countries or in different proportions. By focusing on this within-country-pair variation, we can insulate our estimates from structural factors at the country-pair level, such as geographical distance and common language. We can do so even when such latent factors vary over time, since our strictest specification includes fixed effects at *country-pair x time* level. This allows us to compare the exposures towards the same target country by the banks headquartered in the same home country at the same point in time, thereby ruling out country-level confounding factors.

Banks hold sovereign bonds for different reasons. Some hold them for trading with clients (Duffie 2010). Others hold bonds of risky sovereigns because they are confident of being bailed out by the authorities (Admati and Hellwig 2013). Still others purchase government bonds as the price of obtaining other advisory, cash-management or investment-management mandates.[5] Insofar as motives and behaviours differ across banks, bank fixed effects will pick them up. Insofar as they differ over time, we can control for such variation by including *bank x time* fixed effects. We consequently exploit the variation across different target countries for the same bank at the same point in time, shielding our estimates against time-varying omitted shocks operating at the bank level.

[4] We are aware of the problem of anthropomorphism – that banks, as financial institutions, do not have feelings such as trust. Rather, trust is a feeling or value evinced by bank employees and by the executives and boards of directors to whom they report. We try to keep this distinction in mind in what follows, although for ease of exposition we sometimes refer to the "trust of a bank" toward a government or a country.

[5] On competition for mandates more generally, see Ljungqvist, Marston and Wilhelm (2006).

When a bank has more positive cultural trust bias towards a target country, it is more likely to hold its sovereign debt. The relationship is stable over more than a decade. It is economically important: a one standard deviation rise in bank-level trust bias increases the probability of investing in a target country by 14 per cent. For a bank that would otherwise, following the dictates of capital-asset pricing theory, hold the market portfolio of sovereign bonds, this accounts for one third of the observed diversification gap of 42 per cent in our sample.[6]

While trust operates across the whole maturity structure of sovereign exposures, higher trust is more strongly associated with holding longer maturity debt, thus tilting banks' sovereign portfolios towards the long-term investments. Intuitively, when trust is high, banks are more inclined to make long-term investment commitments. When it is low, they prefer the option value of exiting without losses and are therefore more inclined to hold short-maturity debt.

Our findings hold for alternative definitions of trust and are evident for both large and small banks.[7] Placebo tests confirm that they are not mechanically created by the properties of our empirical setting. They are not driven by domestic (i.e., home-country) exposures, exchange rate fluctuations, observations for relatively weak countries of investment, or banks headquartered there. Cultural stereotypes based on the geography of bank branches are not picking up the direct influence of branches on sovereign debt investments.[8] Using data from the European Central Bank's Single Supervisory Mechanism (SSM), we document that our results are not driven by the heterogeneity in local supervision of these banks. By controlling for a large vector of characteristics at the bank-target-country level, we rule out the possibility that our bank-level measure of trust is picking up other financial, informational, political,

[6] That is, diversification gap can be considered as the difference between the case of full diversification and the unconditional mean observed in our sample (1 – 0.58 = 0.42). A simple asset pricing model with no frictions, such as Capital Asset Pricing Model (CAPM), would predict that the share of a sovereign exposure in each bank's debt portfolio should be proportional to the share of that sovereign's total debt in the sovereign debt market (Sharpe, 1964). By implication, this would require each bank to have at least some positive exposure to each sovereign in our sample, thus implying an unconditional probability of one.

[7] However, more sophisticated (i.e., diversified) banks are less likely to rely on trust as a determinant of their sovereign lending.

[8] The existence of branches in a country may contribute to more bank lending to the government of that country insofar as bank branches are a mechanism for information acquisition and dissemination within the bank (Saka, 2020). A bank with more branches in a country may have more information about that country, encouraging it to assume additional exposure. Our results are intact when we parametrically control for branch penetration in linear and non-linear ways; and, more conservatively, when we focus only on foreign target countries where none of the compared banks has branch presence.

geographical or institutional linkages between banks and target countries.[9] Our results carry over when we instrument trust with the standard measures of genetic and somatic similarities between nations. Trust remains significant even when we control for cultural distance in our regressions. This justifies the presumption that stereotypes have a distinct relationship with cross-border exposures that cannot be fully explained by cultural proximity between banks and target countries.

In our baseline results, we use Eurobarometer data on bilateral trust of the residents of 15 European countries in 1996. That this same dataset is used by previous investigators facilitates comparisons.[10] Use of these data can also be justified on the grounds that trust depends on deep-seated factors that do not change significantly over time. Nevertheless, we also conduct, expressly for this paper, a new nationally-representative survey of the residents of 30 European countries in 2022. Responses to the two surveys conducted a quarter of a century apart are strongly correlated, consistent with the presumption that bilateral trust between nations depends on deep-seated cultural factors and results in strong persistence in attitudes. Conducting this new survey enabled us to gather responses for additional 15 European countries. Reassuringly, results carry over to this expanded sample, confirming the external validity of our findings.

One may question whether the cultural stereotypes we detect in banks' sovereign lending decisions also apply to other cross-country credit exposures. To address this, we collected cross-border corporate sector exposures disclosed by EBA. We again find a positive relationship between bank-specific trust towards a target country and bank lending to its corporations. This is consistent with evidence in Giannetti and Yafeh (2012) and Hagendorff, Lim and Nguyen (2023), who document how culture plays a role in the syndicated loan market. This result supports the external validity of our bank-specific measure of trust and its applicability to other settings.

[9] These bank-level relationships are constructed in the same way that we measure the bank-level trust bias towards a target country; that is, we take the host countries' attributes (e.g., political relationship) vis-à-vis the target country and compute a weighted average for each bank-target-country pair by again using bank branches in host countries as weights.

[10] See, among others, Guiso, Sapienza and Zingales (2009); Bloom, Sadun and Van Reenen (2012); Bottazzi, Da Rin and Hellmann (2016) and Pursiainen (2022).

We use two event studies in order to examine how time-varying shocks that increase the salience of trust stereotypes amplify the role of trust in banks' sovereign lending decisions. First, we focus on the Eurozone crises surrounding the "whatever it takes" speech of Mario Draghi on 26 July 2012 and test for the differential impact of trust when target governments were hit by negative shocks in the sovereign debt market. Second, we focus on the episode surrounding the Brexit referendum in United Kingdom on 23 June 2016 and test for the differential impact of trust on EU banks' exposures toward UK in the post-referendum period. In both cases, we find evidence that salience shocks amplify the effect of trust biases on banks' sovereign exposures.

In the penultimate section, we rationalise our bank-level measure of cultural trust using a framework of banks as hierarchies. In this framework, cultural stereotypes shape the soft information transmitted by subordinates up the hierarchy to headquarters, where the broad parameters guiding portfolio investment decisions are set. Although we cannot directly observe confidential information sharing between bank branches and headquarters, we employ the global dataset on earning call sentiments of Hassan, Schreger, Schwedeler, and Tahoun (forthcoming) to document a positive and significant correlation between the country-specific tone in corporate managers' public communication and trust biases held by the residents in their country.

A complementary way of rationalising our bank-level measure is by focusing on how information sent from branches in host countries is received by directors at bank headquarters, insofar as the latter share the same stereotypes. The existence of shared stereotypes reflects the extent to which banks hire and promote internally across borders, such that the composition of bank boards and officers mirrors the geography of the bank's branch network. We provide empirical support for this framework, showing that foreign branch networks significantly predict the national composition of high-level managerial teams at bank headquarters including executive board and board of directors.[11]

[11] These results can also be interpreted as consistent with banks' optimal branch expansion decisions, in return reflecting their own ex-ante culture determined by the high-level managerial teams. This is similar in spirit to the setting in Hagendorff, Lim and Nguyen (2023), where banks may endogenously match with CEOs that best reflect the change in their corporate culture.

Europe is a natural laboratory for testing these ideas. Its Single Market poses few economic or regulatory barriers to cross-border investment for which one otherwise must control.[12] It has a European Banking Authority and a Single Supervisory Mechanism providing information on cross-border exposures and ensuring consistent application of regulations and supervisory policies. Levels of trust reported by residents of one European country in another vary widely. Qualitative accounts from the euro crisis and the Greek sovereign debt crisis emphasize trust or lack thereof – of, inter alia, Germans in Greeks, and Greeks in Germans – as complicating orderly resolution.[13] The fact that European banks held Greek government bonds, and that those holdings were concentrated in the portfolios of some countries' banks but not others, complicated efforts to resolve the crisis. If cultural biases had an effect on these investment decisions and crisis-resolution efforts, it is important to recover their role.

The findings have implications for interpreting financial allocations. Recall that we are focusing on the sovereign debt markets, where lender-borrower interactions are not relational and default tends to be across the board. Insofar as trust-induced differences in portfolio decisions across banks have nothing to do with the fundamental risk-return trade-off of investing in the target country but simply reflect cultural stereotypes held by that bank's employees and board, they are likely to indicate divergences from optimal portfolio allocations.

A further implication relates to how banks should think about the composition of managerial teams. In our framework, biases transmitted by the bank managers of different nationalities cut in different directions. If cultural biases matter, and if their influence is partially imposed via national composition of managerial teams, then diversity in bank management could bring a

[12] This is especially true for sovereign exposures, which are the focus of our paper. European banks are exempt from requirements to hold additional capital against their sovereign exposures to EU member states. European Systemic Risk Board (2015), p.15 describes the relevant history. Hence regulatory treatment of sovereign exposures that we use in our sample is mostly homogenous across countries and sample period.

[13] Thus, in March 2015 Reuters quoted German Finance Minister Wolfgang Schaeuble as saying that "the new Greek government (led by Syriza) had "destroyed all the trust that had been rebuilt" by its predecessors. A subsequent article also by Reuters, describes a German parliamentarian refusing to support financial assistance for Greece, saying "he has lost all trust in the Athens government…"

more balanced view of potential investments and consequently a more efficient portfolio allocation.[14]

Following a review of literature in Section 2, we describe our data and model in Sections 3 and 4. In Section 5 we present our findings. Section 6 develops a framework of banks as organizational hierarchies and presents suggestive evidence for potential mechanisms. Section 7 concludes.

2. Literature

Our paper is related to several literatures. First, there is research on trust and financial transactions.[15] Gennaioli, La Porta, Lopez-de-Silanes and Shleifer (2022) show that the incidence of insurance claims and their dispute, rejection and payment are affected by average levels of interpersonal trust in the country where the insurance is extended. Hagendorff, Lim and Nguyen (2023) examine the corporate loan market and find that lenders whose CEO comes from an ancestral country characterized by high levels of trust charge lower interest rates on U.S. syndicated loans.

In the context of cross-border transactions, a series of studies utilise measures of bilateral trust based on survey data from Eurobarometer. In a seminal paper, Guiso, Sapienza and Zingales (2009) show that more trust between countries is positively associated with levels of economic exchange such as trade, portfolio investment and foreign direct investment. Bloom, Sadun and Van Reenen (2012) find that more bilateral trust correlates with more decentralisation by multinational firms, which increases productivity. Bottazzi, Da Rin and Hellmann (2016) argue that the international investment decisions of venture capital firms are influenced by trust,

[14] Consistent with this view, a recent literature across social sciences documents the benefits of cultural diversity in increasing the informational quality of consensus decisions reached within group settings (see, among others, Herring, 2009; Levine, Apfelbaum, Bernard, Bartelt, Zajac and Stark, 2014; Page, 2019 and Merkley, Michaely and Pacelli, 2020).

[15] A related literature investigates the determinants of public trust in banks and financial institutions. Knell and Stix (2015) find that trust in banks is negatively related to individuals' direct experience with bank failures. Fungacova, Hasan and Weill (2017) use data for 72 countries from the World Values Survey to establish that women, the wealthy, the young, the religious, and individuals with pro-market economic views place most trust in banks. Other studies consider the consequences of such trust for individuals and banks themselves. Analyzing survey data from five Central European countries, Stix (2014) finds that individuals with less trust in banks have a stronger preference for cash relative to savings accounts. Bachas, Gertler, Higgins and Seira (2021) show that debit cards can help individuals build trust in their banks by more easily having access to their accounts.

especially in the case of early-stage investments. Pursiainen (2022) recently finds that stock recommendations are biased in favour of firms in countries more trusted by residents of the equity analyst's home country, again as measured by Eurobarometer.

As shown in our online appendix, similar country-level results carry over to the present case of bank holdings of sovereign bonds. But our analysis departs from these earlier studies in that we construct measures of trust at the individual bank level. We show that bank-level trust shapes bank lending to sovereigns even after controlling via fixed effects for unobservables that may vary across country pairs and over time.

Second, there is a literature on cultural proximity and international investments. Kogut & Singh (1988) examine how cultural distance, captured by cultural indices of Hofstede (1980), shapes foreign firms' choice of entry mode to US. Siegel, Licht and Schwartz (2011) employ the concept of egalitarianism constructed by Schwartz (1994) to show that bond and equity issuance is lower between nations differing on this dimension. Constructing cultural proxies from the World Values Survey, Giannetti and Yafeh (2012) find that greater cultural distance between the countries of a borrower and lender leads banks to offer borrowers smaller (and more expensive) loans, whereas Ahern, Daminelli and Fracassi (2015) conclude that cultural distance reduces merger activity across borders. Finally, Karolyi (2016) documents the negative association of cultural distance with institutional portfolio holdings.[16]

Our focus is trust, not cultural distance or other cultural proxies such as language. Controlling separately for cultural distance, we document the unique role that trust plays in bank lending to governments (which has not been studied before). In addition, we highlight the acquisition

[16] In addition, a large literature measures cultural proximity using the commonality of different indicators across countries. Grinblatt and Keloharju (2001), cited above, find that investors are more likely to buy, hold and sell the stocks of firms located close by, that communicate in an investor's native language, and that have CEOs of their ethnic background. Sarkissian and Schill (2004) show that firms prefer listing their stock in the stock markets of countries that are culturally close (proxied by language or colonial legacy) to their home country. Mian (2006) documents that greater physical distance between a foreign bank's headquarters and local branches depresses lending by the latter. Using data from an Indian bank, Fisman, Paravisini and Vig (2017) find that cultural distance between borrower and lender, as captured by religion and caste, reduces the quantity of credit. Accetturo, Barboni, Cascarano and Garcia-Appendini (2023), using data from South Tyrol, where two cultural and linguistic groups, German and Italian, co-exist by law, show that firms are more likely to apply for loans from culturally- and linguistically-proximate banks.

and diffusion of cultural traits through branch networks and informational/ managerial flows within multinational banks.[17]

Third, there is the literature on the determinants of banks' sovereign exposures. Broner, Martin and Ventura (2010) show that the value of government bonds may depend on which banks hold these assets, since governments are less likely to default if local banks are expected to suffer adverse consequences. Sovereign bonds tend to move from foreign- to domestic-bank portfolios in times of crisis in anticipation of these incentives. Other scholars observe that governments engage in financial repression by forcing banks in their jurisdiction to hold domestic government bonds; this aggravates home bias in banks' sovereign debt portfolios.[18] Undercapitalisation and risk shifting also may explain banks' sovereign exposures specifically in crisis periods (Acharya and Steffen, 2015; Crosignani, 2021). More broadly, information asymmetries limit the diversification of banks' sovereign debt portfolios (Saka, 2020; De Marco, Macchiavelli and Valchev, 2021).

Our paper points to an additional determinant of banks' sovereign lending decisions not analysed previously. It shows that cultural stereotypes play a role in the composition of sovereign debt portfolios in normal times and have an especially powerful role when governments encounter financial or political turbulence.

3. Data

Our data on bank-level debt portfolios is from the European Banking Authority (EBA). EBA first provided these disclosures in 2010 in response to the Eurozone debt crisis. Subsequently it provided information at the consolidated parent-bank level biannually. We collect these data from CEBS and EBA websites.[19] **Appendix Table A.1** documents the dates of each disclosure

[17] See Fisman and Miguel (2007) for how cultural norms spread when legal environment is muted; Fernández and Fogli (2009) for the diffusion of culture in the domains of individual work and fertility.

[18] Such "moral suasion" by governments toward domestic banks has been investigated in the context of the Eurozone debt crises (see, among others, Becker and Ivashina, 2017; Ongena, Popov and van Horen, 2019).

[19] As the predecessor of the EBA, the Committee of European Banking Supervisors (CEBS) comprised of senior representatives of bank supervisory authorities and central banks of the European Union. The 2010 exercise was undertaken by CEBS and made public by national regulators; however EBA does not provide the related data on its website. Hence, we obtain this first disclosure from the Peterson Institute for International Economics (PIIE), while all other data sets are manually accessed via the EBA.

alongside information on how many banks were included and which year-quarters sovereign portfolio information relates to.

Not all banks provide the full breakdown of their sovereign bond portfolios. In particular, the 2016 and 2017 exercises (derived from the regulatory FINREP data at EBA) required banks to disclose country breakdowns only if they had more than 10% non-domestic exposures in their sovereign debt portfolios.[20] In addition, 12 banks in 2016 reported to EBA on individual basis and thus did not provide a country breakdown. The introduction of EBA's COREP data disclosure framework from 2018 onwards has not only increased the coverage of banks with sovereign breakdowns but also brought finer granularity.[21] For each disclosure exercise, we thus consider banks that report the country breakdown of their sovereign portfolio and drop those reporting aggregate information.[22] In total, there are 14 different exercises with balance-sheet information on 22 distinct year-quarters for 62 to 131 banks at each point in time.

Because banks open, merge and close, they must be traced over time.[23] To track and merge banks in a consistent manner, we use both Legal Entity Identifiers (LEI) provided by EBA in some of the disclosures as well as Google searches and enquiries via SNL Financial. The result is an unbalanced panel of 199 banks headquartered in 27 European countries across 22

[20] We show later that it is indeed banks that are under-diversified in their sovereign debt portfolios tend to rely more on trust in their lending decisions to sovereigns. Hence, exclusion of such banks in 2016 and 2017 biases our estimates towards failing to reject our null hypothesis.

[21] In the words of an EBA officer contacted via email: "Since 2016, data is exclusively based on supervisory reporting: the Transparency templates are therefore populated by the EBA using the data collected through the regular supervisory reporting data, without any additional reporting burden on the banks. As the reporting framework has changed and enhanced through the years, you may notice a consequent evolution of the Transparency templates. In particular, in 2016 the sovereign templates were based on FINREP data. In 2018, the introduction of sovereign data in COREP has allowed for a more granular disclosure, but also some discontinuity of the series with respect to the previous exercises."

[22] Below we confirm that our results are not driven by a particular period or set of periods. Our estimates are actually smaller precisely for the time period 2016-2018 when country composition of the banks' sovereign debt portfolios was hampered, consistent with the intuition that granularity is necessary for identifying the relationship between trust and bank lending to governments.

[23] The European banking industry went through a major consolidation during our sample period (Boer and Portilla, 2020). Hence, when banks in our sample merge, consolidate with a different parent bank, or go bankrupt, they drop from the sample, and new banks are added. We treat an entity as unchanged (even if its official name changes) unless it is acquired by another main entity or merges, creating an independent third entity.

periods.[24] These data distinguish holdings of sovereign bonds of 30 European countries.[25] To our knowledge, this is the only dataset in which the breakdown of sovereign debt portfolios can be systematically traced over time for a large panel of banks.[26]

We merge these bank-level data with country-level surveys of bilateral trust from Eurobarometer. This restricts the banks' home and target observations to 15 European countries.[27] The result is an unbalanced sample of 159 banks whose debt portfolios can be observed over 22 year-quarters. For the analysis of bank-level trust, the sample further reduces to 108 banks, for which we can observe European branch networks on SNL Financial.[28] The outcome variable is constructed using the "Gross Direct Long Exposures" definition, the only category consistently found across all EBA and CEBS disclosures.[29]

Information on bilateral trust is gathered from two distinct sources collected more than a quarter century apart: Eurobarometer, and a new large-scale nationally-representative survey across 30 European countries undertaken expressly for this paper.[30] The specific question included in the early editions of Eurobarometer and in our new survey is: "*I would like to ask*

[24] Countries (which will later be referred as "home countries") are Austria, Belgium, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden and the United Kingdom.

[25] Most disclosures provide the full country breakdown of each bank's sovereign debt portfolio for up to 200 countries. In order to establish consistency across disclosures, only the exposures to 30 European countries are included in the sample. These (which will later be referred as "target countries") are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom. Another reason for restricting target countries is that our main independent variable, cultural trust bias, is derived from Eurobarometer surveys and is only available across 15 of these European countries. Robustness checks with a more comprehensive and recent survey of our own consider all 30 European countries and produce qualitatively similar results.

[26] An earlier version of this dataset (up to year 2015) is used in Saka (2020). Similar information can be found in the proprietary data set at the European Central Bank (see Ongena, Popov, and Van Horen, 2019). However, compared to EBA data, ECB cover banks from a smaller subset of countries (only for Eurozone) and provide only a broad classification of countries represented in sovereign debt portfolios (that is, domestic vs. foreign) instead of full country-breakdowns. Since our identification strategy builds on variation across foreign exposures, the EBA dataset is ideal for our setting.

[27] These are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, and United Kingdom. See **Appendix Table A.4**.

[28] A full list of banks used in country-level or in bank-level analyses (those with branch information available) alongside the dates on which their sovereign portfolio information is available is in **Online Appendix F**.

[29] We manually collect additional data from EBA on corporate exposures as well as the maturity breakdown of sovereign exposures. These details are only available for a subset of banks and disclosure exercises.

[30] See **Appendix Table D.1** for the country and respondent composition of our new survey.

you a question about how much trust you have in people from various countries. For each, please tell me whether you have a lot of trust, some trust, not very much trust, or no trust at all." Following Bloom et al. (2012) and Pursiainen (2022), we focus on the last Eurobarometer survey wave (i.e., 1996) when this question was asked. Our benchmark definition of country-level bilateral trust corresponds to the percentage of people in a home country expressing "a lot of trust" towards people in a target country.[31] For our bank-level trust measure, we combine this country-pair-level data with branch networks of each bank, generating a time-invariant proxy of trust between each bank and each of these 15 (30) target countries when employing Eurobarometer (our new survey).

Data on branch networks of banks across European countries as a single snapshot are from SNL Financial (as of February 2016).[32] As a control variable in the country-level analysis, we compute the total number of bank branches in the target country of a bank that ultimately belong to a parent bank located in its home country.[33] For a sub-sample of banks included in EBA disclosures, we can directly associate bank branches at the bank-target-country level, which is what we use to construct both the measure of bank-level trust biases and the control variable employed in the bank-level analysis.[34]

Information on the construction of other variables and data sources is in **Appendix A**. Summary statistics for the main analysis in the paper are in **Table 1** and those for the country-

[31] Our results are robust to alternative definitions such as that adopted by Guiso et al. (2009), which grades individual responses from 1 to 4 and then aggregates at country-pair level. A summary of trust measures between home and target countries can be found in **Appendix Tables A.4-A.5** for Eurobarometer and in **Tables D.2-D.3** for the new survey.

[32] This is the earliest date we can access a snapshot of bank branch networks via SNL Financial. SNL does not provide time-series information for branch networks and, to our knowledge, there is no other publicly available dataset that does so.

[33] We aim to capture here the intensity of exchange of financial information between the two countries. This measure is created by taking all ultimate-parent banks located in 30 EEA countries in the SNL database, independent of whether the bank is included in EBA dataset. The purpose is to capture time-invariant banking linkages across countries. Hence, it is important to consider the full sample rather than only the restricted EBA sample. The results do not depend on this choice however. These data cover 137,284 bank branches in total, which is 92% of all bank branches (149,242) in these countries according to World Bank data for 2014.

[34] Aggregate bank branch flows between European countries are illustrated in **Appendix Figure A.1,** and bank-level branch penetrations for the ten largest multinational banks in our sample are mapped in **Figure A.2.** The subset of banks in our sample for which we can observe branch networks across Europe can be found in **Online Appendix F**. Note that this excludes from our bank-level analysis the European subsidiaries of all non-European banks (such as Bank of New York Mellon in Belgium) because we do not observe the branch networks of any of these non-European banks.

level analysis are reported in **Appendix Table B.1**. For the latter sample, the unconditional probability of exposure to a target country is 56%. Compared to a counterfactual with no frictions and full diversification in sovereign debt markets (i.e., unconditional probability=1), this implies a diversification gap of 44%. The corresponding gap for the bank-level sample is 42%, meaning that 42% percent of the time a bank has no exposure to the sovereign debt of a potential target country of investment. These gaps are consistent with the idea that sovereign debt market is far from frictionless. There is room, in other words, for factors such as trust to explain variations in banks' sovereign debt portfolios.

4. Empirical Model

We outline the empirical model and discuss the results of the country-level analysis in **Appendix B**. Our main analysis and contribution of the paper rests on the following bank-level specification:

$$\text{Sovereign Exposure}_{b,h,c,t} = \beta_1 \text{Bank-level Trust Bias}_{bc} + \beta_2 \text{Bank Branches}_{bc} + \beta_3 \gamma_{bt} + \beta_4 \lambda_{hct} + \varepsilon_{bhct} \quad (1)$$

where $Sovereign\ Exposure_{bhct}$ is a dummy variable for whether or not bank *b* of home country *h* has any positive exposure to target country *c* at time *t*.

We estimate linear probability models, which permits interpretation of our coefficients as marginal probabilities. A dummy variable provides several advantages (over a continuous one) in this setting. Because of the consolidated nature of EBA disclosures, we cannot distinguish between bonds purchased at headquarters and at subsidiaries. We therefore consider the extensive margin of sovereign exposures, since strategic decisions such as whether or not a bank should invest in a country are taken at bank headquarters. In addition, there is heterogeneity in sovereign debt valuation methods across disclosures, and some flexibility at the bank level in categorizing sovereign exposures as residing on the trading versus banking books, which in turn affects reported values. Such flexibility could lead to self-reporting biases for the continuous variable but is less likely to affect its extensive margin (Kaplow and Shavell

1994). Finally, since we do not observe currency denomination, exchange rate fluctuations can introduce variation in reported sovereign exposures in different currencies in the absence of active investment decisions.[35]

Bank-level Trust Bias$_{bc}$ is constructed by computing a weighted average of *Country-level Trust Bias* across host countries for each bank-target-country pair (*b, c*), where the share of host-country (*i*) branches in the branch network of the multinational bank is employed as weights:[36]

$$\text{Bank-level Trust Bias}_{b,c} = \sum_{i=1}^{n} \left(\text{Weight}_{b,i} \; x \; \text{Country Level Trust Bias}_{i,c} \right) \quad (2)$$

We define *Country-level Bilateral Trust* as the share of respondents in home country *h* expressing "a lot of trust" in target country *c*. These self-reported measures are then adjusted for country fixed effects, because some nationalities may be universally regarded as more trustworthy and respondents of some nationalities may universally trust foreigners more. In moving from *Country-level Bilateral Trust* to *Country-level Trust Bias*$_{hc}$ (the variable that appears in eq. 2), we therefore follow Guiso et al. (2009), Bloom et al. (2012) and Pursiainen (2022), running a gravity regression of bilateral trust for country pairs:

$$\text{Country-level Bilateral Trust}_{h,c} = \alpha_1 \theta_h + \alpha_2 \vartheta_c + \epsilon_{hc} \quad (3)$$

[35] Despite its drawbacks, we also consider the continuous exposure variable in robustness checks, employing the log of the nominal values (in million Euros) of sovereign lending reported by banks, and obtain qualitatively similar results.

[36] For instance, if a bank has 50% of its branches in country A and 50% in country B, then its trust bias towards country C is the simple average of trust biases in countries A and B toward country C. Recall that, in line with the notion of relatively permanent cultural stereotypes, this measure is time-invariant and constructed from a single snapshot of bank branch networks for each bank. Hence we do not have time variation in bank-level trust. That said, changes in branch networks tend to be very gradual. In addition, previous literature has emphasized the long-term stability of cultural stereotypes and used time-invariant measures to capture them (see e.g. Guiso et al., 2009; Bloom et al., 2012; Bottazzi et al., 2016; Pursiainen, 2022). As you will see later, our new survey from 2022 provides further evidence on the persistency of cultural stereotypes over time.

Residuals from this regression, after controlling for home country (θ_h) and target country (ϑ_c) fixed effects, capture the relative trust bias of home country *h* towards target country *c* (ϵ_{hc} = *Country-level Trust Bias*$_{hc}$).[37]

The identification strategy is depicted in panel A of **Figure 1**. We exploit the variation across banks (i.e., HSBC vs. RBS) headquartered within the same home country (i.e., UK) facing the same target country (i.e., Austria) at the same point in time because these multinational banks have subsidiaries in different countries (i.e., France and Ireland) and because residents of those host countries have different perceptions of the same target country.[38] Hence, saturating our specification with *home-country x target-country x time* fixed effects (λ_{hct} in eq. 1) absorbs all time-varying country-level variation in our outcome variable. For instance, if banks located in EU countries shift away from UK exposures after Brexit, this would be controlled for in our setting. Additionally focusing on *within-bank-time* (γ_{bt} in eq. 1) variation insulates our estimates from latent dynamics at the bank level, such as time-varying shocks to banks and changes in business models. If a bank shifts away from sovereign investments because it can lend more lucratively to corporates, for example, this will not affect our estimates so long as the bank-specific shift is the same across all target sovereigns.

We also control for the number of branches each bank has in a target country (*Bank Branches*$_{bc}$). This helps to distinguish the information channel (and, more broadly, direct financial linkages between banks and target countries), as highlighted by Saka (2020). In additional analyses, we exclusively compare banks' lending to target countries in which none of the banks considered have branches (e.g., in **Figure 1a**, dropping observations of investments in the UK, France and Ireland when comparing RBS and HSBC). We also control for indirect relationships between banks and target countries that may be sustained through host countries (e.g., HSBC – compared to RBS – being financially closer to Austria because France is financially better-linked to Austria than is Ireland). Finally, we control for various

[37] The resulting measure is illustrated in **Appendix Table A.5** for Eurobarometer and **Table D.3** for our online survey whereas the corresponding *Country-level Bilateral Trust* (in levels without the gravity adjustment in eq. 3) is reported in **Table A.4** and **Table D.2**.

[38] Domestic banks (i.e., Lloyds), on the other hand, do not add to our identifying variation as their treatment status only depends on the variation between home and target countries.

measures of cultural distance between banks and target countries to show that the role of trust cannot be fully explained by cultural differences.

We cluster standard errors by bank, given the possibility that the error term is correlated across target countries and time. Double clustering at country-pair and time levels or double clustering at country-pair and bank levels does not change the results.

5. Results

5.1. Baseline Results

Table 2 reports estimates of *Equation (1)* using a bank-level measure of trust biases. Column 1 includes a rich set of fixed effects but no other controls. Column 2 renders country-pair-specific controls redundant by adding *home-country x target-country* fixed effects. Columns 3-4 include controls for branch linkages between banks and target countries, both linear and non-linear. Column 5 saturates the model with *home-country x target-country x time* fixed effects. This limits the comparison to banks headquartered in the same country with exposures to the same government at the same point in time. It thereby enables us to disentangle the effect of bank lending supply, our concern here, from demand-side factors in the countries to which banks lend.

Estimates of the effect of bank-level trust bias are positive and statistically significant.[39] Point estimates grow larger as we add controls such as the number of bank branches and include country-pair fixed effects to capture other unobservables. The specification in Column 5 flexibly controls for country-level unobservables by allowing them to vary over time.[40] Here a one standard deviation rise in bank-level trust bias is associated with an increase of 14 per cent in the probability of investing in a target country. This is a large effect, accounting for one-third of the diversification gap (i.e., 42%) in banks' sovereign exposures or one fourth of the

[39] The baseline estimate in Column 1 is slightly larger than those estimates using country-level trust measures reported in **Appendix B**. However, elasticities (in response to one std. dev. change) are approximately equal (~12%) in both cases.

[40] Note that including *home-country x target-country x time* fixed effects shields our estimates against the possibility of home bias (i.e., banks generally holding higher sovereign debt of their home countries) even when such bias is heterogenous across countries and varying over time. Our estimates remain significant at conventional levels with double clustering at country-pair and time levels (see **Appendix Table C.1**) or at country-pair and bank levels (see **Table C.2**).

unconditional mean of the dependent variable (i.e., 58%). We reach similar conclusions when employing the logarithmic value (in millions) of banks' sovereign exposures (instead of a binary indicator) as the dependent variable in panel A of **Appendix Table C.3**. Here a one standard deviation rise in trust (based on column 5) is associated with more than 105% increase, more than doubling the volume of sovereign lending in a target country.[41]

Figure 2 plots the coefficients from separate estimates of *Equation (1)* over subperiods. The positive relationship between bank-level trust bias and sovereign exposures, whether measured as discrete (panel A) or continuous (panel B), is significant and stable despite the changes in bank coverage. This observation is consistent with the intuition that cultural biases persist over time. It rules out the concern that our estimates are driven by Eurozone crises in the early part of our period.[42]

Our results remain intact when we exclude domestic (i.e., home country=target country) observations in **Appendix Table C.5**. This further shields our estimates from the influence of home bias (i.e., banks disproportionately holding the sovereign debt of their home countries). Although our baseline specification controls for home bias at the country level by including country-pair specific fixed effects, one can imagine different degrees of home bias across different banks headquartered in the same country. However, when we exclude investments in the bonds of the home country, the association between cultural biases and foreign government exposures is if anything larger than indicated by the baseline estimates in **Table 2**.

Regulators may prevent banks from investing in countries in which they have little trust. They may discourage banks from investing in foreign government bonds as a way of encouraging them to invest in their own country's government bonds. However, we obtain similar results, as shown in **Appendix Table C.6**, when limiting the sample to banks overseen by the EU's

[41] Panel B of **Appendix Table C.3** presents the intensive margin estimates where exposures with zero value are excluded and reports qualitatively similar results.

[42] The reduction in the size of the coefficients in the period 2016 to 2018 (shaded in **Figure 2**) confirms that loss of granularity (due to changing reporting requirements during this period) in banks' sovereign exposures makes it more difficult to identify the effect of trust. EBA directly used regulatory FINREP reports during this period, which led to some banks not disclosing the country-breakdown of their sovereign exposures at all or reducing the granularity in these exposures (i.e., categorizing exposures below a certain threshold under the name "other countries"). In line with **Figure 2**, our point estimate in Column 5 of **Table 2** becomes approximately 12% larger when we drop FINREP disclosure dates from our sample (see **Appendix Table C.4**).

Single Supervisory Mechanism (SSM). Focusing on banks supervised by the SSM thus rules out the alternative hypothesis that we are picking up the cultural stereotypes of bank supervisors as opposed to bankers.[43]

Exchange rate risk could affect the decision to invest and thus the extensive margin of banks' sovereign exposures. Eurozone-headquartered banks may be inclined to invest in the bonds of Eurozone governments while refusing to invest in the local-currency bonds of other countries subject to exchange risk. In **Appendix Table C.7** we therefore include only banks headquartered in the Eurozone and target countries of investment that are members of the Eurozone. The results carry over.

Banks situated in the Eurozone's crisis countries – Greece, Italy, Ireland, Portugal, and Spain – were subject to financial problems at the beginning of our sample period, which could have affected banks' investment decisions. While **Figure 2** speaks against this concern by showing that our results extend beyond the crisis period, we can directly exclude both banks headquartered in these countries and their governments as potential targets for cross-border investment. There is again little change in our results (**Appendix Table C.8)**.[44]

Our empirical setting with banks' branch networks and a weighted computation of trust biases could conceivably be conducive to mechanically generating the results in **Table 2**. **Appendix Table C.12** therefore presents two placebo tests in which we randomly distribute observed branch networks either across banks located in the same home country (panel A) or across all banks in our sample (panel B). Both tests confirm the previous findings are not an artefact of our empirical setting.

[43] The SSM, housed in the ECB in Frankfurt, supervises more than 100 of the largest banks in Europe; the same supervisors apply the same rules and scrutiny to all of them. Since SSM started its operations in 2014, there has been limited time variation in terms of the number and identity of systemically significant banks that it supervises. Our results in **Appendix Table C.6** take this time variation into account although the results are very similar if we focus only on the initial set of banks that came under the supervision of SSM in 2014.

[44] In **Appendix Table C.9**, we substitute trust bias (**Table A.5**) with the trust measure in levels (**Table A.4**), considering the simple proportion of people in a country with "a lot of trust" toward another country aggregated at bank-level. **Table C.10** substitutes the *graded* cultural trust bias proxy employed in Guiso et al. (2009), which uses the full variation in survey respondents' answers ranging from 1 (i.e., "no trust at all") to 4 (i.e., "lot of trust"). In **Table C.11**, we use the *graded* proxy in levels without computing the residuals as in *Equation (3)*. Results carry over.

Including the number of bank branches does not affect the results in **Table 2**, as noted. Still, it is possible (despite our parametric controls) that a measure of bank-specific trust bias based on bank branches is picking up not the effect of trust but, rather, financial linkages with the target country of potential investment owing to branch presence. Relatedly, the same factors that convince a bank to expand its branch network to a country may lead it to purchase more debt of that country. **Table 3** therefore excludes target countries where a bank has any branch presence, shutting down this potential channel.[45] These estimates compare banks headquartered in the same country with regard to the same target country of investment, but only when none of the banks in question has branch presence in that target country. The estimated effect is larger, not smaller. Insofar as a bank's decision to expand its branch network to a foreign country is orthogonal to its investment in the government bonds of third countries, the results point to a causal relationship between bank-level trust and sovereign exposures.

The fact that banks operate in multiple countries may not only lead them to adopt the cultural traits of these host countries but also help them to establish financial, informational, political or other types of linkages via their host countries to other target countries. Including country-pair-level fixed effects does not rule out the possibility, for example, that banks combine information from multiple countries and that branch networks play a role in aggregating financial information, just as they do in aggregating cultural stereotypes. In **Table 4**, we therefore construct measures of such indirect linkages at bank-target-country level, focusing on branch penetration, historical merger activity, media coverage, political relationships, geographical distance, commonality of legal origins and religious similarity between host and target countries.[46] We construct these proxies in the same way as for bank-level trust bias, using a weighted average of host-country characteristics to aggregate at the bank-target-country level (à la *Equation (2)*). None of these variables is statistically significant when included as a control in **Table 4**. Estimates of bank-level trust bias and their statistical significance are stable across

[45] Note that this includes all types of bank presence in a country whether it is via subsidiaries or single branches.
[46] These variables are frequently used in gravity models of international economic exchange. See, for instance, Guiso et al. (2009) for media coverage, commonality of legal origins and religious similarity; Saka (2020) for branch penetration and historical merger activity; Fisman, Knill, Mityakov and Portnykh (2022) for political relationships and countless other papers for geographical distance. See **Online Appendix A** for variable construction and the relevant data sources. As **Appendix Table C.13** shows, all but two of these variables (legal origin and religious relationships) have the expected sign and are statistically significant when included in a specification that excludes bank-level trust bias.

models, consistent with the view that branch networks are not providing indirect financial or other types of relationships with target countries but rather that they are specifically transmitting cultural stereotypes from their host countries, which in turn influence bank headquarters' sovereign lending decisions.

The EBA provides the maturity breakdown of banks' sovereign exposures for each target country for a subset of banks and disclosure dates. By using this information, we construct separate dependent variables in **Figure 3** corresponding to seven distinct terms to maturity and study how trust shapes the maturity structure of sovereign debt holdings. Panel A (B) for the full sample (foreign subsample) documents the consistent role that trust plays across maturities. In addition, however, differences between the estimates for the longest and the shortest maturities is positive and significant at conventional levels, meaning trust is a more important driver of long-term bank lending. These results suggest that trust tilts banks' sovereign portfolios towards the longer end of the maturity structure. Intuitively, when trust is high, banks are more inclined to make long-term commitments. When it is low, they prefer the option value of exiting the position without losses and therefore are more inclined to hold short-maturity debt.

5.2. Genetic and Somatic Distance as Instruments for Trust

We have shown that the relationship between bilateral trust and sovereign exposures is stable over time and that our results carry over when removing crisis periods during which bond market conditions could conceivably impact trust. Still, one may question whether trust is truly exogenous with respect to bond market conditions. Following Guiso et al. (2009) and Ahern et al. (2015), we therefore instrument cultural trust with genetic and somatic distance.[47] These

[47] Our bilateral country-level measure of genetic distance computes the probability that two random alleles taken from the DNA sequences of two different country populations do *not* overlap (Cavalli-Sforza, Menozzi, and Piazza, 1996). This measure is evolutionarily correlated with the length of time that passed since the two populations separated back in history. Country-level somatic distance is based on anthropometric measures on four dimensions in a population: height, cephalic index, hair colour and skin pigmentation (Biasutti, 1954). Countries are first divided into three ordinal categories in each dimension. Somatic distance for each country-pair is then computed by taking the sum of the absolute differences in each of these four dimensions. Both measures are provided by Guiso et al. (2009).

two measures are again aggregated at bank-target-country level by using bank branch networks as relative weights.

Table 5 shows that our baseline results carry over. Columns 1 and 2 present 2SLS estimates for the full sample, columns 3 and 4 for the sample where we drop banks' home country exposures. The F-statistics on the first stage are considerably above the Stock-Yogo threshold of 10. Both instruments are significant at conventional levels with expected signs (greater genetic or somatic distance influencing trust negatively). The coefficients on bank-level trust bias are consistently significant at the 1 per cent level. They are larger than the baseline estimates in **Table 2**. The most conservative of these estimates (i.e., 2.037 in column 1 of panel B) indicates that a one standard deviation rise in bank-level trust bias increases the probability of investing in a target country by more than 18 per cent. This corresponds to nearly half of the observed diversification gap in European banks' sovereign portfolios.

5.3. Cultural Trust vs. Cultural Distance

In light of the large literature on cultural distance and financial outcomes (e.g. Siegel et al., 2011; Ahern et al., 2015), one may ask whether our results are simply capturing the effects of cultural distance as operationalized by Hofstede (1980; 2001), Schwartz (1994) and Gelfand et al. (2011) rather than identifying a distinct factor, namely trust.

In panel A of **Table 6**, we document the relationship between three frequently used measures of cultural distance and sovereign exposures. Column 1 utilizes the first principal component of the six cultural dimensions of Hofstede (1980; 2001).[48] Column 2 then utilizes the first principal component of the three dimensions identified by Schwartz (1994).[49] Finally,column

[48] Of these six dimensions, Long-term Orientation defines cultures prioritizing practicality in the long term, whereas Individualism emphasizes cultures centered around self-sufficiency. Uncertainty Avoidance assesses an individual's unease with unpredictability and ambiguity, while Masculinity accentuates traits like competitiveness and assertiveness. Power Distance and Indulgence gauge the importance of hierarchy and of satisfaction of human desires in a society, respectively. We take the first principal component of these six dimensions to minimize multicollinearity in our regressions.

[49] Schwartz (1994) distinguishes three dimensions of national culture: embeddedness, harmony and egalitarianism. We take the first principal component of these three dimensions in order to minimize multicollinearity in our regressions.

3 uses the cultural tightness index of Gelfand et al. (2011).[50] For each of these measures, we first calculate the cultural distance for each country-pair, computing absolute differences between the countries in each pair and then aggregating at bank-target-country level, using bank branch networks as relative weights.

All three measures have the expected (i.e., negative) sign vis-à-vis banks' sovereign exposures in addition to the first two being statistically significant at 1% level. However, when we include these cultural distance variables as controls in panel B, our main variable of interest -*Bank-level Trust Bias*- still carries a large and significant coefficient estimate, whereas the estimates for cultural distance variables lose size and significance. Evidently, cultural distance between banks and target countries cannot fully explain the impact of trust on sovereign exposures. While cultural distance may partially drive our results, trust appears to have an independent effect on banks' lending decisions to governments.

5.4. External Validity: A New Online Survey / Corporate Exposures

In the preceding, we use the most recent Eurobarometer survey of cultural trust perceptions, which dates from 1996. Previous literature takes culture as given and assumes that it is persistent over time (see Guiso et al., 2009). Still, one may worry that trust perceptions have changed significantly. We therefore conducted a new online survey across 30 European countries in order to get a recent picture of cultural trust biases and compare it to the earlier Eurobarometer survey. The new survey was conducted from June through December, 2022 with the help of the survey company Respondi and its partners. Respondents were asked a set of basic demographic questions as well as their trust levels, using the exact same question and answer choices as in the Eurobarometer survey. Each country's survey was translated into the local language and was made nationally representative by imposing quotas on demographic characteristics taken from Gallup World Polls. Only respondents who satisfied these quotas and passed attention tests are included in the final sample.[51] **Table 1** provides the relevant

[50] Based on earlier anthropological work on small societies by Pelto (1968), Gelfand et al. (2011) measure how strict a country' residents are with its cultural norms without explicitly defining what those norms are and construct an index indicating the cultural tightness (or inversely, looseness) of a nation. We directly use this index in our regressions.

[51] **Appendix Table D.2** shows the resulting estimates of trust levels between countries, where trust is defined as the portion of individuals in the home country expressing "a lot of trust" towards target country. In **Table D.3** we

summary statistics for bank level treatment. **Appendix Table D.1** lists the set of countries covered.

We can compare the Eurobarometer surveys and our online survey by plotting them side-by-side. **Figure 4** does this for the trust levels (biases) in panel A (B). It confirms the strongly positive relationship between the two surveys conducted more than a quarter century apart, consistent with the notion that cultural stereotypes are persistent. The correlation coefficients between the two surveys are 0.72 for trust levels and 0.75 for trust biases (both significant at 0.01 level).[52]

Next we check the external validity of our main results with this new survey covering 30 countries (as opposed to 15 in Eurobarometer). This not only gives us the chance to include banks headquartered in additional European countries but also helps us expand the target countries in our sample.[53] Panel A of **Table 7** employs the same measure of trust (based on responses affirming "a lot of trust") as **Table 2,** while panel B does the same for the alternative measure based on grading responses from 1 to 4.[54] The coefficients of interest are all statistically significant at least at 5 per cent level. Estimates in panel A for bank-level trust bias are strikingly similar in size to our baseline estimates in **Table 2** (especially in column 5).[55] The results thus support the external validity of our findings and confirm our central assumption that cultural stereotypes are persistent over time.

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compute the resulting biases in trust after taking into account home and target country fixed effects. While we report the estimates only for 15 countries in these tables for comparability with Eurobarometer, our new survey includes information for an additional 15 European countries, which we also utilize in our analysis.

[52] These high correlations exist despite some structural differences between our new survey and Eurobarometer. First, our survey was undertaken online, whereas Eurobarometer takes place in person, leading to different selection biases in sampling. Second, our survey has smaller sample sizes per country. Third, different demographic characteristics have been used to make the two surveys nationally representative.

[53] A caveat is that our variable of interest (i.e., trust) is in this case measured after sovereign exposures are realised and thus could suffer from endogeneity. The fact that our sample period includes sovereign debt crises heightens the possibility of reverse causality from sovereign debt exposures to trust (measured later in time). Hence, we stick to the historical Eurobarometer surveys for the baseline and additional results in the paper.

[54] This is the same definition used in **Appendix Table C.10**.

[55] Similarly, the estimates in panel B are very similar to those in **Appendix Table C.10.** However, despite the increase in sample size, standard errors are now substantially larger, potentially reflecting the measurement error introduced by our new survey that involved smaller samples of individuals per country compared to Eurobarometer. **Table D.4** reports corresponding results when dropping all domestic observations from the sample. Estimates are again comparable but are not as statistically precise as before especially in more saturated specifications.

We additionally check the externality validity of our findings vis-à-vis other types of exposures that banks have in the same target countries. For this purpose, we separately collect data from EBA on banks' corporate exposures, which cover only a subset of banks and disclosure dates. **Table 8** presents the results, where the dependent variable is defined as a dummy indicating positive corporate exposures in the target country, and alternatively a continuous variable with log nominal values (in millions) of corporate exposures. In line with the findings of Giannetti and Yafeh (2012) and Hagendorff et al. (2023), we detect a positive and significant relationship between cultural trust and banks' corporate exposures.[56]

5.5. Heterogeneity

Figure 5 reports additional results for banks with more and fewer total assets, for banks with more or less widely diversified bond portfolios, and for target countries more and less frequently present in those portfolios. In panel A, we categorise the banks based on their average total assets within our sample period. In panel B, we compute the number of countries to which a bank has positive exposures and average it over time for each bank. This allows us to calculate a time-invariant measure of diversification and separate high- and low-diversification banks by choosing the median bank as a threshold. In panel C, we compute the number of times the bonds of a target country are included in portfolios across all banks and times, and then separate countries into two groups based on median values.

Panel A confirms that stereotypes similarly drive sovereign portfolios of large and small banks. Panel B shows that banks whose investment portfolios are widely diversified across countries are less likely to allow trust biases to affect their lending decisions. An interpretation is that more widely diversified banks are more sophisticated and have more sources of hard information. These findings are thus consistent with previous evidence that sophisticated investors are less likely to exhibit cultural biases (Grinblatt and Keloharju, 2001). In addition, there is an indication that trust is less important -albeit insignificantly- for target countries whose bonds are frequently present in bank portfolios (panel C), an example being Germany.

[56] Results are very similar, even when we focus only on foreign exposures of these banks (see Appendix **Table D.5**).

This is consistent with evidence that familiarity may mitigate the role of trust in financial decisions (Pursiainen, 2022).

5.6. Salience Shocks: Eurozone Crises and Brexit Referendum

In this section, we focus on two types of salience shocks potentially amplifying the role of trust in banks' lending decisions to their governments. The first one is the Eurozone debt crises impacting countries such as Greece and Italy. The second one is the Brexit referendum that may have rendered trust issues more salient for EU banks specifically towards UK as a target country. We analyse these events both by focusing on short time intervals around the relevant shocks (plus/minus 2 years) and utilizing our full sample.

We start by estimating the following model:

$$\text{Sovereign Exposure}_{b,h,c,t} = \beta_1 \text{Bank-level Trust Bias}_{bc} \times \text{Eurozone Crises}_{ct} + \beta_2 \text{ Bank-level Trust Bias}_{bc} + \beta_3 \text{Bank Branches}_{bc} + \beta_4 \gamma_{bt} + \beta_5 \lambda_{hct} + \varepsilon_{bhct} \quad (4)$$

where *Eurozone Crises*$_{ct}$ is a dummy variable indicating when target country *c* experiences a sovereign debt crisis at time point *t*. To gauge the point of crisis we use the following threshold for the preceding 3 month-period: at least 400 basis points average daily bond yields above that of Germany (as in Brutti and Saure, 2016).

Results are in **Table 9.** Panel A defines the dependent variable as a dummy for sovereign exposures, while panel B uses the continuous version of the same variable. Columns 1 and 2 employ the full sample whereas columns 3 and 4 create an event study setting focusing on the plus/minus two year period around ECB President Mario Draghi's "Whatever it takes" speech on 26 July 2012. The resulting coefficients support our prediction that salience shocks strengthen the role trust plays in banks' investment decisions. When faced with adverse shocks hitting sovereign debt markets of target countries, banks increasingly resort to their cultural stereotypes in deciding to which country and how much to lend. In panel A, the total effect for bank-level trust bias (interaction + baseline) is at least three times that in our baseline estimates

in **Table 2**, underlining the importance of these time-varying salience shocks in driving the relationship between trust and investments.

The second part of our investigation, focusing on Brexit salience, estimates the following model:

$$\text{Sovereign Exposure}_{b,h,c,t} = \beta_1 \text{Bank-level Trust Bias}_{bc} \times \text{Brexit Salience}_{hct} + \beta_2 \text{ Bank-level Trust Bias}_{bc} + \beta_3 \text{Bank Branches}_{bc} + \beta_4 \gamma_{bt} + \beta_5 \lambda_{hct} + \varepsilon_{bhct} \quad (5)$$

where *Brexit Salience*$_{hct}$ is a dummy variable indicating the banks headquartered in EU countries (*h*), facing United Kingdom as a target country (*c*), after Brexit referendum took place on 23 June 2016 (*t*). Note that this variable, similar to *Eurozone Crises*$_{ct}$ in our previous setting, can only be estimated in interaction due to our saturated fixed effect specification.

Results are reported in **Table 10,** where we again focus on both types of dependent variables (panels A and B), full period versus event study periods around the Brexit referendum (columns 1-2 vs. 3-4), and all exposures versus foreign exposures (columns 1-3 vs. 2-4). Estimates for the interaction coefficient generally have the expected positive sign but are precisely estimated only in panel B. This suggests that the *Brexit Salience* operates more strongly via the intensive margin of sovereign exposures. That is, assuming Brexit was a negative shock for the UK sovereign debt market, low-trust EU banks do not exit the UK sovereign debt market more than the high-trust EU banks. Instead, they simply reduce their exposures further.

6. Mechanisms

In this section we discuss why the cultural biases of branch employees are important for an investment strategy whose broad parameters are set by board members and officers at bank headquarters.

Decisions at bank headquarters are shaped by information and personnel flows up the organizational hierarchy from branches to the C-suite and boardroom. As Corporate Finance Institute (2021) writes, "… banks have a rigid and strict hierarchy that is comparable to a

military organization, where each rank means a great deal…" A number of studies have examined the impact of these organizational hierarchies on banks' economic decision making. Liberti and Mian (2009) find that greater hierarchical and geographical distance between the information-collecting agent and loan-approving officer leads to less reliance on subjective information and more on objective information. Skrastins and Vig (2018) find that increased hierarchization of branches reduces the volume of credit extension, worsens loan performance, and leads to greater standardization of loan contracts. Motivation for these studies differs, but they have in common their treatment of banks as hierarchies.

We follow this literature by modelling banks as hierarchies linking headquarters, where broad strategic decisions are made, with branches and subsidiaries, from where human capital and information flow. Panel B in **Figure 1** is a visual representation.[57] Loan officers, portfolio managers, investment analysts and other subordinates in the countries in which the bank operates provide information to headquarters. Headquarters, which in practice means the CEO, board and investment committee, is then responsible for making broad strategic decisions about the investment portfolio. Those inputs are colored by the trust that subordinates display toward countries of potential investment. Those inputs are aggregated and assessed by the bank's top officers, who then establish guidelines for the bank's investment decisions.

Employees of a foreign subsidiary are residents of the country in question and tend also to be citizens of that country. This justifies imputing to them the cultural attitudes of residents of that country. In practice, cultural stereotypes of the employees of foreign subsidiaries can influence decisions made at headquarters through disembodied information flows transmitted via internal reports, meetings, phone calls and other types of communication. We cannot directly distinguish this channel, however, since we lack data on such internal information flows for banks in our sample.

[57] Despite being theoretically possible, we consider the first mechanism here, namely the delegation of sovereign bond investment decisions from bank headquarters to subsidiaries, to be negligible given that our focus is on the entry/exit decisions of multinational banks, which are centrally decided by high-level managerial teams at bank headquarters. The literature discusses cases where bank subsidiaries/branches set their own deposit rates, hire their own tellers, award promotions to their own employees, pick bank hours, and design the process for selling new investment products to retail customers (Dlugosz, 2017; Nagar, 2002), but not to determine the entry/exit decisions from a particular sovereign debt market. Our discussions with individuals working in multinational banks also provided various anecdotes inconsistent with the operation of this mechanism.

We therefore utilize a dataset made available by Hassan, Schreger, Schwedeler and Tahoun (forthcoming), which documents firm-level sentiments towards various target countries expressed during earning calls by managers of publicly-traded firms. This dataset, spanning the 2002-2020 period, covers a broad range of countries where firms are located (i.e., home countries) and a broad range of countries that firm managers "talk about" (i.e., target countries). Because such communications are open to the public, managers are less likely to reveal subjective beliefs and biases in their statements, which stacks the cards against our hypothesis.

We aggregate these firm-level data at the country level and construct a dependent variable by computing the average managerial sentiments across firms located in the same home country, talking about the same target country at the same point in time. We then estimate the following specification:

$$\text{Managerial Sentiments}_{h,c,t} = \beta_1 \text{Country-level Trust Bias}_{hc} + \beta_2 \gamma_{ht} + \beta_3 \lambda_{ct} + \varepsilon_{hct} \quad (6)$$

A positive coefficient for β_1 would be consistent with the information channel in panel B of **Figure 1.** It implies that managers express sentiments that are positively related to the cultural trust biases of the country where their firms are located. The fact that we include time-varying target country fixed effects makes it unlikely that managerial sentiments reflect any fundamental information regarding these target countries.

Table 11 reports the results for four alternative definitions of trust biases. The first two columns focus only on financial firms whereas the latter two columns aggregate the data across all firms available in Hassan et al. (forthcoming). Columns 1 and 3 include all country-pair observations, while columns 2 and 4 exclude the observations where home and target countries overlap. Overall, there is a strong positive relationship between country-level trust biases and managerial sentiments expressed with regards to different target countries. According to Column 1 of panel A, a one standard deviation increase in trust biases is associated with a 0.16 more positive tone in managerial sentiments. This is more than half of the standard deviation of the dependent variable (see **Table 1**).

One might think that senior managers at headquarters are able to override prejudices and inefficiencies created by lack of trust of the employees of local subsidiaries. But the cultural stereotypes of employees of foreign subsidiaries can also affect decisions at headquarters through human capital flows that shape the composition of high-level managerial teams. Corporate culture in bank headquarters may be shaped by the tendency of banks to hire and promote internally for high-level managerial posts.[58] Given this tendency toward internal promotion, the more branches and employees a bank has in a country, the more likely it is that this nationality will be represented at directorial/managerial levels, other things equal.

To provide empirical support for this mechanism, we gathered data from *BankFocus* on current and former directors and managers employed in the headquarters of the banks in our sample.[59] We then estimated the following specification at bank-target-country level:

$$\text{Nationality at HQ}_{b,h,c} = \beta_1 \text{Bank Branches}_{bc} + \beta_2 \gamma_b + \beta_3 \mu_c + \beta_4 \lambda_{hc} + \varepsilon_{bhct} \quad (7)$$

where *Nationality at HQ*$_{b,h,c}$ indicates whether, as of year 2022, bank *b* headquartered in country *h* has (or had) directors or managers with the nationality of the target country *c*. The variable of interest, *Bank Branches*$_{bc}$, measures branch presence of the bank *b* in target country *c* in 2016.

The first panel of **Table 12** uses the number of bank branches, the second the log number of bank branches, and the third the share of the branches in target country within the total branch portfolio of the bank. Column 1 does not include controls; subsequent columns progressively saturate the estimations with *Bank*, *Target Country* and *Home Country x Target Country* fixed effects. The results support the conjecture that managerial teams disproportionally come from countries where banks have subsidiaries/branches. Column 5 indicates that a one-standard deviation increase in log number of branches in a target country is associated with 8.4% rise in

[58] To cite one data point, UBS filled more than a third of its vacancies internally in 2015 (Butcher, 2016).
[59] Although we can trace individuals' names across all banks in our sample, we can see directors' and managers' nationalities only for a subset of banks, which is why the number of banks included in the sample for this part of the analysis is smaller (~20% of the bank sample in **Table 2**).

the probability of that country being represented among employees at bank headquarters. This corresponds to one third of the mean for the outcome variable.[60]

While this analysis does not establish a causal link between branch networks and nationality composition of employees at bank headquarters, it is consistent with our framework of banks as hierarchies. It is consistent and with the assumption that banks hire and promote from within, such that that the national composition of its staff will affect the national composition of its board of directors, and that cultural stereotypes coloring information transmitted by subordinates will be received by directors with broadly similar cultural traits and biases.

7. Conclusion

Individuals vary in the trust they place in residents of other countries. This variation has been shown, using aggregate country-level data, to affect a range of cross-border transactions. We consider how these cultural stereotypes or biases influence investment decisions at the individual bank level. Building on the geography of branch networks, we develop a bank-specific measure of these cultural stereotypes. This allows us to compare the sovereign exposures of banks headquartered in the same country, at the same point in time, with regard to the same target country of investment, thus ruling out omitted factors at the country and country-pair level that potentially confound previous analyses.

Using data on the sovereign bond portfolios, we then show that the trust of residents of a bank's countries of operation in residents of the country that is a potential target of investment has a positive, statistically significant and economically important impact on its sovereign exposures. This is the first evidence of the importance of cultural biases or stereotypes for bank lending to governments. It is the first analysis of the acquisition and transmission of such biases via the operation of multinational bank branch networks.

[60] In **Appendix Table E.1**, we restrict our sample only to foreign target countries; and in **Appendix Table E.2**, we double-cluster the standard errors by country-pair and bank. In **Appendix Tables E.3** and **E.4**, we restrict the sample of employees only to senior managers (i.e., the executive board, board of directors and senior management) for the full sample and only for foreign target countries, respectively. In **Appendix Tables E.5** and **E.6**, we restrict the sample only to the first (i.e., main) nationalities of the employees, again separately for all targets and only for foreign targets. And in **Appendix Tables E.7** and **E.8**, we similarly restrict the sample to the current managers (as of November 2022). Our interpretations are supported in all cases.

Well diversified, relatively sophisticated banks are less likely to be influenced by trust biases. Similarly, banks with well diversified branch networks and management teams are likely to suffer less from such biases. For a bank with a branch network that is well diversified geographically, the overall bias transmitted by different national branches will tend to zero. Since trust bias can take on both positive and negative values, the pluses and minuses will tend to cancel out as more nationalities are represented in decision-making processes.

Our findings have implications for the operation of financial markets. Because we are comparing banks from the same home country investing in the same target country, and because we are focusing on sovereign debt markets, where lender-borrower interactions are not relational and default is rarely selective, trust differentials affecting portfolio composition may lead to inefficient allocations. The changes in investment they produce have nothing to do with the fundamental risk of the target country and cause distortions in banks' portfolio management decisions.

References

Accetturo, Antonio, Giorgia Barboni, Michele Cascarano and Emilia Garcia-Appendini (2023), "The Role of Culture in Firm-Bank Matching," *Journal of Financial Intermediation*, 53, 101018.

Acharya, Viral and Sacha Steffen (2015), "The "Greatest" Carry Trade Ever? Understanding Eurozone Bank Risks," *Journal of Financial Economics* 115, pp.215-236.

Admati, Anat and Martin Hellwig (2013), *The Bankers' New Clothes: What's Wrong with Banking and What to Do about It*, Princeton: Princeton University Press.

Ahern, Kenneth R., Daniele Daminelli, and Cesare Fracassi (2015), "Lost in translation? The effect of cultural values on mergers around the world," *Journal of Financial Economics* 117, pp. 165-189.

Angrist, Joshua D., and Jörn-Steffen Pischke (2009), *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

Arrow, Kenneth (1974), *The Limits of Organization*, New York: Norton & Co.

Bachas, P., Gertler, P., Higgins, S., & Seira, E. (2021). "How Debit Cards Enable the Poor to Save More," *Journal of Finance* 76, pp.1913-1957.

Becker, Bo and Victoria Ivashina (2017), "Financial Repression in the European Sovereign Debt Crisis," *Review of Finance* 72, pp.1-33.

Biasutti, Renato (1954), Le Razze e i Popoli Della Terra, Unione Tipografico- Editrice, Torinese, Torino.

Bisin, Alberto and Thierry Verdier (2001), "The Economics of Cultural Transmission and the Dynamics of Preferences," *Journal of Economic Theory* 97, pp.298-319.

Bloom, Nicholas, Raffaella Sadun and John Van Reenen (2012), "The Organization of Firms across Countries," *Quarterly Journal of Economics* 127, pp.1663-1705.

Boer, Martin and Andres Portilla (2020), "Consolidation of the European Banking Industry: Obstacles and Policies," in *The Euro in 2020*, Madrid: Spanish Institute of Financial Analysts, pp.263-282.

Bordalo, Pedro, Nicola Gennaioli and Andrei Shleifer (2018), "Diagnostic Expectations and Credit Cycles," *Journal of Finance* 73, pp.199-227.

Bottazzi, Laura, Marco Da Rin and Thomas Hellmann (2016), "The Importance of Trust for Investment: Evidence from Venture Capital," *Review of Financial Studies* 29, pp.2283-2318.

Broner, Fernando, Alberto Martin and Jaime Ventura (2010), "Sovereign Risk and Secondary Markets," *American Economic Review* 100, pp.1523-55.

Brutti, Filippo and Philip Saure (2016), "Repatriation of Debt in the Euro Crisis," *Journal of the European Economic Association* 14, pp.145-74.

Butcher, Sarah (2016), "You're Doing it Wrong: Banks Hire Like This Now," *efinancial careers* (7 September) https://www.efinancialcareers.com/news/2016/09/youre-doing-it-wrong-banks-hire-like-this-now

Cavalli-Sforza, Luca L., Paolo Menozzi, and Alberto Piazza (1996), *The History and Geography of Human Genes*. Princeton, NJ: Princeton University Press.

Corporate Finance Institute (2021), "Typical Hierarchy of Investment Banks," https://corporatefinanceinstitute.com/resources/careers/jobs/typical-hierarchy-investment-banks/

Crosignani, Matteo (2021), "Bank Capital, Government Bond Holdings, and Sovereign Debt Capacity," *Journal of Financial Economics* 141, pp.693-704.

De Marco, Filippo, Marco Macchiavelli and Rosen Valchev (2021), "Beyond Home Bias: International Portfolio Holdings and Information Heterogeneity," *Review of Financial Studies* 34, pp.1-36.

Dlugosz, Jennifer, Yong Kyu Gam, RadhakrishnanGopalan and Janis Skrastins (2017), "Decision-Making Delegation in Banks," unpublished manuscript, Washington University in St. Louis and Southwestern University of Finance and Economics.

Duffie, Darrell (2010), "The Failure Mechanics of Dealer Banks," *Journal of Economic Perspectives* 24, pp.51-72.

European Systemic Risk Board (2015), "ESRB Report on the Regulatory Treatment of Sovereign Exposures," Brussels: ESRB.

Fernández, Raquel and Andrea Fogli (2009), "Culture: An Empirical Investigation of Beliefs, Work, and Fertility," *American Economic Journal: Macroeconomics* 1, pp.146-77.

Fisman, Raymond and Edward Miguel (2007), "Corruption, Norms, and Legal Enforcement: Evidence from Diplomatic Parking Tickets," *Journal of Political Economy* 115, pp.1020-1048.

Fisman, Raymond, Daniel Paravisini and Vikrant Vig (2017), "Cultural Proximity and Loan Outcomes," *American Economic Review* 107, pp.457-492.

Fisman, Raymond, April Knill, Sergey Mityakov, and Margarita Portnykh (2022), "Political Beta," *Review of Finance* 26, pp.1179-1215.

French, Kenneth and James Poterba (1991), "Investor Diversification and International Equity Markets," *American Economic Review* 81, pp.222–226.

Fungacova, Zuzana, Iftekhar Hasan and Laurent Weill (2017), "Trust in Banks," *Journal of Economic Behavior & Organization*, 157, pp.452-476.

Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., ... & Yamaguchi, S. (2011), "Differences between Tight and Loose Cultures: A 33-Nation Study," *Science* 332, pp. 1100-1104.

Gennaioli, Nicola, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2022), "Trust and Insurance Contracts," *Review of Financial Studies*, 35, 5287-5333.

Giannetti, Mariassunta and Yishay Yafeh (2012), "Do Cultural Differences between Contracting Parties Matter? Evidence from Syndicated Bank Loans," *Management Science* 58, pp.365-383.

Greif, Avner (1989), "Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders," *Journal of Economic History* 49, pp.857-882.

Greif, Avner (1991), "The Organization of Long-Distance Trade: Reputation and Coalitions in the Geniza Documents and Genoa during the Eleventh and Twelfth Centuries," *Journal of Economic History* 51, pp.459-462.

Grinblatt, Mark and Matti Keloharju (2001), "How Distance, Language, and Culture Influence Stockholdings and Trades," *Journal of Finance* 56, pp.1053-1073.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales (2006), "Does Culture Affect Economic Outcomes?" *Journal of Economic Perspectives* 20, pp.23-48.

Guiso, Luigi, Paolo Sapienza and Luigi Zingales (2009), "Cultural Biases in Economic Exchange," *Quarterly Journal of Economics* 124, pp.1095-1131.

Hagendorff, Jens, Sonya Lim and Duc Nguyen (2023), "Lender Trust and Bank Loan Contracts," *Management Science* 69, pp.1758--1779.

Hassan, Tarek Alexander, Jesse Schreger, Markus Schwedeler, and Ahmed Tahoun (Forthcoming), "Sources and Transmission of Country Risk," *The Review of Economic Studies*.

Herring, Cedric (2009), "Does Diversity Pay? Race, Gender, and the Business Case for Diversity," *American Sociological Review* 74, pp. 208-224.

Hofstede, Geert (1980), *Culture's Consequences: International Differences in Work Related Values*. Beverly Hills CA: Sage.

Hofstede, Geert (2001), *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*. Thousand Oaks CA: Sage.

House, R.J. et al (2004), *Culture, Leadership and Organizations: The GLOBE Study of 62 Societies*, Thousand Oaks, CA: Sage.

Kaplow, Louis and Steven Shavell (1994), "Optimal Law Enforcement with Self-Reporting of Behavior," *Journal of Political Economy* 102, pp.583-606.

Karolyi, G. Andrew (2016), "The gravity of culture for finance," *Journal of Corporate Finance* 41, pp. 610-625.

Knell, Markus and Helmut Stix (2015), "Trust in Banks during Normal and Crisis Times – Evidence from Survey Data," *Economica* 82, pp.995-1020.

Kogut, Bruce, and Harbir Singh (1988), "The effect of national culture on the choice of entry mode," *Journal of International Business Studies* 19, pp. 411-432.

Levine, Sheen S., Evan P. Apfelbaum, Mark Bernard, Valerie L. Bartelt, Edward J. Zajac, and David Stark (2014), "Ethnic Diversity Deflates Price Bubbles," *Proceedings of the National Academy of Sciences* 111, pp. 18524-18529.

Ljungqvist, Alexander, Felicia Marston and William Wilhelm Jr. (2006), "Competing for Securities Underwriting Mandates: Banking Relationships and Analyst Recommendations," *Journal of Finance* 61, pp.301-340.

Mayer, Thierry, and Soledad Zignago. (2011) "Notes on CEPII's Distances Measures: The GeoDist Database." CEPII Working Paper No. 2011-25.

Merkley, Kenneth, Roni Michaely, and Joseph Pacelli (2020), "Cultural Diversity on Wall Street: Evidence from Consensus Earnings Forecasts," *Journal of Accounting and Economics* 70, 101330.

Mian, Atif (2006), "Distance Constraints: The Limits of Foreign Lending in Poor Countries," *Journal of Finance* 61, pp.1465-1505.

Nagar, Venky (2002), "Delegation and Incentive Compensation," *Accounting Review* 77, pp.379-395.

Ongena, Steven, Alexander Popov and Neeltje van Horen (2019), "The Invisible Hand of the Government: Moral Suasion during the European Sovereign Debt Crisis," *American Economic Journal: Macroeconomics* 11, pp.346-379.

Page, Scott E. (2019), "The Diversity Bonus: How Great Teams Pay Off in the Knowledge Economy," Princeton University Press.

Pursiainen, Vesa (2022), "Cultural Biases in Equity Analysis," *Journal of Finance* 77, pp.163-211.

Roland, Gerard (2020), "The Deep Historical Roots of Modern Culture: A Comparative Perspective," *Journal of Comparative Economics* 48, pp.483-508.

Saka, Orkun (2020), "Domestic Banks as Lightning Rods? Home Bias and Information during the Eurozone Crisis," *Journal of Money, Credit and Banking* 52, pp. 273-305.

Sarkissian, Sergei, and Michael J. Schill (2004), "The Overseas Listing Decision: New Evidence of Proximity Preference," *Review of Financial Studies* 17, pp. 769-809.

Schwartz, Shalom H. (1994), Beyond individualism - collectivism: New cultural dimensions of values. In: Individualism and Collectivism: Theory, Method and Applications. Sage, Newbury Park, CA, pp. 85-119.

Sharpe, William (1964), "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk. *Journal of Finance* 19, pp.425-442.

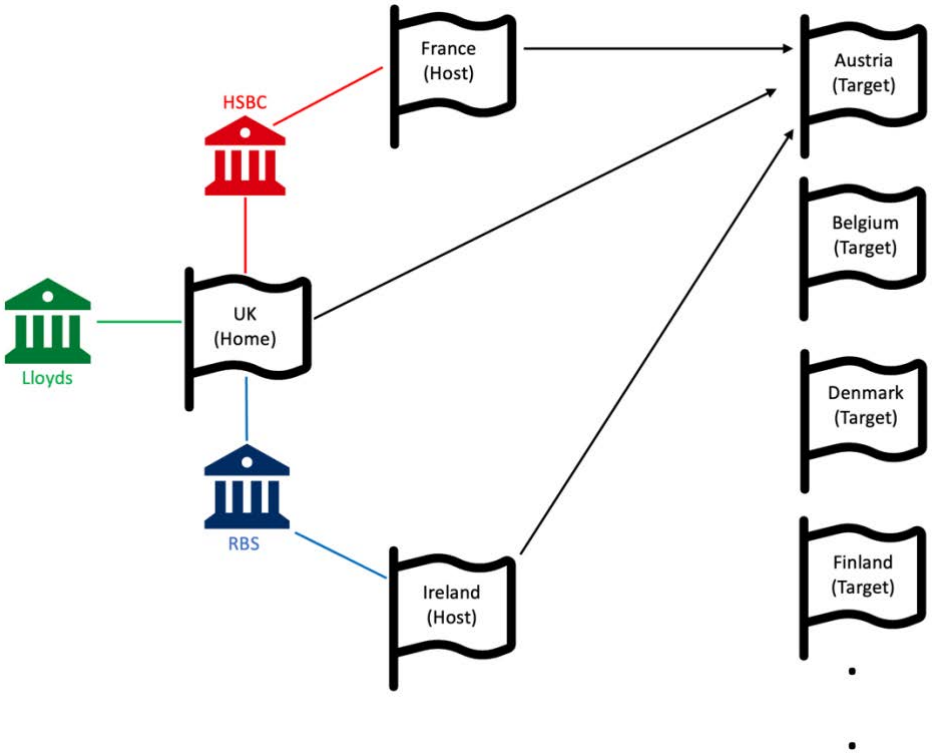
Siegel, Jordan I., Amir N. Licht, and Shalom H. Schwartz (2011), "Egalitarianism and international investment." *Journal of Financial Economics* 102, pp. 621-642.

Skrastins, Janis and Vikrant Vig (2018), "How Organizational Hierarchy Affects Information Production," *Review of Financial Studies* 32, pp.564-604.

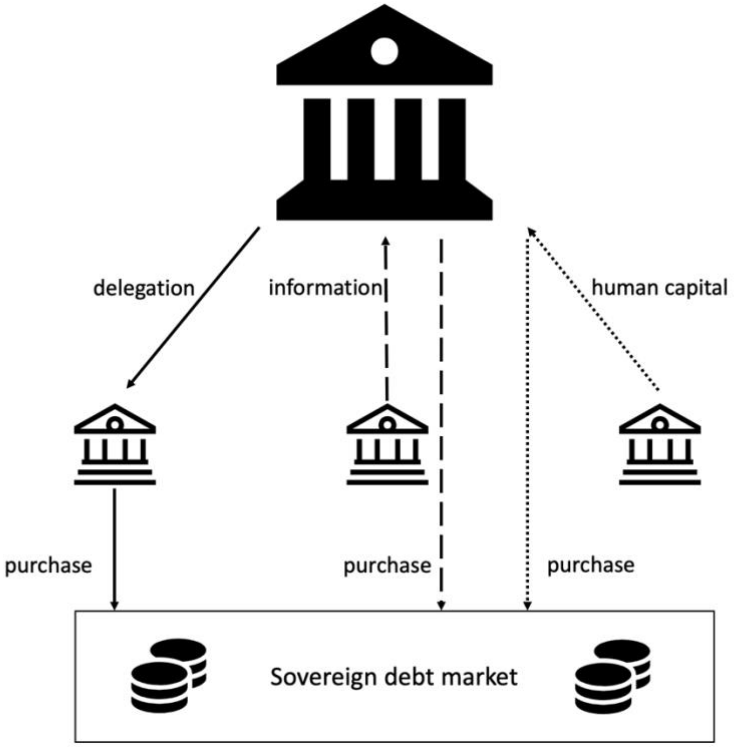
Stix, Helmut (2013), "Why Do People Save in Cash? Distrust, Memories of Banking Crises, Weak Institutions and Dollarization," *Journal of Banking and Finance* 37, pp.4087-4106.

World Values Association (2022), *World Values Survey Wave 7*, Vienna: World Values Association.

Figure 1: Bank Level Identification Strategy and Framework.



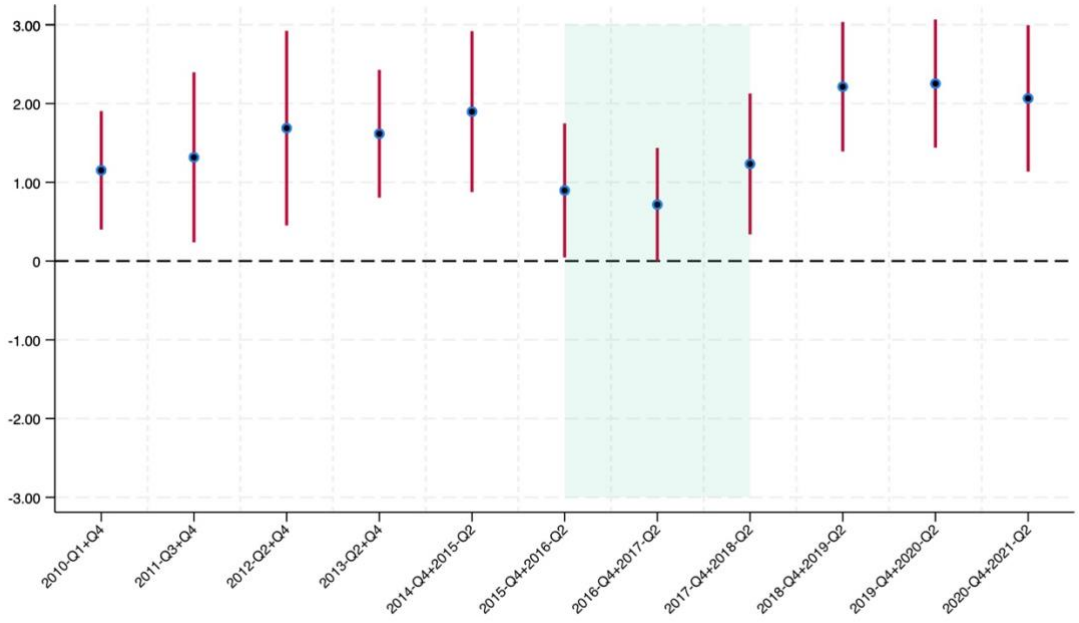
(a) Identification strategy at bank level



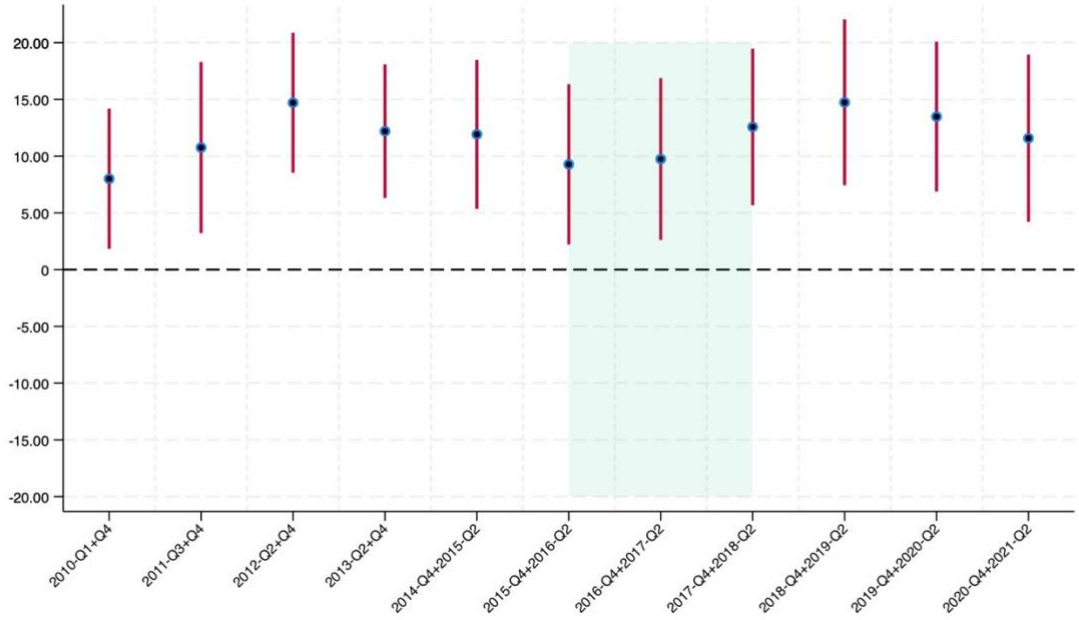
(b) Banks as hierarchies

Note: This figure represents (a) the bank-level identification strategy as described in Section 4 and (b) the mechanisms that link foreign bank branches to multinational banks' sovereign exposures as described in Section 6.

Figure 2: Baseline Estimates over Sub-Sample Periods.



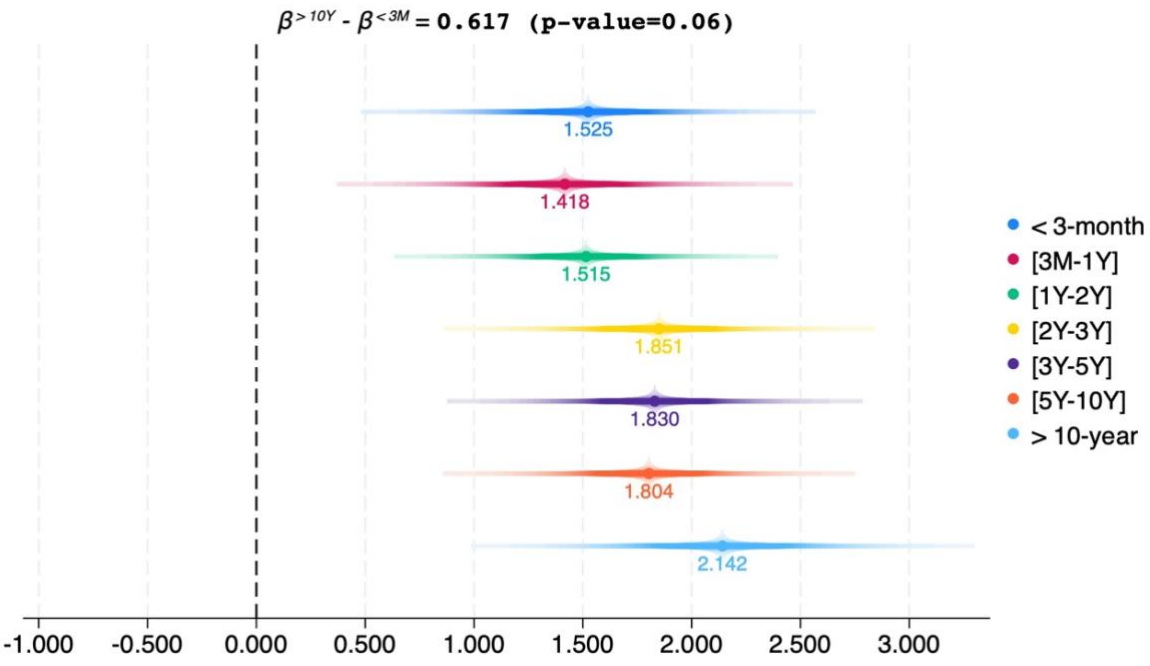
(a) Dependent variable: Sovereign exposure (dummy)



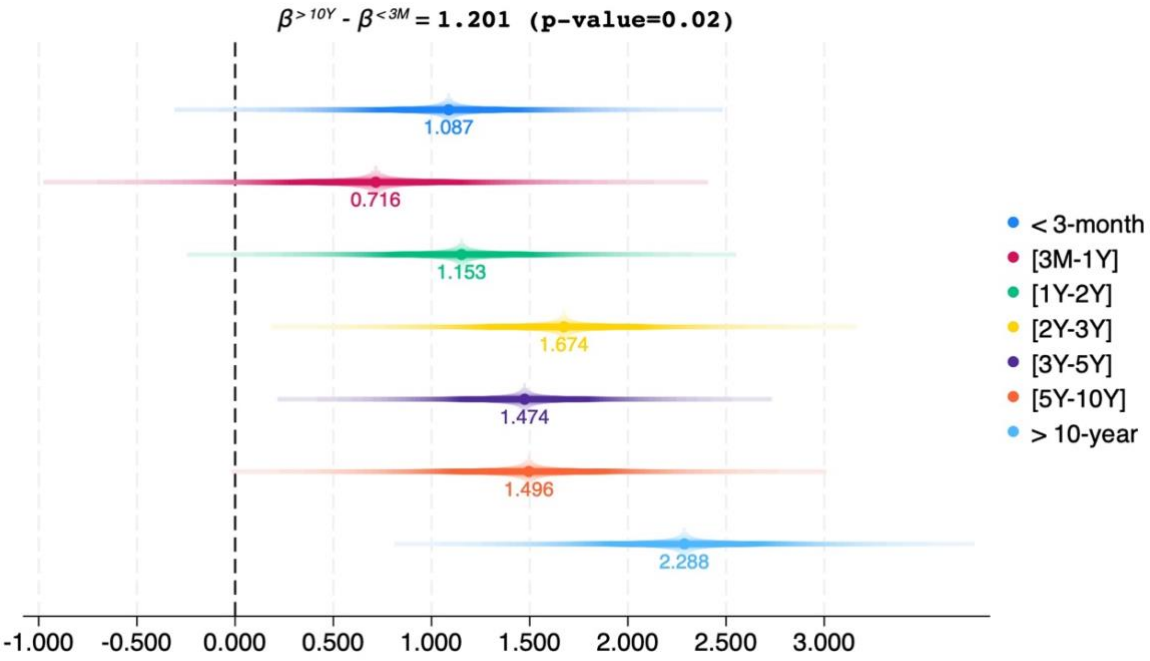
(b) Dependent variable: Sovereign exposure (log nominal)

Note: This figure shows estimates for the coefficient of bank-level trust bias separately for 11 distinct sub-sample periods. Dependent variables are the probability of sovereign exposure (upper panel) and log nominal sovereign exposures -in millions- (lower panel). Shaded areas indicate sub-periods during which EBA reported sovereign exposures based on regulatory FINREP data that restrict the level of granularity disclosed in banks' sovereign debt portfolios. The specification is Column 5 of Table 2. Only the estimated coefficient on *Bank-level Trust Bias* is plotted. Confidence intervals are at 90% significance level. Source: EBA, CEBS, Eurobarometer and SNL Financial.

Figure 3: Bank-level Trust Bias and Probability of Sovereign Exposure with Different Maturities



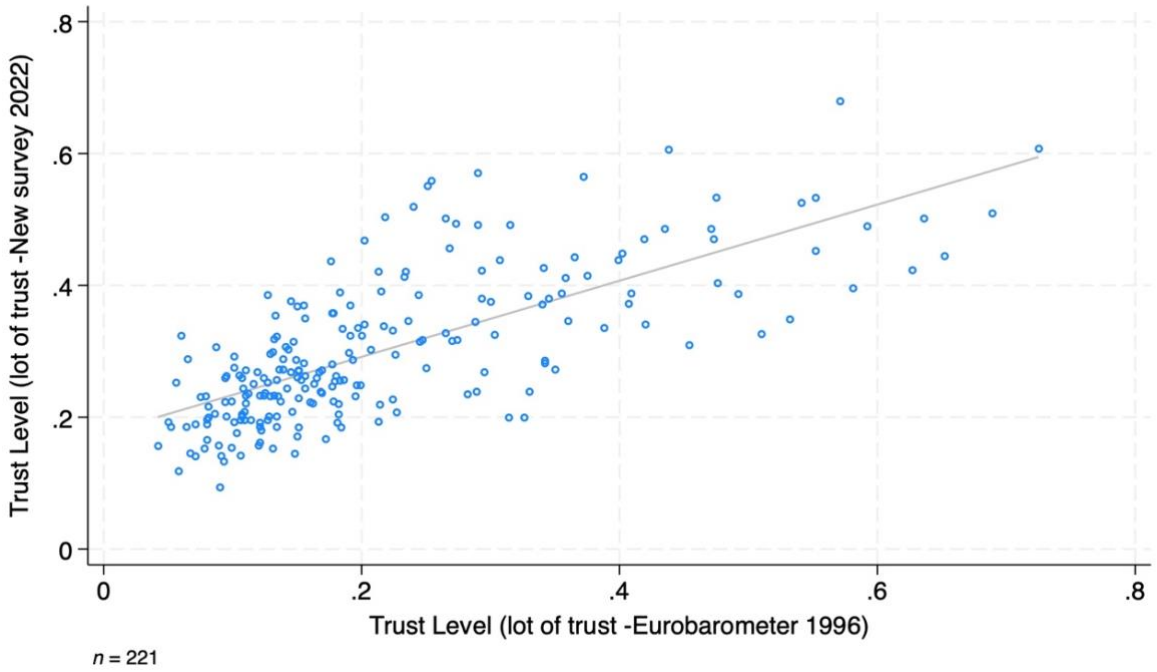
(a) Full sample



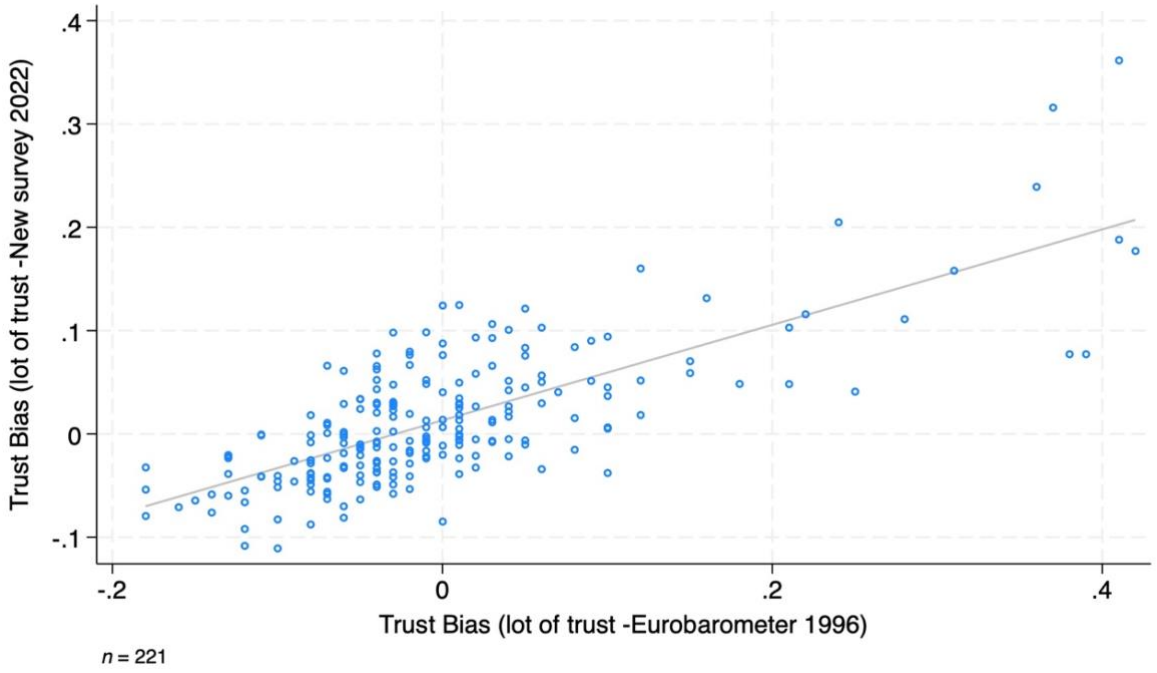
(b) Foreign target countries

Note: This figure shows estimates for the coefficient of *Bank-level Trust Bias* separately estimated for 7 distinct maturities of sovereign debt. Dependent variable is the probability of sovereign exposure and the specification is Column 5 of Table 2. Confidence intervals are at 95% significance level. Source: EBA, CEBS, Eurobarometer and SNL Financial.

Figure 4: Trust Levels and Biases (lot of trust) – Eurobarometer vs. New Online Survey



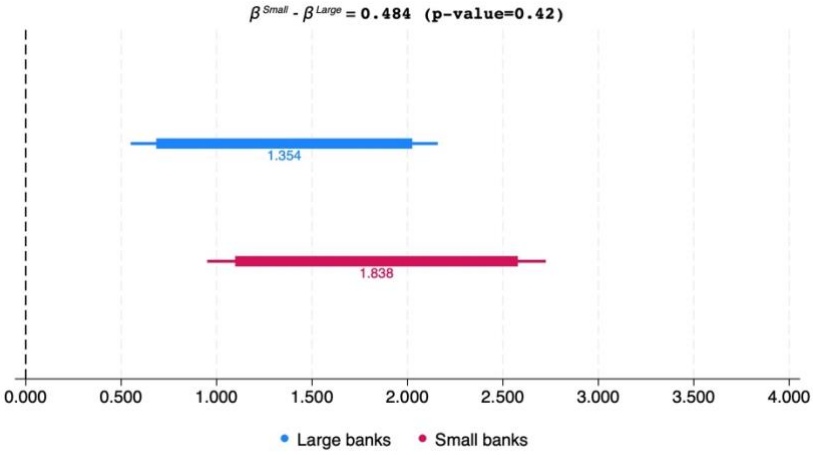
(a) Trust levels



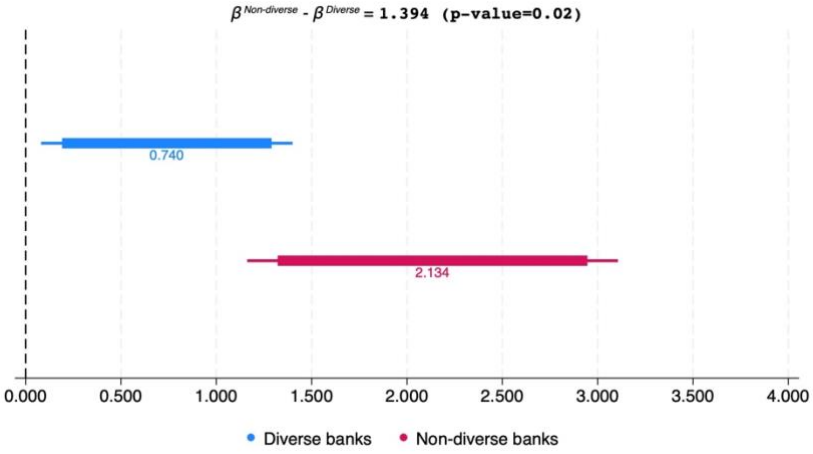
(b) Trust biases

Note: This figure represents the scatterplot of the trust levels and biases as measured via Eurobarometer (x-axis) and our new online survey (y-axis). Trust in both cases is defined as the portion of individuals in home country expressing "a lot of trust" towards target country. Unit of observation is at home-target country level and sample size is 221.

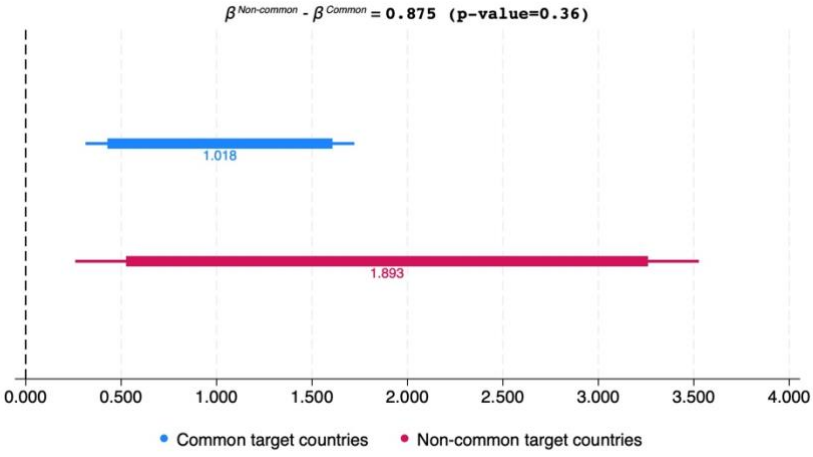
Figure 5: Bank and Country Level Heterogeneity in Baseline Results



(a) Bank size



(b) Bank diversification



(c) Target country commonness

Note: The figure summarizes the baseline results estimated for 6 different subsamples over the full sample period 2010-Q1 to 2021-Q2. The estimated specification corresponds to column 5 in Table 2 and the coefficients for *Bank-level Trust Bias* are plotted for each subsample. Thicker lines indicate 90% and thinner lines indicate 95% confidence intervals.

Table 1: Summary Statistics

Variables	Mean	Std. dev.	Min	Max	Obs.	Source
Bank-level analysis						
Sovereign exposure (dummy)	0.58	0.49	0.00	1.00	23,760	EBA & CEBS
Sovereign exposure (log nominal – in millions)	3.08	3.38	0.00	12.32	23,760	EBA & CEBS
Corporate exposure (dummy)	0.29	0.45	0.00	1.00	18,255	EBA & CEBS
Corporate exposure (log nominal – in millions)	1.64	2.92	0.00	11.95	18,255	EBA & CEBS
Bank-level Trust Bias (lot of trust)	0.01	0.09	-0.15	0.41	1,620	Eurobarometer/SNL
Bank-level Trust Level (lot of trust)	0.16	0.11	0.00	0.72	1,620	Eurobarometer/SNL
Bank-level Trust Bias (graded)	0.00	0.17	-0.46	0.85	1,620	Eurobarometer/SNL
Bank-level Trust Level (graded)	2.26	0.94	0.00	3.66	1,620	Eurobarometer/SNL
Bank-level Trust Bias (online - lot of trust)	0.00	0.05	-0.14	0.36	3,240	Online Survey/ SNL
Bank-level Trust Bias (online - graded)	0.00	0.11	-0.48	0.78	3,240	Online Survey/ SNL
Bank-level Branches (in 000)	0.05	0.33	0.00	5.80	1,620	SNL Financial
Bank-level Branch Relationship (in 000)	0.74	3.55	0.00	28.72	1,620	SNL Financial
Bank-level Merger Relationship (in 000)	0.02	0.07	0.00	0.61	1,620	SDC Platinum/SNL
Bank-level Media Relationship	0.08	0.11	0.00	0.75	1,620	Factiva/SNL
Bank-level Political Relationship	0.93	0.06	0.76	1.00	1,620	UNGA/SNL
Bank-level Distance Relationship (log)	1.33	0.70	0.00	3.73	1,620	MapQuest/SNL
Bank-level Legal Origin Relationship	0.26	0.40	0.00	1.00	1,620	LP (2008)/SNL
Bank-level Religious Relationship	0.24	0.24	0.00	0.87	1,620	GSZ (2009)/SNL
Bank-level Genetic Distance	0.01	0.00	0.00	0.03	1,620	GSZ (2009)/SNL
Bank-level Somatic Distance	2.35	1.66	0.00	6.00	1,620	GSZ (2009)/SNL
Bank-level Cultural Distance (PC1) by Hofstede	-0.05	1.14	-2.96	3.47	1,620	Hofstede (2001) /SNL
Bank-level Cultural Distance (PC1) by Schwartz	0.16	0.99	-2.26	2.86	1,620	Schwartz (1994) /SNL
Bank-level Cultural Distance by Gelfand et al.	0.01	0.01	0.00	0.06	1,620	Gelfand et al. (2011)/SNL
Eurozone crises	0.08	0.27	0.00	1.00	330	Datastream
Brexit Salience	0.03	0.17	0.00	1.00	6,375	Authors' calculations
Mechanisms						
Managerial Sentiments	0.16	0.28	-4.31	4.84	12,212	Hassan et al. (forth.)
Country-level Trust Bias (lot of trust – EB)	0.00	0.10	-0.18	0.42	163	Eurobarometer
Country-level Trust Bias (graded – EB)	0.00	0.21	-0.49	0.92	163	Eurobarometer
Country-level Trust Bias (lot of trust – Online)	0.00	0.06	-0.14	0.36	336	Eurobarometer
Country-level Trust Bias (graded – Online)	0.01	0.13	-0.48	0.41	336	Eurobarometer
Nationality at HQ	0.27	0.44	0.00	1.00	660	BankFocus
Nationality at HQ (Senior managers)	0.25	0.43	0.00	1.00	660	BankFocus
Nationality at HQ (First nationalities)	0.19	0.39	0.00	1.00	660	BankFocus
Nationality at HQ (Current managers)	0.21	0.41	0.00	1.00	660	BankFocus
Bank Branches (in 000)	0.08	0.46	0.00	5.80	660	SNL Financial
Log Bank Branches	0.77	1.83	0.00	8.67	660	SNL Financial
Share of Bank Branches	0.03	0.15	0.00	1.00	660	SNL Financial

Notes: The table lists all the variables used in the main analyses of the paper. See **Appendix Table B.1** for the variables from the additional country-level analyses reported in the Online Appendix. For the specific definitions and construction of variables, see Section 3 as well as **Appendix A**. The final column displays the data sources.

Table 2: Bank-level Trust Bias and Probability of Sovereign Exposure

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.353***	1.757***	1.604***	1.630***	1.562***
	[0.110]	[0.329]	[0.301]	[0.300]	[0.310]
Bank-level Branches			-0.090***	-0.153***	-0.163***
			[0.027]	[0.053]	[0.056]
Bank-level Branches (squared)				0.014	0.016
				[0.011]	[0.012]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 3: Bank-level Trust Bias and Probability of Sovereign Exposure in Foreign Target Countries with No Branch Connections.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure
Bank-level Trust Bias	1.230***	2.026***	1.972***
	[0.240]	[0.660]	[0.734]
Bank x Time FEs	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	No
Home Country x Target Country x Time FEs	No	No	Yes
Sample included	Foreign + No Branch	Foreign + No Branch	Foreign + No Branch
Observations	18,984	18,984	16,728

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2; but only for the bank-target country pairs in which the bank does not own any branches in the target country. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4: Bank-level Trust Bias and Probability of Sovereign Exposure when Controlling for Bank-level Relationships with Target country.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure
Bank-level Trust Bias	1.562***	1.638***	1.732***	1.381***	1.371***	1.287***	1.309***	1.290***
	[0.281]	[0.368]	[0.384]	[0.460]	[0.467]	[0.458]	[0.442]	[0.451]
Bank-level Branch Relationship		-0.004	0.000	-0.004	-0.010	-0.012	-0.013	-0.013
		[0.009]	[0.012]	[0.014]	[0.015]	[0.014]	[0.015]	[0.014]
Bank-level Merger Relationship			-0.370	-0.447	-0.418	-0.396	-0.402	-0.366
			[0.641]	[0.609]	[0.642]	[0.622]	[0.620]	[0.638]
Bank-level Media Relationship				0.496	0.472	0.394	0.359	0.394
				[0.358]	[0.360]	[0.383]	[0.381]	[0.393]
Bank-level Political Relationship					0.929	0.872	0.827	0.844
					[0.806]	[0.806]	[0.790]	[0.769]
Bank-level Distance Relationship						-0.071	-0.084	-0.079
						[0.088]	[0.093]	[0.091]
Bank-level Legal Origin Relationship							-0.048	-0.051
							[0.059]	[0.061]
Bank-level Religious Relationship								0.042
								[0.244]
Control for Bank-level Branches	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Bank-level Branches (squared)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Home Country x Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	21,615	21,615	21,615	21,615	21,615	21,615	21,615	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. For the detailed construction of the data and other variables, see Section 3 and **Online Appendix A**. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: *Instrumented* Bank-level Trust Bias and Probability of Sovereign Exposure

Outcome ➔	(1) (2SLS) Sovereign Exposure	(2) (First-stage) Bank-level Trust Bias	(3) (2SLS) Sovereign Exposure	(4) (First-stage) Bank-level Trust Bias
Panel A				
Bank-level Trust Bias	3.014***		4.491***	
	[0.871]		[1.608]	
Bank-level Branches	-0.167***	0.007	-1.113**	0.149**
	[0.055]	[0.013]	[0.453]	[0.066]
Bank-level Branches (squared)	0.020**	-0.003	1.015*	-0.123
	[0.009]	[0.003]	[0.516]	[0.089]
Bank-level Genetic Distance		-13.676***		-7.619***
		[1.229]		[0.882]
First-stage Kleibergen-Paap F-stat		123.84		74.65
First-stage Montiel-Pflueger F-stat		125.93		54.49
Panel B				
Bank-level Trust Bias	2.037***		2.658***	
	[0.531]		[0.874]	
Bank-level Branches	-0.164***	0.004	-0.786**	0.105**
	[0.055]	[0.010]	[0.396]	[0.045]
Bank-level Branches (squared)	0.017*	-0.002	0.724	-0.081
	[0.010]	[0.003]	[0.459]	[0.061]
Bank-level Somatic Distance		-0.043***		-0.027***
		[0.003]		[0.003]
First-stage Kleibergen-Paap F-stat		220.99		69.15
First-stage Montiel-Pflueger F-stat		206.19		118.39
Bank x Time FEs	Yes	Yes	Yes	Yes
Home Country x Target Country x Time FEs	Yes	Yes	Yes	Yes
Observations	21,615	21,615	20,241	20,241
Bank Sample	All	All	Foreign	Foreign

Notes: The table summarizes the results of 2SLS estimations over the full sample period 2010-Q1 to 2021-Q2. *Bank-level Trust Bias* is instrumented with *Bank-level Genetic Distance* in panel A and with *Bank-level Somatic Distance* in panel B. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank-level Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the definition of the other variables, see Section 5.2. First-stage Montiel-Pflueger F-stat tests for weak instruments in the first-stage estimation are implemented in a way that is robust to heteroscedasticity, autocorrelation, and clustering. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: Bank-level Trust Bias and Probability of Sovereign Exposure when Controlling for Bank-level Cultural Distance

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure
Panel A				
Bank-level Cultural Distance by Hofstede	-0.116***			
	[0.024]			
Bank-level Cultural Distance by Schwartz		-0.066***		
		[0.023]		
Bank-level Cultural Distance by Gelfand et al.			-6.675	
			[4.898]	
Panel B				
Bank-level Trust Bias	1.562***	0.947**	1.101**	1.037**
	[0.310]	[0.391]	[0.432]	[0.408]
Bank-level Cultural Distance by Hofstede		-0.069**	-0.073**	-0.070**
		[0.030]	[0.031]	[0.030]
Bank-level Cultural Distance by Schwartz			0.027	0.023
			[0.029]	[0.026]
Bank-level Cultural Distance by Gelfand et al.				-2.246
				[4.283]
Control for Bank-level Branches	Yes	Yes	Yes	Yes
Control for Bank-level Branches (squared)	Yes	Yes	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes
Home Country x Target Country x Time FEs	Yes	Yes	Yes	Yes
Observations	21,615	21,615	21,615	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the definition of the other variables, see Section 5.3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7: External Validity - Bank-level Trust Bias (from Online Survey) and Probability of Sovereign Exposure

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Panel A					
Bank-level Trust Bias (online – lot of trust)	1.439***	1.531***	1.549***	1.508***	1.561***
	[0.176]	[0.428]	[0.427]	[0.419]	[0.470]
Panel B					
Bank-level Trust Bias (online – graded)	0.486***	0.664***	0.679***	0.664***	0.682**
	[0.075]	[0.222]	[0.223]	[0.224]	[0.266]
Control for Bank-level Branches	No	No	Yes	Yes	Yes
Control for Bank-level Branches (squared)	No	No	No	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	47,520	47,520	47,520	47,520	43,230

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Panel A and panel B display separate estimations with two different independent variables, both of which are sourced from our new online survey undertaken across 30 European countries in the second half of the year 2022. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias (online – lot of trust)* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country. *Bank-level Trust Bias (online – graded)* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the average across individuals in home country expressing values from 1 (i.e., "no trust at all") to 4 (i.e., "lot of trust") towards target country. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8: External Validity - Bank-level Trust Bias and *Corporate* Exposures

Panel A	(1)	(2)	(3)	(4)	(5)
Outcome ➔	Corporate Exposure (dummy)	Corporate Exposure (dummy)	Corporate Exposure (dummy)	Corporate Exposure (dummy)	Corporate Exposure (dummy)
Bank-level Trust Bias	2.200***	1.592***	1.687***	1.596***	1.556***
	[0.131]	[0.435]	[0.462]	[0.436]	[0.484]
Panel B					
Outcome ➔	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)
Bank-level Trust Bias	18.338***	12.688***	13.868***	13.034***	12.751***
	[0.916]	[3.197]	[3.504]	[3.194]	[3.498]
Control for Bank-level Branches	No	No	Yes	Yes	Yes
Control for Bank-level Branches (squared)	No	No	No	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	18,255	18,255	18,255	18,255	16,620

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Corporate Exposure*, defined either as a dummy variable indicating any positive exposure (panel A) or the logarithmic -log(x+1)- nominal exposure (in millions; panel B) of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 9: Interaction between Bank-level Trust Bias and Eurozone Crises

Panel A	(1)	(2)	(3)	(4)
Outcome ➔	Sovereign Exposure (dummy)	Sovereign Exposure (dummy)	Sovereign Exposure (dummy)	Sovereign Exposure (dummy)
Bank-level Trust Bias x Eurozone Crises	3.178**	5.438***	3.370**	5.541***
	[1.528]	[1.675]	[1.568]	[1.788]
Bank-level Trust Bias	1.438***	1.404***	1.177***	1.245**
	[0.308]	[0.481]	[0.380]	[0.583]
Panel B				
Outcome ➔	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)
Bank-level Trust Bias x Eurozone Crises	9.642	21.367*	13.411*	25.955**
	[7.597]	[10.863]	[7.811]	[11.281]
Bank-level Trust Bias	11.361***	8.305**	10.093***	7.496*
	[2.688]	[4.171]	[2.690]	[4.501]
Control for Bank-level Branches	Yes	Yes	Yes	Yes
Control for Bank-level Branches (squared)	Yes	Yes	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes
Home Country x Target Country x Time FEs	Yes	Yes	Yes	Yes
Observations	21,615	20,241	7,455	6,979
Bank Sample	All	Foreign	All	Foreign
Event window	Full	Full	±2-year	±2-year

Notes: The table summarizes the results of *Equation (4)* estimated either over the full sample period 2010-Q1 to 2021-Q2 (columns 1 and 2) or over the event window of 2 years before and after 26 July 2012, Draghi's 'Whatever it takes' speech (columns 3 and 4). Dependent variable is *Sovereign Exposure*, defined either as a dummy variable indicating any positive exposure (panel A) or log nominal exposures -in millions- (panel B) of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Eurozone crises* indicate which target-country-time points correspond to crises defined as at least 400 basis points average daily bond yields above Germany in the preceding 3-month period (sourced from Datastream). For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 10: Interaction between Bank-level Trust Bias and Brexit Salience

Panel A	(1)	(2)	(3)	(4)
Outcome ➔	Sovereign Exposure (dummy)	Sovereign Exposure (dummy)	Sovereign Exposure (dummy)	Sovereign Exposure (dummy)
Bank-level Trust Bias x Brexit Salience	0.638	0.604	1.225	1.311
	[1.821]	[1.948]	[2.077]	[2.206]
Bank-level Trust Bias	1.536***	1.632***	1.168***	1.469**
	[0.335]	[0.530]	[0.387]	[0.635]
Panel B				
Outcome ➔	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)
Bank-level Trust Bias x Brexit Salience	29.788***	25.945**	37.097***	35.027***
	[10.691]	[10.268]	[11.111]	[10.774]
Bank-level Trust Bias	10.546***	7.638*	9.544***	7.923
	[2.589]	[4.124]	[3.227]	[4.826]
Control for Bank-level Branches	Yes	Yes	Yes	Yes
Control for Bank-level Branches (squared)	Yes	Yes	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes
Home Country x Target Country x Time FEs	Yes	Yes	Yes	Yes
Observations	21,615	20,241	8,445	7,909
Bank Sample	All	Foreign	All	Foreign
Event window	Full	Full	±2-year	±2-year

Notes: The table summarizes the results of *Equation (5)* estimated either over the full sample period 2010-Q1 to 2021-Q2 (columns 1 and 2) or over the event window of 2 years before and after 23 June 2016, Brexit referendum (columns 3 and 4). Dependent variable is *Sovereign Exposure*, defined either as a dummy variable indicating any positive exposure (panel A) or log nominal exposures -in millions- (panel B) of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Brexit Salience* is a dummy variable indicating EU banks' exposures towards UK after 23 June 2016 (Brexit referendum). For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 11: Country-level Trust Bias and Managers' Country-specific Sentiments during Earning Calls

Outcome ➔	(1) Managerial Sentiments	(2) Managerial Sentiments	(3) Managerial Sentiments	(4) Managerial Sentiments
Panel A				
Country-level Trust Bias (lot of trust – Eurobarometer)	1.612***	0.838**	1.046***	0.571***
	[0.288]	[0.365]	[0.121]	[0.145]
Observations	11,465	10,750	12,212	11,459
Panel B				
Country-level Trust Bias (graded – Eurobarometer)	0.593***	0.153*	0.406***	0.125***
	[0.141]	[0.087]	[0.076]	[0.045]
Observations	11,465	10,750	12,212	11,459
Panel C				
Country-level Trust Bias (lot of trust – Online Survey)	2.173***	0.594**	1.823***	0.322**
	[0.626]	[0.262]	[0.506]	[0.152]
Observations	18,956	17,988	21,910	20,869
Panel D				
Country-level Trust Bias (graded – Online Survey)	0.481**	0.060	0.494**	0.026
	[0.189]	[0.088]	[0.192]	[0.042]
Observations	18,956	17,988	21,910	20,869
Home Country x Time FEs	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes
Aggregated Over	Financial Firms	Financial Firms	All Firms	All Firms
Country-Pair Sample	All	H-Country≠T-Country	All	H-Country≠T-Country

Notes: The table summarizes the results of *Equation (6)* estimated over the full sample period 2002-Q1 to 2020-Q4. Each panel displays a separate estimation with a different definition of *Country-level Trust Bias*, sourced either from Eurobarometer (panels A/B) or from our new online survey (panels C/D). Dependent variable is *Managerial Sentiments*, defined as the average managerial sentiment expressed across firms located in the same home country, talking about the same target country, at the same point in time, sourced from Hassan et al. (Forthcoming). For the detailed construction of the data, see Section 3. Robust standard errors are clustered at country-pair level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 12: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Panel A					
Bank Branches in Target Country	0.278***	0.281***	0.157***	0.156***	0.121**
	[0.043]	[0.042]	[0.024]	[0.024]	[0.053]
Panel B					
Log of Bank Branches in Target Country	0.110***	0.111***	0.074***	0.071***	0.046***
	[0.008]	[0.008]	[0.009]	[0.010]	[0.014]
Panel C					
Share of Bank Branches in Target Country	1.105***	1.105***	0.590***	0.590***	0.682**
	[0.087]	[0.087]	[0.096]	[0.096]	[0.282]
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	660	660	660	660	600

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures. Each panel displays a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the employees of the bank at headquarters, sourced from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Online Appendix for

Cultural Stereotypes of Multinational Banks[1]

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May 2024

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Appendix A: Additional Data Sources and Descriptive Statistics

BankFocus

For information on the nationalities of directors and managers employed in the headquarters of banks, we use BankFocus, provided by Bureau van Dijk. BankFocus tracks the characteristics of current and former managers of global parent banks at the unique individual ID level and extracts this information from various external sources (such as Refinitiv and World'Vest Base Inc.) as well as from its own manual searches via company websites, annual reports and other types of public information.

We manually match EBA banks that have branch information available on SNL to those in BankFocus. Here we have a full overlap between these two databases. Only 22 of these 107 banks turn out to have the relevant director and manager information on BankFocus. By using this subset of banks and the nationalities of all the current/former managerial employees linked to each, we create a dummy variable indicating whether a given nationality of a target country is represented at the managerial team in a bank's headquarters. We also calculate variants focusing only on the senior managers (i.e., executive board, board of directors and senior management), only on the first nationality of each individual included in the dataset[2] and only on those individuals who are currently employed by the bank (as of November 2022).

SDC Platinum

As an additional proxy for the flow of financial information across countries, we extract from SDC Platinum the total number of bank mergers between the home country and the target country of a bank in the years starting from 1985 up to the pre-crisis year of 2008. Focusing on mergers creates a risk of underestimating other potential channels via which financial institutions may set up branches in foreign countries, such as greenfield investments. The identifying assumption is that the

[2] BankFocus reports nationalities of each individual up to five different countries.

method of foreign bank entry does not meaningfully differ across European countries or at least that it is orthogonal to the sovereign risk.

Factiva

We follow Guiso, Sapienza, and Zingales (2009) in creating a more general information proxy between countries. We search the headlines of all news articles covered in each country's highest circulated news source (in the local language) in Factiva for the years between 2003 and 2007.[3] We record the frequency with which each country or its citizens is mentioned in another country's news headlines, and divide this by the total number of times in which the country or its citizens are mentioned in any news headline in our sample (see **Appendix Table A.3** for the news sources covered in each country and the corresponding language). Formally:

$$\text{Country-level Media Coverage}_{h,c} = \frac{Coverage_{h,c}}{\sum_{h=1}^{n} Coverage_{h,c}},$$

This index summarizes the relative familiarity of a country and its citizens to other countries.

MapQuest

We use an API for MapQuest to extract the shortest distance between the capital cities of each country pair in our sample. We compute log distance in kilometres between the capital city of the bank's home country and the capital city of the target country. This variable is defined as log (x + 1) and naturally takes the value of zero for domestic observations.

United Nations General Assembly Voting Records

[3] We focus on the highest-circulated news sources that are available via Factiva. For Cyprus and Malta, there is no pre-crisis press coverage in Factiva. Thus, we use the most recently available coverage for the period furthest away in time from the Eurozone crisis, between the years 2016 and 2018.

A recent literature in political science has emphasised the signal value of voting patterns in United Nations General Assembly, reflecting the political alignments of countries around the world and over time (see, among others, Gartzke, 2010; Dreher and Sturm, 2012; Bailey, Strezhnev and Voeten, 2017; Bailey and Voeten, 2018). We follow Fisman, Knill, Mityakov and Portnykh (2022) in generating a proxy for the political relationships across countries. We download UNGA voting data from Voeten, Strezhnev and Bailey (2009) and then restrict our dataset to a symmetric matrix of the 15 countries included in Eurobarometer and the most recent year before our sample period starts (i.e., 2009). UNGA voting records include entries equal to one of the following for each year: "yes," "no," "abstain," "absent," or "non-member". We code the first three answers as follows: 1 for "yes"; 2 for "abstain"; and 3 for "no". Our baseline measure of political relations is then computed as:

$$\text{Country-level Political Relationship}_{h,c} = 1 - 2\frac{d}{d_{max}},$$

where d is the sum of metric distances between votes by bilateral pairs (h,c) in a given year and d_{max} is the largest possible metric distance for those votes. The resulting measure varies from -1 (complete political misalignment) to +1 (complete political alignment). To take into account indirect political relationships (via host countries) between banks and target countries, we calculate a branch-weighted average of this measure for each bank-target country pair:

$$\text{Bank-level Political Relationship}_{b,c} = \sum_{i=1}^{n}\left(\text{Weight}_{b,i}\ x\ \text{C. L. Pol. Rel.}_{i,c}\right)$$

where the weights are the share of host-country (i) branches in the branch network of the multinational bank (b).

Single Supervisory Mechanism (SSM)

ECB's Single Supervisory Mechanism aims to improve the safety and soundness of the European banking system, increase financial integration and stability and ensure consistent supervision across European banks. Under SSM, the ECB has authority to:

- conduct supervisory reviews, on-site inspections and investigations;
- grant or withdraw banking licences;
- assess banks' acquisition and disposal of qualifying holdings;
- ensure compliance with EU prudential rules; and
- set higher capital requirements ("buffers") in order to counter any financial risks.

The ECB has been announcing the names of "significant" banks in Europe to come under its direct supervision since 4 September 2014. The last list of significant banks (as of writing this paper) was announced on 15 November 2022 and contains 110 banks in total. We manually collect the series of announcements available on SSM website[4] and then match them to the closest time points in our sample as well as to the banks included in EBA/CEBS disclosures. The subsample of significant banks that are directly supervised by ECB during at least part of our sample period can be found in **Appendix F**.

Miscellaneous

The literature suggests structural (and non-directional) variables that may capture linguistic, historical, and geographical channels of information transmission. Sharing a common language has been shown to have a substantial positive impact on investors' asset holdings. We employ an indicator variable taking the value of 1 if at least 9% of the population in both countries speaks the same language and 0 otherwise. Another indicator that may capture common cultural and historical heritage across nations is colonial ties, which we measure as a dummy variable picking up the pairs of countries that have ever had a colonial relationship in the

[4] See https://www.bankingsupervision.europa.eu/press/publications/html/index.en.html?skey=list.

past. We also control for countries that share a common border. We extract all of these variables from the classic dataset provided by Mayer and Zignago (2011).

The six variables regarding cultural traits across nations (in Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long-term Orientation and Indulgence) come from Hofstede (2001). We manually construct the distances between countries in each of these traits by computing the absolute values of the differences in that respective trait for each country-pair observation.

Finally, we construct a measure of common legal origins across country pairs from La Porta, Lopez-de Silanes, and Shleifer (2008). Information on daily credit default swap (CDS) premia and yields for target country government bonds come from Datastream. These variables are summarised in **Table 1** in the manuscript and **Table B.1** in this appendix**.**

References

Bailey, M. A., Strezhnev, A., & Voeten, E. (2017), "Estimating dynamic state preferences from United Nations voting data," *Journal of Conflict Resolution*, 61(2), 430-456.

Bailey, M. A., & Voeten, E. (2018), "A two-dimensional analysis of seventy years of United Nations voting," *Public Choice*, 176(1), 33-55.

Dreher, A., & Sturm, J. E. (2012), "Do the IMF and the World Bank influence voting in the UN General Assembly?" *Public Choice*, 151(1), 363-397.

Fisman, R., Knill, A., Mityakov, S., & Portnykh, M. (2022), "Political Beta," *Review of Finance*, 26(5), 1179-1215.

Gartzke, E. (2010), "The Affinity of Nations: Similarity of State Voting Positions in the UNGA," http://dss.ucsd.edu/~egartzke/htmlpages/data.html.

Guiso, Luigi, Paolo Sapienza & Luigi Zingales (2009), "Cultural Biases in Economic Exchange," *Quarterly Journal of Economics* 124, pp.1095-1131.

Hofstede, G. (2001). *Culture's consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*. Sage.

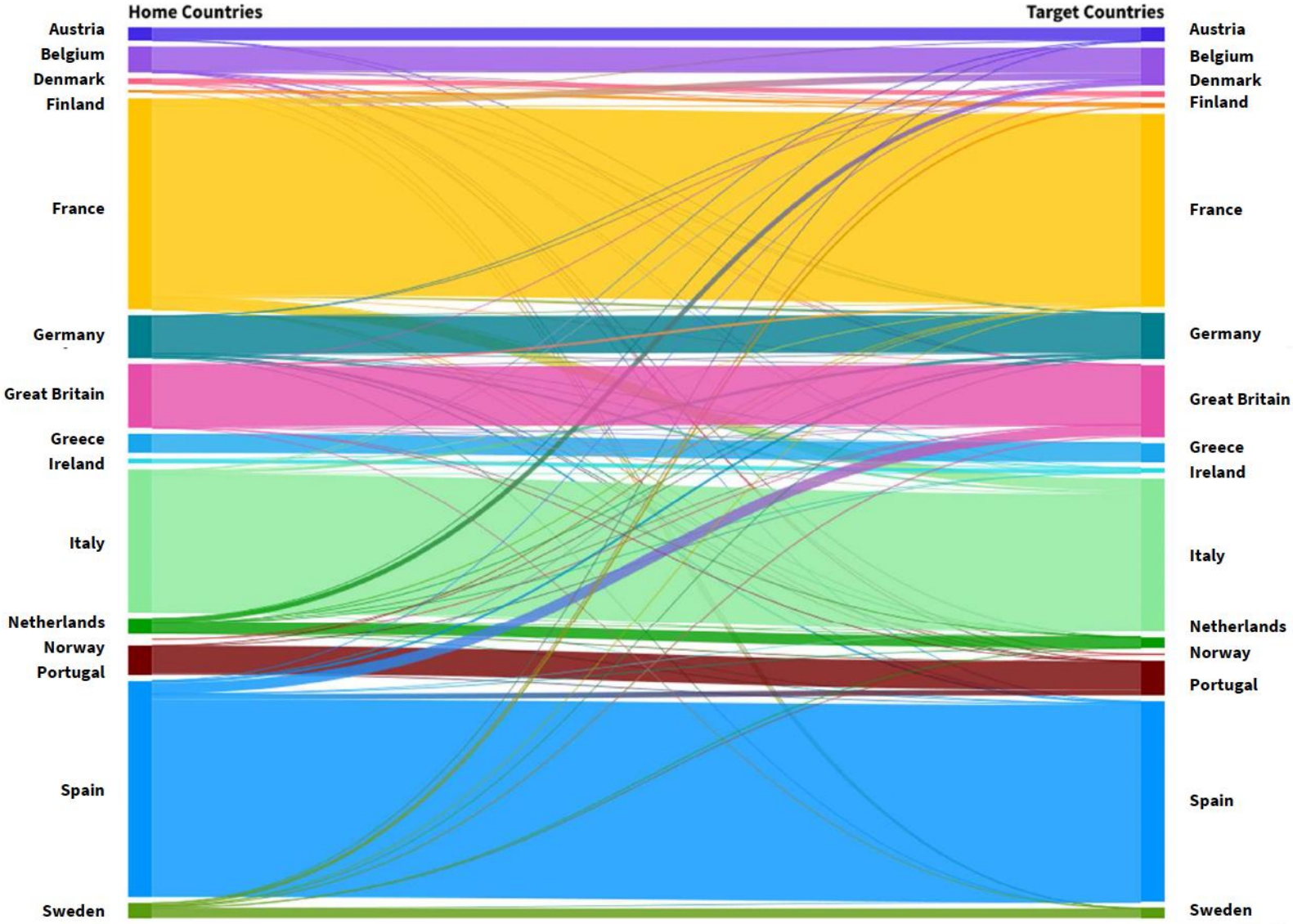
La Porta, R., Lopez-de Silanes, F. & Shleifer. A. (2008), "The Economic Consequences of Legal Origins," *Journal of Economic Literature*, 46, 285–332.

Mayer, T., & Zignago S. (2011), "Notes on CEPII's Distances Measures: The GeoDist Database." CEPII Working Paper No. 2011-25.

Pursiainen, Vesa (2022), "Cultural Biases in Equity Analysis," *Journal of Finance* 77, pp.163-211.

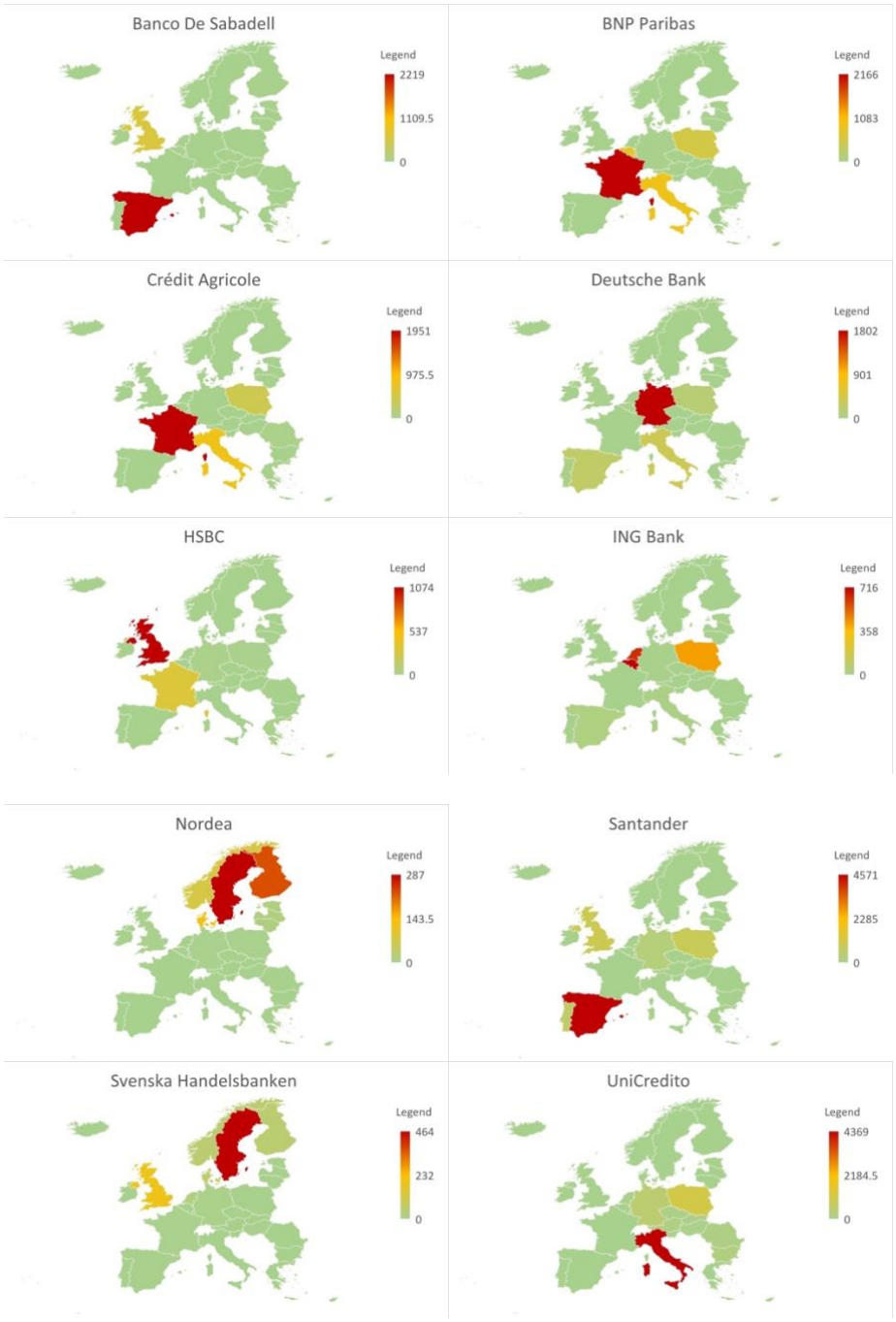
Voeten, E., Strezhnev, A., & Bailey, M. (2009), "United Nations General Assembly Voting Data", https://doi.org/10.7910/DVN/LEJUQZ, Harvard Dataverse, V29.

Figure A.1: Flows of Bank Branches across Countries.



Note: This figure shows a Sankey diagram in which flows between countries are proportional to the total number of bank branches that home country banks own in target countries. Source: SNL Financial.

Figure A.2: Branch Penetration at Bank-level.



Note: This figure shows the branch numbers of the ten most multinational banks in our sample. Source: SNL Financial.

Table A.1: Data Disclosure Details from the European Banking Authority (EBA)

Disclosure Name	Disclosure Date	Information Date	Banks covered	Banks with sovereign breakdown
2010 EU-wide stress testing exercise	23/07/2010	2010-Q1	91	91
2011 EU-wide stress testing exercise	15/07/2011	2010-Q4	90	90
EU Capital exercise 2011	08/12/2011	2011-Q3	65	65
EU Capital exercise 2012	03/10/2012	2011-Q4; 2012-Q2	62	62
2013 EU-wide transparency exercise	16/12/2013	2012-Q4; 2013-Q2	64	64
2014 EU-wide stress testing exercise	26/10/2014	2013-Q4	123	123
2015 EU-wide transparency exercise	24/11/2015	2014-Q4 & 2015-Q2	105	105
2016 EU-wide transparency exercise	02/12/2016	2015-Q4 & 2016-Q2	131	87
2017 EU-wide transparency exercise	24/11/2017	2016-Q4 & 2017-Q2	132	91
2018 EU-wide transparency exercise	14/12/2018	2017-Q4 & 2018-Q2	130	130
2019 EU-wide transparency exercise	29/11/2019	2018-Q4 & 2019-Q2	131	131
2020-1 EU-wide transparency exercise	08/06/2020	2019-Q4	127	127
2020-2 EU-wide transparency exercise	11/12/2020	2020-Q2	129	129
2021 EU-wide transparency exercise	03/12/2021	2020-Q4 & 2021-Q2	120	117

Notes: The table lists the disclosures of various exercise results as announced by the EBA. Information date refers to the data time-points in each disclosure for which the values of banks' sovereign positions can be found. Not all banks covered in 2016, 2017 and 2021 exercises provide the full breakdown of their sovereign portfolio due to changing requirements in these exercises. 2010 EU-wide stress testing exercise was conducted by the Committee of European Banking Supervisors (CEBS), which was comprised of senior representatives of bank supervisory authorities and central banks of the European Union and later succeeded by the EBA. 2010 exercise was made public by national regulators; however the EBA does not provide the related data. Hence, this data set was obtained from the Peterson Institute for International Economics while all other data sets were acquired from the EBA

Table A.2: News Sources Searched via Factiva

Country	News source	Language
Austria	Die Presse	German
Belgium	Agence Belga	Dutch
Denmark	Politiken	Danish
Finland	Kauppalehti	Finnish
France	Le Figaro	French
Germany	Süddeutsche Zeitung	German
Greece	Athens News Agency	English
Ireland	The Irish Independent	English
Italy	Corriere della Sera	Italian
Netherlands	MD Business News	English
Norway	Norsk Telegrambyrå	Norwegian
Portugal	Jornal de Notícias	Portuguese
Spain	El Pais	Spanish
Sweden	Nyhetsbyrån Direkt	Swedish
Great Britain	The Sun	English

Notes: The table lists the news source and the corresponding language for each country searched via Factiva.

Table A.3: Correlation Matrix for Country-Level Variables

	Trust Bias	Bank Branches (in 000)	Bank Mergers (in 000)	Media Coverage	Common Language	Colonial Relationship	Distance (log)	Common Border	Common Legal Origin
Trust Bias	1								
Bank Branches (in 000)	0.4488	1							
Bank Mergers (in 000)	0.4906	0.7684	1						
Media Coverage	0.6851	0.4881	0.4899	1					
Common Language	0.5766	0.4371	0.4913	0.6298	1				
Colonial Relationship	0.6808	0.5295	0.5849	0.7747	0.7128	1			
Distance (log)	-0.7908	-0.5763	-0.6426	-0.7751	-0.7723	-0.8639	1		
Common Border	0.5493	0.3408	0.3961	0.5729	0.6822	0.6147	-0.6569	1	
Common Legal Origin	0.4695	0.2399	0.2784	0.456	0.4155	0.4373	-0.4356	0.4635	1

Notes: All reported correlation coefficients are significant at least at 1% level. Total number of observations: 221.

Table A.4: Trust Level by Home and Target Countries

		Target countries														
		Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Norway	Portugal	Spain	Sweden	GB
Home countries	Austria	0.65	0.25	0.21	0.24	0.17	0.36	0.15	0.15	0.12	0.23	0.27	0.14	0.14	0.29	0.15
	Belgium	0.18	0.40	0.23	0.18	0.23	0.19	0.09	0.15	0.08	0.24	0.19	0.10	0.11	0.20	0.18
	Denmark	0.34	0.30	0.48	0.34	0.19	0.29	0.13	0.27	0.11	0.40	0.54	0.13	0.12	0.47	0.35
	Finland	0.41	0.29	0.42	0.73	0.23	0.27	0.15	0.25	0.10	0.33	0.55	0.13	0.12	0.47	0.34
	France	0.11	0.22	0.18	0.16	0.33	0.16	0.09	0.13	0.07	0.18	0.19	0.11	0.12	0.20	0.09
	Germany	0.32	0.18	0.25	0.22	0.22	0.55	0.11	0.13	0.08	0.24	0.25	0.10	0.13	0.29	0.17
	Greece	0.08	0.17	0.18	0.10	0.25	0.17	0.51	0.16	0.12	0.18	0.09	0.16	0.21	0.13	0.15
	Ireland	0.14	0.16	0.18	0.13	0.15	0.18	0.09	0.44	0.11	0.19	0.14	0.10	0.11	0.13	0.18
	Italy	0.11	0.09	0.13	0.16	0.12	0.18	0.07	0.08	0.20	0.14	0.16	0.05	0.11	0.18	0.11
	Netherlands	0.15	0.29	0.36	0.30	0.11	0.15	0.08	0.15	0.04	0.36	0.35	0.09	0.08	0.37	0.21
	Norway		0.31	0.57		0.22	0.27	0.14	0.27	0.12	0.37		0.13	0.13		0.38
	Portugal	0.05	0.10	0.10	0.06	0.21	0.11	0.06	0.06	0.07	0.11	0.07	0.44	0.13	0.06	0.12
	Spain	0.13	0.16	0.17	0.14	0.13	0.20	0.12	0.13	0.15	0.20	0.19	0.14	0.49	0.20	0.10
	Sweden	0.58	0.42	0.63	0.59	0.34	0.41	0.31	0.45	0.28	0.48	0.69	0.33	0.29	0.64	0.53
	Great Britain	0.15	0.17	0.27	0.18	0.08	0.15	0.11	0.15	0.08	0.30	0.22	0.12	0.09	0.20	0.39

Notes: The table shows trust levels between home and target country pairs defined as the portion of individuals in home country expressing “a lot of trust” towards target country, measured via Eurobarometer surveys.

Table A.5: Trust Bias by Home and Target Countries

		Target countries														
		Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Norway	Portugal	Spain	Sweden	GB
Home countries	Austria	0.38	0.00	-0.06	-0.04	-0.05	0.10	-0.02	-0.06	-0.01	-0.04	-0.04	-0.03	-0.04	-0.01	-0.08
	Belgium	-0.03	0.12	-0.02	-0.04	0.02	-0.03	0.00	-0.01	0.02	-0.03	-0.06	0.01	-0.01	-0.04	-0.04
	Denmark	0.05	-0.04	0.31	0.04	-0.08	-0.03	-0.05	0.02	-0.04	0.10	0.22	-0.04	-0.06	0.15	0.05
	Finland	0.05	-0.04	0.06	0.36	-0.08	-0.07	-0.10	-0.05	-0.12	-0.03	0.16	-0.12	-0.14	0.09	0.03
	France	-0.07	0.04	-0.01	-0.03	0.25	0.06	0.01	0.01	0.05	-0.02	-0.03	0.04	0.04	-0.01	-0.05
	Germany	0.09	-0.03	0.01	-0.02	0.06	0.39	-0.02	-0.05	0.00	0.00	-0.01	-0.04	-0.02	0.03	-0.07
	Greece	-0.16	-0.13	-0.18	-0.15	-0.07	-0.12	0.42	-0.07	0.01	-0.18	-0.18	-0.02	0.00	-0.13	-0.14
	Ireland	-0.06	-0.04	-0.07	-0.08	-0.01	-0.05	0.01	0.41	0.06	-0.06	-0.09	0.01	-0.01	-0.10	-0.04
	Italy	-0.04	-0.03	0.00	0.00	0.06	0.10	0.01	0.01	0.21	0.01	-0.03	0.00	0.03	0.00	0.03
	Netherlands	-0.06	0.03	0.18	0.08	-0.09	-0.02	-0.05	0.01	-0.03	0.21	0.10	-0.01	-0.02	0.12	0.01
	Norway		0.01	0.24		-0.05	-0.04	-0.08	0.02	-0.06	0.05		-0.08	-0.10		0.10
	Portugal	-0.10	-0.08	-0.11	-0.11	0.01	-0.06	-0.03	-0.06	0.04	-0.10	-0.13	0.37	0.04	-0.13	-0.05
	Spain	-0.08	-0.07	-0.07	-0.08	-0.07	0.01	-0.04	-0.04	0.05	-0.05	-0.05	0.04	0.41	-0.04	-0.13
	Sweden	0.08	-0.06	0.12	0.08	-0.11	-0.08	-0.08	0.02	-0.08	-0.03	0.15	-0.07	-0.12	0.10	0.07
	Great Britain	-0.05	-0.02	0.02	-0.03	-0.08	-0.11	-0.01	0.03	0.03	0.04	-0.01	0.01	-0.01	-0.03	0.28

Notes: The table shows trust bias between home and target country pairs. Trust Bias is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (2)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys.

Appendix B: Analysis with Country-Level Trust Biases

Empirical Model

In this section, we follow the previous literature by estimating a specification using country-level variation in bilateral trust:

$$\text{Sovereign Exposure}_{b,h,c,t} = \beta_1 \text{Country-level Trust Bias}_{hc} + \beta_2 X_{hc} \quad (1)$$

$$+ \beta_3 \gamma_{bt} + \beta_4 \mu_{ct} + \varepsilon_{bhct}$$

where $Sovereign\ Exposure_{bhct}$ is a dummy variable for whether or not bank b of home country h has any positive exposure to target country c at time t. We estimate linear probability models, thereby focusing on headquarter-led entry/exit decisions in consolidated bank portfolios.[5]

For three reasons, we focus on a binary indicator of whether a bank has *any* positive exposure to a sovereign at a point in time. First, because of the consolidated nature of EBA disclosures, we cannot distinguish between bonds purchased at headquarters and at subsidiaries. We therefore consider the extensive margin of sovereign exposures, since strategic decisions such as whether or not a bank should invest in a country are taken at bank headquarters. Second, there is some heterogeneity in sovereign debt valuation methods across disclosures, and some flexibility at the bank level in categorizing sovereign exposures as residing on the trading versus banking books, which in turn affects reported values.[6] Such flexibility could lead to self-reporting biases (Kaplow and Shavell 1994).[7] Third, since we do not observe currency denomination, exchange rate fluctuations can introduce variation in reported sovereign exposures in different currencies in the absence of active investment decisions. Despite its obvious drawbacks, we also consider the intensive margin in robustness checks, employing the log of the nominal values (in million Euros) of sovereign exposures reported by banks, and obtain qualitatively similar results.

[5] This also helps with interpretation of our coefficients as marginal probabilities.

[6] For instance, direct sovereign exposures reported in the 2021 EU-wide transparency exercise contain the following four categories, each with a different accounting framework: financial assets held for trading, financial assets designated at fair value through profit or loss, financial assets at fair value through other comprehensive income, and financial assets at amortised cost.

[7] This could occur, for example, if more trusting banks strategically underreport their exposures to risky sovereigns during sovereign debt crises.

We define country-level bilateral trust as the share of respondents in home country *h* expressing "a lot of trust" in target country *c*. We adjust these self-reported measures for country fixed effects, since some nationalities may be universally regarded as more trustworthy, and because respondents of some nationalities may universally trust foreigners more or less. In implementing this adjustment – in moving from country-level trust to *Country-level Trust Bias*$_{hc}$ (the variable that appears in eq. 1) – we follow Guiso et al. (2009), Bloom et al. (2012) and Pursiainen (2021), running a gravity regression of bilateral trust for country pairs:

$$\text{Country-level Bilateral Trust}_{h,c} = \alpha_1 \theta_h + \alpha_2 \vartheta_c + \epsilon_{hc} \quad (2)$$

Residuals from this regression, after controlling for home country (θ_h) and target country (ϑ_c) fixed effects, capture the relative trust bias of home country *h* in target country *c* (ϵ_{hc} = *Country-level Trust Bias*$_{hc}$). The resulting measure is illustrated in **Table A.5** for Eurobarometer and **Table D.3** for our online survey whereas the levels of trust across countries (without the gravity adjustment in eq. 2) are reported in **Table A.4** and **Table D.2**.

Since we have multiple observations for each home and target country, we can include fixed effects to remove potential time-varying dynamics in these two dimensions. However, because each bank's treatment is determined by the pair-specific trust relationship between their home and target countries, we cannot employ fixed effects in this dimension and have to parametrically control for other confounding factors.

The country-pair controls (X_{hc}) in *Equation (1)* include two sets of variables. Directional variables are *Bank Branches*$_{hc}$ which measures the total number of bank branches in target country *c* belonging to a parent bank from home country *h;*[8] *Bank Mergers*$_{hc}$ which is the total number of bank mergers between 1985 and 2008 in which a bank in home country *h* acquired a bank in target country *c*; and *Media Coverage*$_{hc}$ which records the frequency with which each target country or its citizens are mentioned in home country news headlines, divided by the total number of times the target country or its citizens are mentioned in any news headline in the sample. Non-directional controls are *Common Language*$_{hc}$ which takes the value of 1 if at

[8] Unfortunately, branch information cannot be derived historically since SNL Financial only provides the most recent data available (as of February 2016).

least 9% of the population in both countries speaks the same language and 0 otherwise;[9] *Colonial Relationship*$_{hc}$, a dummy variable picking up pairs of countries in a colonial relationship at any time in the past; *Distance*$_{hc}$ which is log distance in kilometers between the capital cities of countries *h* and *c*; *Common Border*$_{hc}$ which is a dummy for pairs of countries sharing a common border; and *Common Legal Origin*$_{hc}$ which is a dummy for shared legal origins across countries.[10] Notice that we purposefully abstain from including too many economic controls (such as trade or investments) for country-pairs as these variables themselves could be affected by trust (as proven by Guiso et al., 2009), rendering them as "bad controls" in our setting. Summary statistics for all the variables used in this section can be found in **Table B.1**.

We include fixed effects in *Equation (1)* at the *bank x time* (γ_{bt}) and *target-country x time* (μ_{ct}) levels.[11] The former control for time-varying bank-level factors that influence all target country exposures of a bank at any point in time. If a bank shifts away from sovereign investments because it can lend more lucratively to corporates, for example, this will not affect our estimates so long as the shift is homogenous across sovereigns. The latter control for time-varying target-country-level factors affecting lending by all banks to a country at a point in time. If a country experiences a crisis and its sovereign debt becomes riskier, for example, this will not affect our estimates if all banks change their behaviour vis-à-vis the newly risky country similarly. Our coefficient of interest (β_1) will not then be driven by overall bank or target-country characteristics.

Results

Table B.2 reports estimates of *Equation (1)*. The dependent variable is a binary variable for whether or not a bank has exposure to a target country at a point in time. Column 1 reports estimates with *bank x time* and *target-country x time* fixed effects but no additional country-level controls. Columns 2-9 add country-level controls in pairwise fashion to determine if any

[9] The threshold of 9% (imposed by Mayer and Zignago, 2011) is arbitrary; but we also experimented with an alternative 20% threshold without leading to a qualitative change in our results. We keep the former definition since it is more likely to pick up the latent lingual relationships across countries.

[10] Construction of these variables and data sources are detailed in **Appendix A** and summary statistics are provided in **Table 1**.

[11] Since banks in our sample never change their home countries, it is unnecessary to include a third set of fixed-effects at *home-country x time* level since such coarse variation is already absorbed by *bank x time* fixed-effects.

of these singlehandedly explains the effect of trust bias on sovereign exposures. Column 10 includes all control variables.

Column 1 shows a positive, statistically significant relationship between the trust bias of a bank toward a target country and the bank's probability of lending to its government. Columns 2-9 confirm that the result is robust to controls. The effect is not obviously related to informational linkages or geographical/historical/legal distance between countries, in other words.[12] Although point estimates shrink as controls are added, they remain uniformly significant at the 99 percent level.[13] Column 10 controls for all of these linkages and confirms that country-level trust biases still have a positive relationship with banks' sovereign exposures.

It is possible that omitted county-pair characteristics are influential in driving both cultural trust bias and sovereign exposures, creating a spurious statistical relationship between the two. We therefore follow the method of Oster (2019) to shed light on the importance of unobservables in generating the coefficients in **Table B.2**. Oster bounds are thus presented in **Table B.4**. *Rmax upper bound* is defined as 1.3 times the R-squared in the specification that controls for all observables in **Table B.2,** Column 10. The bottom row presents Oster's delta, which indicates the selection on unobservables relative to observables needed to fully explain the results by omitted variable bias. The delta value greater than 1 is reassuring: given the wide range of controls included in our models, it is implausible that unobserved factors are at least as important as the observables included in the specification with all controls.

Home bias in general (French and Poterba, 1991) and in the context of European sovereign debt markets (Saka, 2020) could still be an issue. Since survey respondents tend to trust residents of their own country more than others (see **Table A.5**), the estimated coefficients could be picking up home bias in investment occurring for other reasons.[14] In **Table B.5**, we

[12] **Table B.3** shows that, when estimated as a stand-alone predictor, each of these control variables are significant in predicting the probability of bank sovereign exposure in expected directions.

[13] It makes sense that the coefficient of interest shrinks as we add country-level controls. As Guiso et al. (2009) discuss, some of these economic and financial control variables may themselves influence levels of trust between countries, or may be affected by such trust, rendering them as "bad controls" in our setting. For instance, it is not unreasonable to argue that physically distant countries may vest less trust in each other or countries that have a better relationship (i.e., trusting each other) are also more likely to cover each other's news in their media channels. High correlations reported in **Table A.3** between these variables and our measure of trust support these possibilities.

[14] The possibility that trust itself might partially explain this home bias phenomenon; especially with regard to its cultural dimension has previously been discussed in the literature (see Grinblatt and Keloharju 2001).

therefore re-run the same regressions dropping the home-country exposures of each bank. The coefficients of interest are if anything even larger than before.

We also re-run these models substituting the log nominal value (in millions) of the banks' sovereign exposures for the binary indicator of any exposure. The results reported in **Table B.6** carry over when we use this full variation.[15]

Appendix Tables B.9 and **B.10** replicate **Table B.2** with two different definitions of trust generated via our online survey. One, *Country-level Trust Bias (online - lot of trust)*, is our benchmark measure (a la Pursiainen, 2021) and measures the bias when trust is simply defined as percentage of people in the home country who expressed "a lot of trust" in the target country. The other, *Country-level Trust Bias (online - graded)*, is a la Guiso et al. (2009) and grades the survey responses as 1 (i.e., "no trust at all"), 2 (i.e., "not very much trust"), 3 (i.e., "some trust") and 4 (i.e., "lot of trust"). **Appendix Tables B.11** and **B.12** report corresponding estimates after dropping domestic observations from the sample. Again, our main results and interpretations for **Table B.2** hold when the model is estimated using the new online survey, more than doubling the number of observations in the estimation sample.

[15] We additionally experiment with other ways of clustering standard errors. Our estimates remain significant at conventional levels in response to double clustering at country-pair and time levels (see **Table B.7**) or at country-pair and bank levels (see **Table B.8**).

Table B.1: Summary Statistics (for Appendix B only)

Variables	Mean	Std. dev.	Min	Max	Obs.	Source
Country-level analysis						
Sovereign Exposure (dummy)	0.56	0.50	0.00	1.00	27,409	EBA & CEBS
Sovereign Exposure (log million)	3.02	3.37	0.00	12.32	27,409	EBA & CEBS
Country-level Trust Bias (lot of trust)	0.00	0.11	-0.18	0.42	221	Eurobarometer
Country-level Trust Bias (online - lot of trust)	0.00	0.06	-0.14	0.36	810	Online Survey
Country-level Trust Bias (online - graded)	0.00	0.13	-0.48	0.78	810	Online Survey
Country-level Bank Branches (in 000)	0.53	3.08	0.00	28.72	221	SNL Financial
Country-level Bank Mergers (in 000)	0.01	0.06	0.00	0.61	221	SDC Platinum
Country-level Media Coverage	0.09	0.14	0.00	0.77	221	Factiva
Country-level Common Language	0.12	0.32	0.00	1.00	221	M&Z (2011)
Country-level Colonial Relationship	0.08	0.27	0.00	1.00	221	M&Z (2011)
Country-level Distance (log)	6.66	1.83	0.00	8.12	221	MapQuest
Country-level Common Border	0.19	0.39	0.00	1.00	221	M&Z (2011)
Country-level Common Legal Origin	0.32	0.47	0.00	1.00	221	LP (2008)

Notes: The table lists all the variables used in the additional analyses of **Online Appendix B**. For the specific definitions and construction of variables, see Section 3 in the paper as well as **Appendix A**. The final column displays the data sources.

Table B.2: Country-Level Trust Bias and Probability of Sovereign Exposure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Outcome ➔	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure
Country-level Trust Bias	1.093***	1.163***	1.230***	0.560***	0.848***	0.913***	0.673***	0.901***	0.902***	0.429***
	[0.085]	[0.101]	[0.100]	[0.118]	[0.096]	[0.110]	[0.128]	[0.075]	[0.086]	[0.131]
Country-level Bank Branches		-0.003								-0.002
		[0.002]								[0.003]
Country-level Bank Mergers			-0.335***							-0.659***
			[0.115]							[0.174]
Country-level Media Coverage				0.558***						0.516***
				[0.119]						[0.171]
Country-level Common Language					0.116***					0.038
					[0.027]					[0.039]
Country-level Colonial Relationship						0.087**				-0.200**
						[0.036]				[0.077]
Country-level Distance							-0.028***			-0.044***
							[0.007]			[0.016]
Country-level Common Border								0.089***		0.011
								[0.022]		[0.021]
Country-level Common Legal Origin									0.082***	0.050**
									[0.026]	[0.024]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409
Adjusted R^2	0.478	0.478	0.479	0.486	0.480	0.478	0.481	0.481	0.481	0.494

Notes: The table summarizes the results of *Equation (1)* in Appendix B estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Country-level Trust Bias* is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (2)* in Appendix B) in which trust is defined as the portion of individuals in home country who expresses "a lot of trust" towards target country, measured via Eurobarometer surveys. For the specific definitions and data sources of control variables, see **Appendix A**. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.3: Country-Level Bilateral Variables and Probability of Sovereign Exposure.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure
Country-level Bank Branches	0.015***							
	[0.002]							
Country-level Bank Mergers		0.717***						
		[0.106]						
Country-level Media Coverage			0.901***					
			[0.085]					
Country-level Common Language				0.299***				
				[0.027]				
Country-level Colonial Relationship					0.346***			
					[0.029]			
Country-level Distance						-0.059***		
						[0.005]		
Country-level Common Border							0.217***	
							[0.025]	
Country-level Common Legal Origin								0.207***
								[0.025]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409
Adjusted R^2	0.440	0.438	0.480	0.464	0.464	0.475	0.458	0.458

Notes: The table summarizes the results of *Equation (1)* in Appendix B estimated without the main independent variable over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. For the specific definitions and data sources of control variables, see **Appendix A**. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.4: Country-Level Trust Bias and Probability of Sovereign Exposure - Robustness to Omitted Variables Bias

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3)
Country-level Trust Bias	1.093***	0.429***	
	[0.085]	[0.131]	
Country-level Bank Branches		-0.002	
		[0.003]	
Country-level Bank Mergers		-0.659***	
		[0.174]	
Country-level Media Coverage		0.516***	
		[0.171]	
Country-level Common Language		0.038	
		[0.039]	
Country-level Colonial Relationship		-0.200**	
		[0.077]	
Country-level Distance		-0.044***	
		[0.016]	
Country-level Common Border		0.011	
		[0.021]	
Country-level Common Legal Origin		0.050**	
		[0.024]	
Bounds on the treatment effect (δ=1, Rmax=1.3*R)			(0.429, 1.589)
Delta (Rmax=1.3*R)			1.05
Bank x Time FEs	Yes	Yes	
Target Country x Time FEs	Yes	Yes	
Observations	27,409	27,409	
Adjusted R^2	0.478	0.494	

Notes: Bounds on the *Country-level Trust Bias* effect are calculated using Stata code psacalc, which calculates estimates of treatment effects and relative degree of selection in linear models as proposed in Oster (2019). Delta, δ, calculates an estimate of the proportional degree of selection given a maximum value of the R-squared. Rmax specifies the maximum R-squared which would result if all unobservables were included in the regression. We define Rmax upper bound as 1.3 times the R-squared from the main specification that controls for all observables. Oster's delta indicates the degree of selection on unobservables relative to observables that would be needed to fully explain our results by omitted variable bias. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.5: Country-Level Trust Bias and Probability of Sovereign Exposure (Foreign target countries).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias	1.152***	1.131***	0.952***	0.859***	1.060***	1.097***	0.753***	1.028***	0.842***	0.577***
	[0.174]	[0.170]	[0.168]	[0.148]	[0.180]	[0.168]	[0.154]	[0.166]	[0.144]	[0.149]
Country-level Bank Branches		0.052								-0.017
		[0.036]								[0.032]
Country-level Bank Mergers			6.941***							3.571
			[2.571]							[2.495]
Country-level Media Coverage				0.632***						0.306
				[0.212]						[0.221]
Country-level Common Language					0.097***					0.027
					[0.031]					[0.039]
Country-level Colonial Relationship						0.178***				0.006
						[0.058]				[0.077]
Country-level Distance							-0.114***			-0.095***
							[0.021]			[0.024]
Country-level Common Border								0.056***		-0.056**
								[0.021]		[0.027]
Country-level Common Legal Origin									0.096***	0.031
									[0.023]	[0.026]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample included	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign
Observations	25,603	25,603	25,603	25,603	25,603	25,603	25,603	25,603	25,603	25,603
Adjusted R^2	0.483	0.483	0.485	0.488	0.485	0.484	0.491	0.484	0.487	0.494

Notes: The table summarizes the results of *Equation (1)* in Appendix B estimated over the full sample period 2010-Q1 to 2021-Q2 after dropping domestic observations (i.e., home country=target country). Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Country-level Trust Bias* is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (2)* in Appendix B) in which trust is defined as the portion of individuals in home country who expresses "a lot of trust" towards target country, measured via Eurobarometer surveys. For the specific definitions and data sources of control variables, see **Appendix A**. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.6: Country-Level Trust Bias and Log Nominal Sovereign Exposures.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias	13.181***	11.692***	11.426***	5.820***	9.217***	7.263***	3.016***	10.756***	11.545***	1.473**
	[0.494]	[0.628]	[0.631]	[1.090]	[0.656]	[0.731]	[0.835]	[0.535]	[0.612]	[0.745]
Country-level Bank Branches		0.073***								-0.009
		[0.016]								[0.019]
Country-level Bank Mergers			4.319***							-1.875**
			[0.759]							[0.873]
Country-level Media Coverage				7.690***						3.426***
				[1.101]						[1.245]
Country-level Common Language					1.876***					0.184
					[0.226]					[0.278]
Country-level Colonial Relationship						2.848***				-1.226**
						[0.279]				[0.500]
Country-level Distance							-0.666***			-0.664***
							[0.048]			[0.117]
Country-level Common Border								1.125***		0.255*
								[0.180]		[0.137]
Country-level Common Legal Origin									0.700***	0.359**
									[0.193]	[0.171]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409
Adjusted R^2	0.612	0.616	0.617	0.646	0.629	0.634	0.651	0.624	0.617	0.660

Notes: The table summarizes the results of *Equation (1)* in Appendix B estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as the logarithmic -log(x+1)- nominal exposure (in millions) of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Country-level Trust Bias* is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (2)* in Appendix B) in which trust is defined as the portion of individuals in home country who expresses "a lot of trust" towards target country, measured via Eurobarometer surveys. For the specific definitions and data sources of control variables, see **Appendix A**. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.7: Country-Level Trust Bias and Probability of Sovereign Exposure (Double-clustered by country-pair and time).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias	1.093***	1.163***	1.230***	0.560***	0.848***	0.913***	0.673***	0.901***	0.902***	0.429***
	[0.140]	[0.173]	[0.143]	[0.205]	[0.165]	[0.192]	[0.222]	[0.153]	[0.160]	[0.176]
Country-level Bank Branches		-0.003								-0.002
		[0.003]								[0.004]
Country-level Bank Mergers			-0.335							-0.659**
			[0.242]							[0.241]
Country-level Media Coverage				0.558***						0.516**
				[0.185]						[0.247]
Country-level Common Language					0.116**					0.038
					[0.042]					[0.053]
Country-level Colonial Relationship						0.087				-0.200
						[0.074]				[0.142]
Country-level Distance							-0.028**			-0.044*
							[0.013]			[0.024]
Country-level Common Border								0.089**		0.011
								[0.035]		[0.038]
Country-level Common Legal Origin									0.082**	0.050*
									[0.030]	[0.028]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustering (double)	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time
Observations	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409
Adjusted R^2	0.478	0.478	0.479	0.486	0.480	0.478	0.481	0.481	0.481	0.494

Notes: The table summarizes the results of *Equation (1)* in Appendix B estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Country-level Trust Bias* is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (2)* in Appendix B) in which trust is defined as the portion of individuals in home country who expresses "a lot of trust" towards target country, measured via Eurobarometer surveys. For the specific definitions and data sources of control variables, see **Appendix A**. Robust standard errors are double clustered at the country-pair and time levels and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.8: Country-Level Trust Bias and Probability of Sovereign Exposure (Double-clustered by country-pair and bank).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Outcome ➔	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure	Sovereign Exposure
Country-level Trust Bias	1.093***	1.163***	1.230***	0.560***	0.848***	0.913***	0.673***	0.901***	0.902***	0.429***
	[0.146]	[0.177]	[0.152]	[0.205]	[0.166]	[0.191]	[0.222]	[0.150]	[0.160]	[0.185]
Country-level Bank Branches		-0.003								-0.002
		[0.003]								[0.004]
Country-level Bank Mergers			-0.335							-0.659***
			[0.242]							[0.252]
Country-level Media Coverage				0.558***						0.516**
				[0.197]						[0.259]
Country-level Common Language					0.116***					0.038
					[0.041]					[0.057]
Country-level Colonial Relationship						0.087				-0.200
						[0.071]				[0.140]
Country-level Distance							-0.028**			-0.044*
							[0.013]			[0.025]
Country-level Common Border								0.089**		0.011
								[0.036]		[0.037]
Country-level Common Legal Origin									0.082**	0.050
									[0.035]	[0.032]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustering (double)	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank
Observations	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409	27,409
Adjusted R^2	0.478	0.478	0.479	0.486	0.480	0.478	0.481	0.481	0.481	0.494

Notes: The table summarizes the results of *Equation (1)* in Appendix B estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Country-level Trust Bias* is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (2)* in Appendix B) in which trust is defined as the portion of individuals in home country who expresses "a lot of trust" towards target country, measured via Eurobarometer surveys. For the specific definitions and data sources of control variables, see **Appendix A**. Robust standard errors are double clustered at the country-pair and bank levels and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table B.9: External Validity - Country-Level Trust Bias (online - lot of trust) and Probability of Sovereign Exposure

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias (online - lot of trust)	1.191***	1.069***	1.082***	0.380***	0.680***	0.738***	0.332***	0.693***	0.978***	0.130
	[0.122]	[0.125]	[0.125]	[0.109]	[0.124]	[0.111]	[0.114]	[0.128]	[0.114]	[0.123]
Country-level Bank Branches		0.011***								-0.003
		[0.002]								[0.003]
Country-level Bank Mergers			0.568***							-0.797***
			[0.104]							[0.155]
Country-level Media Coverage				0.912***						0.380***
				[0.073]						[0.131]
Country-level Common Language					0.248***					0.017
					[0.031]					[0.034]
Country-level Colonial Relationship						0.273***				-0.016
						[0.025]				[0.033]
Country-level Distance							-0.067***			-0.056***
							[0.005]			[0.010]
Country-level Common Border								0.188***		0.032
								[0.023]		[0.020]
Country-level Common Legal Origin									0.141***	0.065***
									[0.012]	[0.011]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	58,856	58,856	58,856	58,856	58,856	58,856	58,856	58,856	58,856	58,856
Adjusted R^2	0.449	0.452	0.452	0.478	0.461	0.465	0.476	0.462	0.464	0.487

Notes: Please see the notes in **Table B.2**. In this robustness check, *Country-level Trust Bias* is replaced by *Country-level Trust Bias (online – lot of trust)*, which is the residual trust bias where trust is defined as the percentage of people in the home country who expressed "a lot of trust" in the target country in response to a new online survey undertaken across 30 European countries in the second half of the year 2022.

Table B.10: External Validity - Country-Level Trust Bias (online - graded) and Probability of Sovereign Exposure

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias (online - graded)	0.401***	0.356***	0.359***	0.151***	0.206***	0.263***	0.131**	0.241***	0.359***	0.097*
	[0.058]	[0.060]	[0.060]	[0.051]	[0.055]	[0.053]	[0.054]	[0.059]	[0.054]	[0.051]
Country-level Bank Branches		0.015***								-0.003
		[0.002]								[0.003]
Country-level Bank Mergers			0.733***							-0.801***
			[0.111]							[0.154]
Country-level Media Coverage				0.962***						0.381***
				[0.068]						[0.130]
Country-level Common Language					0.290***					0.014
					[0.028]					[0.033]
Country-level Colonial Relationship						0.311***				-0.014
						[0.025]				[0.033]
Country-level Distance							-0.071***			-0.056***
							[0.005]			[0.010]
Country-level Common Border								0.219***		0.034*
								[0.022]		[0.019]
Country-level Common Legal Origin									0.158***	0.066***
									[0.012]	[0.011]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	58,856	58,856	58,856	58,856	58,856	58,856	58,856	58,856	58,856	58,856
Adjusted R^2	0.440	0.445	0.445	0.478	0.459	0.462	0.475	0.460	0.459	0.488

Notes: Please see the notes in **Table B.2**. In this robustness check, *Country-level Trust Bias* is replaced by *Country-level Trust Bias (online – graded)*, which is the residual trust bias where trust can take values of 1 (i.e., "no trust at all"), 2 (i.e., "not very much trust"), 3 (i.e., "some trust") and 4 (i.e., "lot of trust") in response to a new online survey undertaken across 30 European countries in the second half of the year 2022.

Table B.11: External Validity - Country-Level Trust Bias (online - lot of trust) and Probability of Sovereign Exposure (Foreign target countries)

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias (online - lot of trust)	0.567***	0.552***	0.500***	0.350***	0.451***	0.519***	0.175	0.323**	0.500***	0.241*
	[0.141]	[0.138]	[0.131]	[0.116]	[0.143]	[0.130]	[0.121]	[0.147]	[0.132]	[0.127]
Country-level Bank Branches		0.128***								0.017
		[0.035]								[0.028]
Country-level Bank Mergers			14.666***							6.480***
			[2.053]							[1.888]
Country-level Media Coverage				1.104***						0.424**
				[0.182]						[0.165]
Country-level Common Language					0.135***					0.030
					[0.038]					[0.034]
Country-level Colonial Relationship						0.198***				0.021
						[0.036]				[0.035]
Country-level Distance							-0.167***			-0.124***
							[0.017]			[0.018]
Country-level Common Border								0.131***		-0.071***
								[0.022]		[0.026]
Country-level Common Legal Origin									0.116***	0.038***
									[0.012]	[0.012]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample included	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign
Observations	56,754	56,754	56,754	56,754	56,754	56,754	56,754	56,754	56,754	56,754
Adjusted R^2	0.453	0.456	0.464	0.468	0.455	0.458	0.475	0.459	0.463	0.481

Notes: Please see the notes in **Table B.2**. In this robustness check, all domestic observations are dropped and *Country-level Trust Bias* is replaced by *Country-level Trust Bias (online – lot of trust)*, which is the residual trust bias where trust is defined as the percentage of people in the home country who expressed "a lot of trust" in the target country in response to a new online survey undertaken across 30 European countries in the second half of the year 2022.

Table B.12: External Validity - Country-Level Trust Bias (online - graded) and Probability of Sovereign Exposure (Foreign target countries)

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure	(8) Sovereign Exposure	(9) Sovereign Exposure	(10) Sovereign Exposure
Country-level Trust Bias (online - graded)	0.162***	0.176***	0.189***	0.151***	0.127**	0.172***	0.128**	0.112*	0.175***	0.171***
	[0.062]	[0.062]	[0.060]	[0.055]	[0.060]	[0.058]	[0.055]	[0.063]	[0.058]	[0.054]
Country-level Bank Branches		0.138***								0.021
		[0.036]								[0.028]
Country-level Bank Mergers			15.379***							6.665***
			[2.131]							[1.919]
Country-level Media Coverage				1.149***						0.432***
				[0.183]						[0.163]
Country-level Common Language					0.152***					0.027
					[0.036]					[0.033]
Country-level Colonial Relationship						0.212***				0.026
						[0.037]				[0.034]
Country-level Distance							-0.170***			-0.127***
							[0.017]			[0.018]
Country-level Common Border								0.141***		-0.072***
								[0.022]		[0.025]
Country-level Common Legal Origin									0.121***	0.038***
									[0.012]	[0.012]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sample included	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign	Foreign
Observations	56,754	56,754	56,754	56,754	56,754	56,754	56,754	56,754	56,754	56,754
Adjusted R^2	0.451	0.454	0.463	0.468	0.454	0.457	0.476	0.459	0.462	0.482

Notes: Please see the notes in **Table B.2**. In this robustness check, all domestic observations are dropped and *Country-level Trust Bias* is replaced by *Country-level Trust Bias (online - graded)*, which is the residual trust bias where trust can take values of 1 (i.e., "no trust at all"), 2 (i.e., "not very much trust"), 3 (i.e., "some trust") and 4 (i.e., "lot of trust") in response to a new online survey undertaken across 30 European countries in the second half of the year 2022.

Appendix C: Additional Analyses for Bank-Level Trust

Table C.1: Bank-level Trust Bias and Probability of Sovereign Exposure (Double-clustered by country-pair and time).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.353***	1.757***	1.604***	1.630***	1.562***
	[0.173]	[0.297]	[0.284]	[0.289]	[0.295]
Bank-level Branches			-0.090***	-0.153***	-0.163***
			[0.019]	[0.053]	[0.050]
Bank-level Branches (squared)				0.014	0.016
				[0.010]	[0.010]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Clustering (double)	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time	Country-pair + Time
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are double clustered at the country-pair and time levels and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.2: Bank-level Trust Bias and Probability of Sovereign Exposure (Double-clustered by country-pair and bank).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.353***	1.757***	1.604***	1.630***	1.562***
	[0.181]	[0.319]	[0.293]	[0.296]	[0.281]
Bank-level Branches			-0.090***	-0.153***	-0.163***
			[0.022]	[0.058]	[0.054]
Bank-level Branches (squared)				0.014	0.016
				[0.011]	[0.010]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Clustering (double)	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are double clustered at the country-pair and bank levels and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.3: Bank-level Trust Bias and *Continuous* Measures of Sovereign Exposures.

Panel A	(1)	(2)	(3)	(4)	(5)
Outcome ➔	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)	Sovereign Exposure (log nominal)
Bank-level Trust Bias	16.712***	11.719***	11.952***	11.785***	11.735***
	[0.627]	[2.326]	[2.447]	[2.357]	[2.594]
Observations	23,760	23,760	23,760	23,760	21,615
Panel B					
Outcome ➔	Sovereign Exposure (log nom. excl. 0)	Sovereign Exposure (log nom. excl. 0)	Sovereign Exposure (log nom. excl. 0)	Sovereign Exposure (log nom. excl. 0)	Sovereign Exposure (log nom. excl. 0)
Bank-level Trust Bias	13.809***	7.056***	7.387***	7.185***	7.352***
	[0.650]	[2.235]	[2.335]	[2.265]	[2.548]
Observations	13,590	13,581	13,581	13,581	11,933
Control for Bank-level Branches	No	No	Yes	Yes	Yes
Control for Bank-level Branches (squared)	No	No	No	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as the logarithmic -log(x+1)- nominal exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. Panel B excludes observations where sovereign exposures are equal to zero. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.4: Bank-level Trust Bias and Probability of Sovereign Exposure (FINREP disclosures dropped).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.373***	1.908***	1.751***	1.776***	1.744***
	[0.107]	[0.332]	[0.306]	[0.305]	[0.322]
Bank-level Branches			-0.088***	-0.154***	-0.160***
			[0.028]	[0.055]	[0.059]
Bank-level Branches (squared)				0.014	0.016
				[0.011]	[0.012]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	19,845	19,845	19,845	19,845	18,060

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2, not including the period corresponding to the years 2016 and 2017 during which disclosures were based on regulatory FINREP templates. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.5: Bank-level Trust Bias and Probability of Sovereign Exposure (Foreign target countries).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.506***	1.347***	1.600***	1.712***	1.672***
	[0.246]	[0.494]	[0.509]	[0.487]	[0.515]
Bank-level Branches			-0.176**	-0.586*	-0.611*
			[0.082]	[0.332]	[0.357]
Bank-level Branches (squared)				0.556	0.568
				[0.397]	[0.430]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Sample included	Foreign	Foreign	Foreign	Foreign	Foreign
Observations	22,336	22,336	22,336	22,336	20,241

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2 after dropping domestic observations (i.e., home country=target country). Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.6: Bank-level Trust Bias and Probability of Sovereign Exposure (Banks under Single Supervisory Mechanism -SSM).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.327***	2.046***	1.815***	1.854***	1.828***
	[0.112]	[0.351]	[0.312]	[0.312]	[0.333]
Bank-level Branches			-0.096***	-0.190***	-0.199***
			[0.030]	[0.059]	[0.063]
Bank-level Branches (squared)				0.022*	0.025*
				[0.013]	[0.014]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Sample included	SSM banks	SSM banks	SSM banks	SSM banks	SSM banks
Observations	12,795	12,795	12,795	12,795	12,105

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2; but only for the significant banks under ECB's single supervisory mechanism (see **Appendix F**). Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.7: Bank-level Trust Bias and Probability of Sovereign Exposure (Eurozone banks and target countries only).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	1.274***	1.850***	1.580***	1.578***	1.552***
	[0.111]	[0.399]	[0.366]	[0.361]	[0.386]
Bank-level Branches			-0.091***	-0.148***	-0.156***
			[0.027]	[0.052]	[0.054]
Bank-level Branches (squared)				0.013	0.014
				[0.011]	[0.012]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Sample included	Eurozone	Eurozone	Eurozone	Eurozone	Eurozone
Observations	14,102	14,102	14,102	14,102	13,145

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2 after dropping all banks and target countries outside Eurozone. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.8: Bank-level Trust Bias and Probability of Sovereign Exposure (GIIPS target countries and banks excluded).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias	0.801***	1.113***	1.021***	1.093***	1.015***
	[0.121]	[0.352]	[0.329]	[0.321]	[0.347]
Bank-level Branches			-0.101**	-0.285***	-0.284***
			[0.045]	[0.083]	[0.090]
Bank-level Branches (squared)				0.079**	0.078**
				[0.032]	[0.036]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Sample included	Non-GIIPS	Non-GIIPS	Non-GIIPS	Non-GIIPS	Non-GIIPS
Observations	10,560	10,560	10,560	10,560	9,130

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2 after dropping the target countries of Greece, Italy, Ireland, Portugal and Spain as well as all the banks headquartered there. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.9: Bank-level Trust *Level* and Probability of Sovereign Exposure.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Level	1.333***	1.395***	1.270***	1.292***	1.275***
	[0.155]	[0.307]	[0.288]	[0.292]	[0.309]
Bank-level Branches			-0.098***	-0.155***	-0.164***
			[0.029]	[0.056]	[0.058]
Bank-level Branches (squared)				0.013	0.015
				[0.013]	[0.013]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Level* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of trust levels, where trust level is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.10: Bank-level *Graded* Trust Bias and Probability of Sovereign Exposure.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Bias (graded)	0.600***	0.668***	0.596***	0.618***	0.587***
	[0.048]	[0.159]	[0.144]	[0.145]	[0.150]
Bank-level Branches			-0.095***	-0.163***	-0.171***
			[0.028]	[0.053]	[0.056]
Bank-level Branches (squared)				0.015	0.017
				[0.012]	[0.012]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the average across individuals in home country expressing values from 1 (i.e., "no trust at all") to 4 (i.e., "lot of trust") towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.11: Bank-level *Graded* Trust *Level* and Probability of Sovereign Exposure.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Bank-level Trust Level (graded)	0.273	0.333***	0.295**	0.303**	0.296**
	[0.170]	[0.127]	[0.121]	[0.124]	[0.133]
Bank-level Branches			-0.103***	-0.155***	-0.163***
			[0.031]	[0.059]	[0.061]
Bank-level Branches (squared)				0.012	0.014
				[0.014]	[0.015]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Level* is computed for each bank-target country pair as the branch-weighted average (see *Equation (2)*) of trust levels, where trust level is defined as the average across individuals in home country expressing values from 1 (i.e., "no trust at all") to 4 (i.e., "lot of trust") towards target country, measured via Eurobarometer surveys. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.12: Bank-level Trust Bias and Probability of Sovereign Exposure (Placebo tests).

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Panel A					
Bank-level Trust Bias (random within country)	1.239***	-0.133	-0.168	-0.140	-0.134
	[0.123]	[0.285]	[0.284]	[0.279]	[0.288]
Bank-level Branches			-0.108***	-0.148**	-0.155**
			[0.032]	[0.063]	[0.065]
Bank-level Branches (squared)				0.009	0.011
				[0.016]	[0.016]
Panel B					
Bank-level Trust Bias (fully random)	-0.182	-0.085	-0.103	-0.102	-0.128
	[0.110]	[0.076]	[0.072]	[0.072]	[0.077]
Bank-level Branches			-0.109***	-0.151**	-0.158**
			[0.032]	[0.062]	[0.063]
Bank-level Branches (squared)				0.009	0.011
				[0.016]	[0.016]
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Observations	23,760	23,760	23,760	23,760	21,615

Notes: The table summarizes the results of *Equation (1)* estimated over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. *Bank-level Trust Bias* is constructed by randomly distributing observed branch networks either across banks located in the same home country (Panel A) or across all banks in our sample (Panel B). See **Table 2** for other details. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.13: Host-country Relationships with Target country and Probability of Sovereign Exposure.

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure	(6) Sovereign Exposure	(7) Sovereign Exposure
Bank-level Branch Relationship	0.022**						
	[0.009]						
Bank-level Merger Relationship		1.162***					
		[0.379]					
Bank-level Media Relationship			1.000***				
			[0.226]				
Bank-level Political Relationship				1.690**			
				[0.714]			
Bank-level Distance Relationship					-0.193**		
					[0.075]		
Bank-level Legal Origin Relationship						-0.049	
						[0.059]	
Bank-level Religious Relationship							-0.130
							[0.216]
Control for Bank-level Branches	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for Bank-level Branches (squared)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Home Country x Target Country x Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	21,615	21,615	21,615	21,615	21,615	21,615	21,615

Notes: The table summarizes the results with control variables as standalone predictors over the full sample period 2010-Q1 to 2021-Q2. Dependent variable is *Sovereign Exposure*, defined as a dummy variable indicating any positive exposure of a bank toward a target country at a point in time reported in EBA and CEBS disclosures. For the detailed construction of the data, see Section 3 and **Online Appendix A**. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Appendix D: External Validity with a New Online Survey and Corporate Exposures

Table D.1: New Online Survey Sample (June-December 2022).

Country	Language Options of the Online Survey	Number of Respondents Reached	Number of Qualifying Respondents
Austria	German	921	254
Belgium	Dutch & French	1354	254
Bulgaria	Bulgarian	2139	255
Cyprus	Cypriot Greek	657	101
Czech Republic	Czech	1018	255
Denmark	Danish	1131	253
Estonia	Estonian	1541	255
Finland	Finnish	2614	255
France	French	1128	255
Germany	German	927	254
Greece	Greek	844	251
Hungary	Hungarian	1869	254
Iceland	Icelandic	545	100
Ireland	English	1073	254
Italy	Italian	778	254
Latvia	Latvian	2115	254
Liechtenstein	German	687	101
Lithuania	Lithuanian	2018	254
Luxembourg	German & French	419	102
Malta	English	476	101
Netherlands	Dutch	999	255
Norway	Norwegian	1351	253
Poland	Polish	1569	254
Portugal	Portuguese	740	253
Romania	Romanian	2316	255
Slovak Republic	Slovakian	1725	252
Slovenia	Slovenian	1720	255
Spain	Spanish	1413	253
Sweden	Swedish	1359	255
United Kingdom	English	1037	253
TOTAL ➔		38483	6854

Notes: *Number of Respondents Reached* refers to the total number of individuals reached out by the survey company (i.e., Respondi) and *Number of Qualifying Respondents* refers to the total number of individuals who were able to pass the country-specific demographic quotas as well as attention tests and are thus included in our final sample.

Table D.2: Trust Level (online – lot of trust) by Home and Target Countries (for the original set of countries as in Eurobarometer)

		Target countries														
		Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Norway	Portugal	Spain	Sweden	GB
Home countries	Austria	0.44	0.31	0.42	0.39	0.26	0.35	0.21	0.31	0.26	0.41	0.46	0.23	0.24	0.49	0.29
	Belgium	0.36	0.45	0.42	0.36	0.30	0.33	0.16	0.27	0.20	0.35	0.37	0.19	0.24	0.47	0.22
	Denmark	0.43	0.38	0.53	0.37	0.26	0.42	0.19	0.33	0.20	0.44	0.53	0.20	0.23	0.49	0.27
	Finland	0.39	0.35	0.47	0.61	0.21	0.32	0.15	0.32	0.18	0.38	0.53	0.15	0.18	0.47	0.28
	France	0.20	0.23	0.25	0.25	0.20	0.28	0.09	0.20	0.14	0.19	0.30	0.20	0.19	0.34	0.13
	Germany	0.49	0.39	0.55	0.50	0.34	0.45	0.21	0.39	0.22	0.52	0.56	0.28	0.30	0.57	0.27
	Greece	0.23	0.24	0.25	0.26	0.27	0.17	0.33	0.26	0.25	0.26	0.31	0.22	0.30	0.35	0.17
	Ireland	0.22	0.24	0.26	0.23	0.19	0.20	0.14	0.61	0.24	0.29	0.31	0.22	0.26	0.32	0.19
	Italy	0.27	0.26	0.32	0.35	0.16	0.22	0.15	0.23	0.23	0.30	0.37	0.19	0.26	0.44	0.20
	Netherlands	0.38	0.38	0.39	0.33	0.20	0.37	0.15	0.27	0.16	0.41	0.38	0.22	0.20	0.44	0.22
	Norway		0.44	0.68		0.39	0.50	0.27	0.49	0.27	0.57		0.30	0.25		0.42
	Portugal	0.19	0.20	0.29	0.25	0.19	0.23	0.12	0.19	0.19	0.22	0.29	0.49	0.23	0.32	0.19
	Spain	0.24	0.22	0.27	0.27	0.20	0.25	0.16	0.26	0.27	0.25	0.32	0.29	0.39	0.34	0.15
	Sweden	0.40	0.34	0.42	0.49	0.29	0.37	0.20	0.31	0.24	0.40	0.51	0.24	0.24	0.50	0.35
	Great Britain	0.26	0.24	0.32	0.28	0.17	0.23	0.14	0.26	0.19	0.27	0.33	0.23	0.21	0.32	0.34

Notes: The table shows trust levels between home and target country pairs defined as the portion of individuals in home country expressing “a lot of trust” towards target country, measured via our new online survey undertaken in the second half of the year 2022.

Table D.3: Trust Bias (online – lot of trust) by Home and Target Countries (for the original set of countries as in Eurobarometer)

		Target countries														
		Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Norway	Portugal	Spain	Sweden	GB
Home countries	Austria	0.08	-0.01	0.03	-0.01	-0.01	0.01	-0.01	0.00	-0.01	0.05	0.03	-0.04	-0.04	0.05	-0.01
	Belgium	0.03	0.16	0.07	0.00	0.06	0.03	-0.02	-0.01	-0.03	0.02	-0.02	-0.04	-0.01	0.06	-0.03
	Denmark	0.08	0.07	0.16	0.00	0.00	0.10	-0.01	0.03	-0.05	0.09	0.12	-0.05	-0.03	0.06	-0.01
	Finland	0.05	0.04	0.10	0.24	-0.04	0.00	-0.05	0.02	-0.07	0.05	0.13	-0.09	-0.08	0.05	0.01
	France	-0.06	0.02	-0.02	-0.03	0.04	0.06	-0.01	-0.01	-0.01	-0.05	-0.01	0.04	0.03	0.01	-0.05
	Germany	0.09	0.03	0.13	0.08	0.03	0.08	-0.04	0.03	-0.08	0.12	0.10	-0.03	-0.02	0.09	-0.06
	Greece	-0.07	-0.02	-0.08	-0.06	0.07	-0.11	0.18	0.01	0.05	-0.03	-0.05	0.02	0.09	-0.02	-0.06
	Ireland	-0.07	-0.01	-0.06	-0.09	-0.02	-0.06	0.00	0.36	0.05	0.00	-0.05	0.03	0.05	-0.05	-0.04
	Italy	-0.01	0.02	0.01	0.04	-0.03	-0.04	0.01	0.00	0.05	0.03	0.03	0.01	0.07	0.08	-0.01
	Netherlands	0.06	0.11	0.05	-0.01	-0.03	0.08	-0.01	0.01	-0.06	0.10	0.01	0.01	-0.03	0.05	-0.02
	Norway		0.03	0.21		0.03	0.08	-0.03	0.09	-0.08	0.12		-0.06	-0.11		0.04
	Portugal	-0.08	-0.03	0.00	-0.04	0.02	-0.01	0.00	-0.03	0.02	-0.04	-0.04	0.32	0.05	-0.02	-0.01
	Spain	-0.05	-0.02	-0.04	-0.04	0.01	-0.01	0.03	0.02	0.08	-0.03	-0.02	0.10	0.19	-0.03	-0.06
	Sweden	0.02	0.00	0.02	0.08	0.00	0.02	-0.03	-0.02	-0.04	0.03	0.07	-0.04	-0.05	0.05	0.04
	Great Britain	-0.04	-0.02	0.00	-0.04	-0.04	-0.04	0.00	0.01	-0.01	-0.02	-0.02	0.03	0.00	-0.05	0.11

Notes: The table shows trust bias between home and target country pairs. Trust Bias is computed for each home-target country pair as the residuals from a gravity model of trust (see *Equation (3)*), where trust is defined as the portion of individuals in home country expressing "a lot of trust" towards target country, measured via our new online survey undertaken in the second half of the year 2022.

Table D.4: External Validity - Bank-level Trust Bias (from Online Survey) and Probability of Sovereign Exposure (Foreign target countries)

Outcome ➔	(1) Sovereign Exposure	(2) Sovereign Exposure	(3) Sovereign Exposure	(4) Sovereign Exposure	(5) Sovereign Exposure
Panel A					
Bank-level Trust Bias (online – lot of trust)	0.843***	1.258**	1.046**	0.931*	1.043*
	[0.202]	[0.481]	[0.486]	[0.484]	[0.549]
Adjusted R^2	0.454	0.570	0.571	0.571	0.539
Panel B					
Bank-level Trust Bias (online – graded)	0.265***	0.584**	0.503**	0.460*	0.495
	[0.081]	[0.235]	[0.247]	[0.251]	[0.302]
Adjusted R^2	0.452	0.571	0.571	0.571	0.539
Control for Bank-level Branches	No	No	Yes	Yes	Yes
Control for Bank-level Branches (squared)	No	No	No	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Sample included	Foreign	Foreign	Foreign	Foreign	Foreign
Observations	45,936	45,936	45,936	45,936	41,789

Notes: See the notes in **Table 7**. In this robustness check, we drop domestic observations (i.e., home country=target country).

Table D.5: External Validity - Bank-level Trust Bias and *Corporate* Exposures (Foreign target countries)

Panel A	(1)	(2)	(3)	(4)	(5)
Outcome ➔	Corporate Exposure (dummy)	Corporate Exposure (dummy)	Corporate Exposure (dummy)	Corporate Exposure (dummy)	Corporate Exposure (dummy)
Bank-level Trust Bias	2.385***	2.853***	1.782***	1.277**	1.272*
	[0.346]	[0.693]	[0.636]	[0.637]	[0.687]
Adjusted R^2	0.417	0.597	0.607	0.613	0.577
Panel B					
Outcome ➔	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)	Corporate Exposure (log nominal)
Bank-level Trust Bias	12.619***	24.746***	14.557***	11.564**	11.216**
	[2.077]	[5.222]	[4.762]	[4.751]	[5.154]
Adjusted R^2	0.420	0.621	0.648	0.654	0.609
Control for Bank-level Branches	No	No	Yes	Yes	Yes
Control for Bank-level Branches (squared)	No	No	No	Yes	Yes
Bank x Time FEs	Yes	Yes	Yes	Yes	Yes
Target Country x Time FEs	Yes	Yes	Yes	Yes	No
Home Country x Target Country FEs	No	Yes	Yes	Yes	No
Home Country x Target Country x Time FEs	No	No	No	No	Yes
Sample included	Foreign	Foreign	Foreign	Foreign	Foreign
Observations	17,157	17,157	17,157	17,157	15,561

Notes: See the notes in **Table 8**. In this robustness check, we drop domestic observations (i.e., home country=target country).

Appendix E: Frameworks and Mechanisms

Table E.1: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (Foreign target countries).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	1.095***	1.085***	0.846***	0.817***	0.542***
	[0.091]	[0.094]	[0.132]	[0.121]	[0.107]
Adjusted R^2	*0.083*	*0.107*	*0.329*	*0.362*	*0.443*
Log of Bank Branches in Target Country	0.108***	0.107***	0.083***	0.080***	0.048***
	[0.012]	[0.013]	[0.013]	[0.013]	[0.014]
Adjusted R^2	*0.129*	*0.147*	*0.353*	*0.381*	*0.442*
Share of Bank Branches in Target Country	4.107***	3.991***	3.294***	3.136***	1.472**
	[0.532]	[0.537]	[0.497]	[0.511]	[0.655]
Adjusted R^2	*0.110*	*0.131*	*0.350*	*0.381*	*0.434*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	638	638	638	638	580
Sample included	Foreign targets	Foreign targets	Foreign targets	Foreign targets	Foreign targets

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures after dropping domestic observations (i.e., home country=target country). Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the employees of the bank at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.2: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (Double-clustered by country-pair and bank).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	0.278***	0.281***	0.157***	0.156***	0.121
	[0.064]	[0.059]	[0.030]	[0.026]	[0.090]
Adjusted R^2	*0.082*	*0.106*	*0.350*	*0.384*	*0.480*
Log of Bank Branches in Target Country	0.110***	0.111***	0.074***	0.071***	0.046***
	[0.008]	[0.008]	[0.010]	[0.010]	[0.014]
Adjusted R^2	*0.205*	*0.222*	*0.408*	*0.432*	*0.493*
Share of Bank Branches in Target Country	1.105***	1.105***	0.590***	0.590***	0.682**
	[0.102]	[0.102]	[0.122]	[0.120]	[0.267]
Adjusted R^2	*0.129*	*0.155*	*0.360*	*0.394*	*0.483*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Clustering (double)	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank	Country-pair + Bank
Observations	660	660	660	660	600

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures. Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the employees of the bank at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the country-pair and bank levels and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.3: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (Senior managers only).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	0.285***	0.285***	0.172***	0.168***	0.142**
	[0.043]	[0.042]	[0.024]	[0.025]	[0.063]
Adjusted R^2	*0.089*	*0.107*	*0.340*	*0.367*	*0.435*
Log of Bank Branches in Target Country	0.112***	0.110***	0.078***	0.073***	0.047***
	[0.008]	[0.008]	[0.009]	[0.009]	[0.014]
Adjusted R^2	*0.219*	*0.223*	*0.404*	*0.417*	*0.449*
Share of Bank Branches in Target Country	1.122***	1.122***	0.638***	0.638***	0.828***
	[0.083]	[0.083]	[0.095]	[0.095]	[0.233]
Adjusted R^2	*0.139*	*0.161*	*0.350*	*0.380*	*0.441*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	660	660	660	660	600
Sample included	Senior managers	Senior managers	Senior managers	Senior managers	Senior managers

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures. Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the senior managers (i.e., the executive board, board of directors and senior management) of the bank at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.4: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (Senior managers only + Foreign target countries).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	1.124***	1.091***	0.908***	0.855***	0.614***
	[0.091]	[0.095]	[0.128]	[0.120]	[0.109]
Adjusted R^2	*0.093*	*0.108*	*0.318*	*0.343*	*0.393*
Log of Bank Branches in Target Country	0.108***	0.104***	0.086***	0.080***	0.049***
	[0.012]	[0.013]	[0.012]	[0.013]	[0.014]
Adjusted R^2	*0.137*	*0.142*	*0.342*	*0.358*	*0.387*
Share of Bank Branches in Target Country	4.059***	3.867***	3.349***	3.108***	1.761***
	[0.530]	[0.528]	[0.499]	[0.510]	[0.588]
Adjusted R^2	*0.113*	*0.125*	*0.335*	*0.357*	*0.382*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	638	638	638	638	580
Sample included	Senior managers + Foreign targets	Senior managers + Foreign targets	Senior managers + Foreign targets	Senior managers + Foreign targets	Senior managers + Foreign targets

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures after dropping domestic observations (i.e., home country=target country). Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the senior managers (i.e., the executive board, board of directors and senior management) of the bank at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.5: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (First nationalities only).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	0.293***	0.303***	0.198***	0.207***	0.153*
	[0.043]	[0.043]	[0.024]	[0.025]	[0.076]
Adjusted R^2	*0.115*	*0.148*	*0.309*	*0.346*	*0.438*
Log of Bank Branches in Target Country	0.107***	0.109***	0.082***	0.082***	0.057***
	[0.010]	[0.010]	[0.011]	[0.011]	[0.012]
Adjusted R^2	*0.248*	*0.271*	*0.388*	*0.416*	*0.465*
Share of Bank Branches in Target Country	1.195***	1.195***	0.804***	0.804***	0.846***
	[0.091]	[0.091]	[0.109]	[0.109]	[0.262]
Adjusted R^2	*0.193*	*0.222*	*0.340*	*0.375*	*0.445*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	660	660	660	660	600
Sample included	First nationalities	First nationalities	First nationalities	First nationalities	First nationalities

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures. Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the first (i.e., main) nationality of the bank employees at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.6: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (First nationalities only + Foreign target countries).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	0.959***	0.965***	0.823***	0.822***	0.635***
	[0.167]	[0.179]	[0.173]	[0.174]	[0.136]
Adjusted R^2	*0.086*	*0.118*	*0.262*	*0.300*	*0.369*
Log of Bank Branches in Target Country	0.095***	0.096***	0.081***	0.080***	0.060***
	[0.014]	[0.015]	[0.014]	[0.015]	[0.012]
Adjusted R^2	*0.134*	*0.161*	*0.293*	*0.326*	*0.372*
Share of Bank Branches in Target Country	4.073***	3.951***	3.604***	3.462***	2.030***
	[0.533]	[0.573]	[0.481]	[0.514]	[0.707]
Adjusted R^2	*0.146*	*0.170*	*0.312*	*0.343*	*0.360*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	638	638	638	638	580
Sample included	First nationalities + Foreign targets	First nationalities + Foreign targets	First nationalities + Foreign targets	First nationalities + Foreign targets	First nationalities + Foreign targets

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures after dropping domestic observations (i.e., home country=target country). Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is (or has ever been) represented among the first (i.e., main) nationalities of the bank employees at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.7: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (Current managers).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	0.288***	0.287***	0.190***	0.187***	0.110
	[0.045]	[0.045]	[0.029]	[0.031]	[0.063]
Adjusted R^2	*0.110*	*0.135*	*0.326*	*0.359*	*0.489*
Log of Bank Branches in Target Country	0.110***	0.109***	0.079***	0.075***	0.043***
	[0.009]	[0.009]	[0.009]	[0.010]	[0.015]
Adjusted R^2	*0.244*	*0.258*	*0.390*	*0.411*	*0.503*
Share of Bank Branches in Target Country	1.135***	1.135***	0.704***	0.704***	0.626*
	[0.077]	[0.077]	[0.081]	[0.081]	[0.338]
Adjusted R^2	*0.169*	*0.199*	*0.340*	*0.377*	*0.492*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	630	630	630	630	600
Sample included	Current managers	Current managers	Current managers	Current managers	Current managers

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures. Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is represented among the current employees (as of November 2022) of the bank at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table E.8: Bank-level Branch Networks and Nationalities of Directors/Managers at Bank Headquarters (Current managers + Foreign target countries).

Outcome ➔	(1) Nationality at HQ	(2) Nationality at HQ	(3) Nationality at HQ	(4) Nationality at HQ	(5) Nationality at HQ
Bank Branches in Target Country	0.980***	0.942***	0.773***	0.720***	0.532***
	[0.135]	[0.161]	[0.164]	[0.172]	[0.156]
Adjusted R^2	*0.087*	*0.111*	*0.280*	*0.310*	*0.428*
Log of Bank Branches in Target Country	0.101***	0.098***	0.079***	0.074***	0.045***
	[0.014]	[0.015]	[0.014]	[0.015]	[0.015]
Adjusted R^2	*0.139*	*0.156*	*0.308*	*0.331*	*0.425*
Share of Bank Branches in Target Country	3.969***	3.688***	3.200***	2.861***	1.294
	[0.664]	[0.660]	[0.619]	[0.594]	[0.887]
Adjusted R^2	*0.114*	*0.131*	*0.299*	*0.323*	*0.414*
Bank FEs	No	Yes	No	Yes	Yes
Target Country FEs	No	No	Yes	Yes	No
Home Country x Target Country FEs	No	No	No	No	Yes
Observations	609	609	609	609	580
Sample included	Current managers + Foreign targets	Current managers + Foreign targets	Current managers + Foreign targets	Current managers + Foreign targets	Current managers + Foreign targets

Notes: The table summarizes the results of *Equation (7)* estimated over a subset of banks included in EBA and CEBS disclosures after dropping domestic observations (i.e., home country=target country). Each panel represents a separate estimation. Dependent variable is *Nationality at HQ*, defined as a dummy variable indicating whether the nationality of a target country is represented among the current employees (as of November 2022) of the bank at headquarters, extracted from BankFocus. *Bank Branches* measures the number of bank branches (in thousands) that the bank owns in the target country. *Log of Bank Branches* measures the logarithmic number (x+1) of bank branches (in thousands) that the bank owns in the target country. *Share of Bank Branches* measures the bank branches that the bank owns in the target country divided by the total number of bank branches it owns across all target countries. All branch-related information is from SNL Financial. For the detailed construction of the data, see Section 3. Robust standard errors are clustered at the bank level and reported in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Appendix F: List of Banks in the Full Sample (Bank-level analysis = Branch info available)

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
Erste Bank	Austria	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Raiffeisen Bank	Austria		Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
OESTERREICHISCHE VOLKSBANK AG	Austria				x	x					x					x	x	x	x	x	x	x	x	x	x
BAWAG P.S.K.	Austria	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Raiffeisenlandesbank Niederösterreich-Wien AG	Austria	Yes	Yes								x	x	x	x	x	x	x								
Raiffeisenlandesbank Oberösterreich AG	Austria	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sberbank Europe AG	Austria		Yes											x	x	x	x	x	x	x	x	x	x	x	x
VTB Bank AG	Austria		Yes											x	x	x	x								
Dexia	Belgium	Yes	Yes	x	x	x					x	x	x	x	x	x	x	x	x	x	x	x			
KBC Bank	Belgium	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Belfius Bank	Belgium	Yes	Yes				x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
AXA Bank Europe SA	Belgium	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Investar (Holding of Argenta Bank- en Verzekeringsgroep)	Belgium		Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bank of New York Mellon	Belgium		Yes											x	x	x	x	x	x	x	x	x	x	x	x
Deutsche Bank	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Commerzbank	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
LBBW	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
DZ Bank	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BayernLB	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Norddeutsche Landesbank	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Hypo Real Estate (HRE)	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
WestLB	Germany	Yes		x	x	x																			

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
HSH Nordbank	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x										
Helaba	Germany	Yes	Yes	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Landesbank Berlin	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
DEKA	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
WGZ Bank	Germany	Yes	Yes	x	x	x	x	x	x	x	x	x	x												
Deutsche Postbank	Germany	Yes		x																					
Aareal Bank AG	Germany	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Deutsche Apotheker- und Ärztebank eG	Germany	Yes	Yes								x	x	x						x	x	x	x	x	x	x
HASPA Finanzholding	Germany	Yes	Yes								x	x	x						x	x	x	x	x	x	x
IKB Deutsche Industriebank AG	Germany	Yes									x														
KfW IPEX-Bank GmbH	Germany										x														
Landeskreditbank Baden-Württemberg-Förderbank	Germany	Yes	Yes								x	x	x						x						
Landwirtschaftliche Rentenbank	Germany	Yes	Yes								x	x	x	x	x	x	x	x	x						
Münchener Hypothekenbank eG	Germany		Yes								x	x	x						x	x	x	x	x	x	x
NRW.Bank	Germany		Yes								x	x	x	x	x	x	x	x	x						
Volkswagen Financial Services AG	Germany	Yes	Yes								x	x	x	x	x			x	x	x	x	x	x	x	x
Wüstenrot Bausparkasse AG	Germany										x														
Wüstenrot Bank AG Pfandbriefbank	Germany	Yes									x														
HSH Beteiligungs Management GmbH	Germany		Yes													x	x	x	x	x	x	x	x	x	x
State Street Europe Holdings Germany S.a.r.l. & Co. KG	Germany		Yes													x	x	x	x	x	x	x	x	x	x
UBS Europe SE, Ffm	Germany		Yes																				x	x	x
J.P. Morgan AG, Frankfurt am Main	Germany		Yes																				x		
Danske Bank	Denmark	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jyske Bank	Denmark	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sydbank	Denmark	Yes		x	x	x	x	x	x	x	x	x	x						x	x	x	x	x	x	x

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
NYKREDIT	Denmark	Yes			x	x	x	x	x	x	x	x	x						x	x	x	x	x	x	x
Santander	Spain	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BBVA	Spain	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
JUPITER	Spain	Yes	Yes	x	x	x					x	x	x						x	x	x	x	x		
CAIXA	Spain	Yes	Yes	x	x	x	x	x	x	x	x	x	x					x	x	x	x	x	x	x	x
EFFIBANK	Spain	Yes	Yes		x						x	x	x						x	x	x	x	x		
Banco Popular Espanol	Spain	Yes	Yes	x	x	x	x	x	x	x	x	x	x												
Banco De Sabadell	Spain	Yes	Yes	x	x						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Diada	Spain	Yes		x	x						x														
BREOGAN	Spain	Yes	Yes	x	x						x	x	x					x	x	x	x	x	x	x	x
Mare Nostrum	Spain	Yes	Yes	x	x						x	x	x												
BankInter, S.A.	Spain	Yes	Yes	x	x						x	x	x					x	x	x	x	x	x	x	x
ESPIGA	Spain			x	x																				
Banca Civica	Spain			x	x																				
Caja De Ahorros Y Monte De piedad De Zaragoza	Spain	Yes	Yes	x	x						x	x	x						x	x	x	x	x	x	x
M.P. Y C.A. De Ronda, Cadiz, Almeria, malaga, Antequera Y Jaen	Spain	Yes	Yes	x	x						x	x	x						x	x	x	x	x	x	x
Banco Pastor	Spain			x	x																				
Bilbao Bizkaia Kutxa	Spain			x	x																				
UNNIM	Spain			x	x																				
Caja De Ahorros Y Monte De Piedad De Gipuzkoa Y San Sebastian	Spain			x	x																				
CAI	Spain			x	x																				
Banca March, S.A.	Spain	Yes		x	x																				
Caja De Ahorros De Vitoria Y Alava	Spain			x	x																				
Caja De Ahorros Y Monte De Piedad De Ontinyent	Spain			x	x																				

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
Colonya	Spain			x	x																				
CAM	Spain			x	x																				
Caja Sol	Spain			x																					
Caja De Ahorros Y Monte De Piedad De Cordoba	Spain			x																					
Banco Guipuzcoana, S.A.	Spain			x																					
Cajas Rurales Unidas	Spain		Yes								x	x	x						x	x	x	x	x	x	x
Kutxabank	Spain	Yes	Yes								x	x	x						x	x	x	x	x	x	x
OP-Pohjola	Finland	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Kuntarahoitus Oyj	Finland		Yes													x	x	x	x	x	x	x	x	x	x
Nordea Bank Abp	Finland		Yes																	x	x	x	x	x	x
Säästöpankkiliitto osk	Finland																			x	x	x	x		
BNP-PARIBAS	France	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Credit Agricole	France	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BPCE	France	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
SocGen	France	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banque PSA Finance	France										x			x	x										
BPI France (Banque Publique d'Investissement)	France		Yes								x	x	x						x	x	x		x	x	x
C.R.H. - Caisse de Refinancement de l'Habitat	France		Yes								x	x	x						x	x	x	x	x		
Groupe Crédit Mutuel	France	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
La Banque Postale	France	Yes	Yes								x	x	x						x	x	x	x	x	x	x
RCI Banque	France		Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Société de Financement Local	France		Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banque Centrale de Compensation (LCH Clearnet)	France																		x	x	x	x	x		
HSBC France	France		Yes																				x	x	x

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
RBS	UK	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
HSBC	UK	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Barclays	UK	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Lloyds	UK	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Nationwide Building Society	UK																		x	x	x	x	x		
Standard Chartered Plc	UK															x	x	x	x	x	x	x	x		
EFG Eurobank	Greece	Yes	Yes	x	x				x	x	x			x	x	x	x	x	x	x	x	x	x	x	x
National Bank of Greece	Greece	Yes	Yes	x	x				x	x	x			x	x	x	x	x	x	x	x	x	x	x	x
Alpha Bank AE	Greece	Yes	Yes	x	x				x	x	x			x	x	x	x	x	x	x	x	x	x	x	x
Piraeus Bank Group	Greece	Yes	Yes	x	x				x	x	x			x	x	x	x	x	x	x	x	x	x	x	x
ATE Bank	Greece			x	x																				
Hellenic Postbank	Greece			x	x																				
Allied Irish Bank	Ireland	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bank of Ireland	Ireland	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
IRISH LIFE AND PERMANENT	Ireland	Yes	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x								
DEPFA BANK Plc	Ireland													x	x	x	x	x	x						
Citibank Holdings Ireland Limited	Ireland		Yes													x	x	x	x	x	x	x	x	x	x
BoA Merrill Lynch International Designated Activity Company	Ireland		Yes																		x		x	x	x
Barclays Bank Ireland Plc	Ireland		Yes																				x	x	x
Ulster Bank Ireland Designated Activity Company	Ireland		Yes																				x	x	x
Intesa SanPaolo	Italy	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
UniCredito	Italy	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Monte Dei Paschi	Italy	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x
Banco Popolare	Italy	Yes	Yes	x	x	x	x	x	x	x	x	x	x												
Ubi Banca	Italy	Yes	Yes	x	x	x	x	x	x	x	x	x	x						x	x	x	x	x		

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
Banca Carige S.P.A. - Cassa di Risparmio di Genova e Imperia	Italy	Yes	Yes								x	x	x						x						
Banca Piccolo Credito Valtellinese	Italy	Yes									x														
Banca Popolare Dell'Emilia Romagna - Società Cooperativa	Italy	Yes	Yes								x	x	x			x	x	x	x	x	x	x			
Banca Popolare Di Milano - SCRL	Italy	Yes	Yes								x	x	x												
Banca Popolare di Sondrio	Italy	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banca Popolare di Vicenza - Società Cooperativa per Azioni	Italy	Yes	Yes								x	x	x												
Credito Emiliano S.p.A.	Italy	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Iccrea Holding S.p.A	Italy	Yes	Yes								x	x	x						x	x	x	x	x	x	x
Mediobanca - Banca di Credito Finanziario S.p.A.	Italy	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Veneto Banca S.C.P.A.	Italy	Yes	Yes								x	x	x												
Banco BPM S.p.A.	Italy		Yes																x	x	x	x	x	x	x
Cassa Centrale Banca - Credito Cooperativo Italiano SpA	Italy		Yes																		x	x	x	x	x
Gruppo Bancario Finecobank	Italy																								x
Gruppo Bancario Mediolanum	Italy																								x
ING Bank	Netherlands	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rabobank	Netherlands	Yes		x	x	x	x	x	x	x															
ABN AMRO	Netherlands	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
SNS Bank	Netherlands		Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bank Nederlandse Gemeenten N.V.	Netherlands		Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Nederlandse Waterschapsbank N.V.	Netherlands		Yes								x	x	x						x	x	x	x	x	x	x
Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.	Netherlands	Yes	Yes								x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
LP Group B.V.	Netherlands																								x
DNB NOR BANK ASA	Norway	Yes			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
SR-bank	Norway																		x	x	x	x	x		

Bank names	Home country	Branch info available	Under SSM	2010 – Q1	2010 – Q4	2011 – Q3	2011 – Q4	2012 – Q2	2012 – Q4	2013 – Q2	2013 – Q4	2014 – Q4	2015 – Q2	2015 – Q4	2016 – Q2	2016 – Q4	2017 – Q2	2017 – Q4	2018 – Q2	2018 – Q4	2019 – Q2	2019 – Q4	2020 – Q2	2020 – Q4	2021 – Q2
SpareBank 1 SMN	Norway																		x	x	x	x	x		
Caixa Geral de Depósitos	Portugal	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banco Comercial Português	Portugal	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Espírito Santo Financial Group S.A. (ESFG)	Portugal			x	x	x	x	x	x	x															
Banco BPI	Portugal	Yes	Yes	x	x	x	x	x	x	x	x	x	x	x	x										
Caixa Central de Crédito Agrícola Mútuo, CRL	Portugal													x	x	x	x	x	x	x	x	x	x		
Caixa Económica Montepio Geral	Portugal																		x	x	x	x	x		
Novo Banco	Portugal		Yes											x	x	x	x	x	x	x	x	x	x	x	x
Nordea	Sweden	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						
SEB	Sweden	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Svenska Handelsbanken	Sweden	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Swedbank	Sweden	Yes		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Kommuninvest - group	Sweden													x	x	x	x	x	x	x	x	x	x	x	x
SBAB Bank AB - group	Sweden																		x	x	x	x	x	x	x
Länsförsäkringar Bank AB - group	Sweden																		x	x	x	x	x	x	x

Notes: This table illustrates the list of 159 banks included in our full sample (see Section 3). Banks are identified by their most common name included in EBA disclosures. Their branch data come from SNL Financial and their supervision structure is manually identified via the website of the Single Supervisory Mechanism (SSM). Their sovereign exposure data availability is identified with an "x" sign for each of the observation dates in our sample period.