Do Cultural Differences Between Contracting Parties Matter?

Evidence from Syndicated Bank Loans

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Abstract

We investigate whether cultural differences between professional decision-makers affect financial contracts in a large dataset of international syndicated bank loans. We find that lead banks offer smaller loans at a higher interest rate to more culturally distant borrowers. Furthermore, lead banks are more likely to require third-party guarantees as cultural distance with the borrower increases. The effects of cultural differences are not confined to the relation between borrower and lender and appear to hamper risk sharing within the syndicate as well. *Ceteris paribus*, participant banks fund smaller portions of syndicated loans led by culturally distant banks. These "cultural biases" are not significantly reduced by repeated interaction with the counterparty or with other agents in the foreign country.

Keywords: Financial contracts, risk sharing, behavioral bias, culture
JEL codes: G3, G21, F4

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Empirical evidence suggests that sharing the same culture fosters social interaction among individuals and thus favors not only economic exchange but also the provision of public goods (see Alesina and La Ferrara, 2005 and Durlauf and Fafchamps, 2005, for thorough literature surveys). Culture is also important in shaping the behavior of organizations (e.g., Hermalin, 2001); cultural differences between organizations, often originating from their home countries' cultures (Bloom, Sadun, and Van Reenen, 2007), impair communication and cause failures of international mergers (Weber and Camerer, 2003 and Weber, Shenkar, and Raveh, 1996). The extent to which cultural differences affect other aspects of economic interaction between organizations is still relatively unexplored.

This paper investigates whether cultural differences influence financial contracting between professional decision-makers and the extent to which cultural differences affect contractual outcomes when agents interact repeatedly. In particular, we ask whether the contracts, written by individuals that have different nationalities or that represent organizations with different national cultures, are affected by the extent of cultural differences between them. For this purpose, we use a large sample of syndicated bank loans around the world, combined with measures of cultural distance across countries from a variety of sources.

We find that the bigger are the cultural differences between the countries of the syndicate lead bank and of the borrower, the less favorable are the loan conditions for the borrower. In particular, after including lead bank nationality and borrower nationality fixed effects, measures of physical distance, creditor protection, and extensive loan and country level controls, we find that, *ceteris paribus*, more culturally distant borrowers are

offered loans at a higher interest rate, are more likely to need a guarantor, and often receive smaller loans.[1] These effects do not disappear if culturally distant foreign banks lend repeatedly to a particular borrower or if they acquire within-country experience (by leading a larger number of syndicates there). Similarly, if the lender has a subsidiary in the country of the borrower, the negative impact of cultural distance on the loan terms is only partially mitigated.

We also explore the extent to which cultural differences affect the interaction between banks participating in the syndicate and find that the bigger is the cultural distance between a participant bank and the lead bank, the larger is the difference between the portion of the loan held by the lead bank and the participant bank, suggesting that cultural differences reduce risk sharing within the syndicate. Repeated interaction between banks lowers the impact of cultural differences; however, the negative effect of cultural distance on within-syndicate risk sharing disappears only after more than 30 joint deals. This is a rare occurrence as 75 percent of all banks are involved in 10 joint deals or less.

We thoroughly explore whether differences in financial contracts may arise from the fact that culturally distant banks attract riskier borrowers in a battery of tests. All tests consistently indicate that culturally distant banks do not attract worse borrowers and that the more conservative terms they offer are not justified by borrowers' unobservable characteristics. First, our results are qualitatively unchanged, if we estimate a selection model, using the number of physically and culturally close (foreign) banks that have been

[1] Since we include lead bank nationality dummies, these findings do not imply that the borrower is offered worse contract terms from a culturally distant bank than from a domestic bank. For example, a French bank could extend loans at a lower interest rate than domestic banks to culturally distant U.S. borrowers and, at the same time, offer worse contract terms to U.S. borrowers than to culturally closer Belgian borrowers.

active in their own market as instruments, in order to account for the effects of unobserved heterogeneity on loan terms.[2] Moreover, we show that culturally distant banks are less inclined to share risk with the lead bank even when we keep the risk of the loan constant by including loan fixed effects.

Second, we explore the *ex post* performance of the borrower. Even though we have limited information on the performance of the loans in our sample, we find no evidence that, after the loan is granted, the performance of firms that borrow from culturally distant banks is worse than that of other borrowers. If anything, the clients of culturally distant banks appear more creditworthy.

Finally, we use several alternative proxies for cultural distance and explore the effect of cultural distance across different subsamples, time periods, and regression specifications that include a variety of controls capturing factors potentially correlated with cultural distance, such as the extent of information flows between countries. If unobservable firm characteristics correlated with cultural distance drove our results, one would expect that varying the set of unobservable characteristics by treating observable characteristics as unobservable or changing the subsample would have a large impact on the estimates of our variable of interest. In fact, the estimates are almost invariant, indicating that bank and borrower characteristics unrelated to cultural distance drive the matches between lead banks and borrowers (or participant banks).

The relevance of cultural differences to financial contracts is consistent with several, not necessarily mutually exclusive, explanations. One interpretation of our results is that cultural dissimilarities increase the cost of information gathering. Having

[2] Since we always include borrower country fixed effects and control for financial development, it is reasonable to assume that the number of physically and culturally close banks captures the supply of loans by different foreign banks.

less precise information, culturally distant banks would consider borrowers riskier than culturally closer banks do.[3] For this reason, culturally distant banks would offer more restrictive contract terms. We cannot rule out this mechanism even though the persistence of the effect of cultural differences despite repeated interaction and the evidence that culturally distant banks attract (or are chosen by) equally or more creditworthy borrowers than culturally close banks make our results less consistent with a story exclusively based on asymmetric information. In addition, we find no evidence that, after controlling for other loan characteristics, the variance of contract terms offered by culturally distant banks is lower than for domestic banks suggesting that culturally distant banks are as discerning.

More generally, (pecuniary or non-pecuniary) transaction costs may be higher for culturally distant lenders. Transaction costs, in turn, may arise not only from difficult communication (leading to coarser information about the borrower), but also from poor coordination between culturally dissimilar individuals and conflicts between organizations with different national cultures.

Another possibility is that cultural differences between borrowers and lenders affect negatively the perception of the borrower and give rise to taste-based discrimination (Becker, 1971).[4] In a similar vein, individuals may focus on (irrationally) pessimistic scenarios when they deal with culturally dissimilar counterparties. In this respect, our findings are related to a few recent papers showing that ethnic minorities,

[3] Based on the findings of the selection model and the robustness tests that lead us to exclude self selection of the worse borrowers to distant banks, this implies that culturally distant banks attract, on average, borrowers with similar characteristics to culturally close banks, but the information these banks have on borrower types is less precise.

[4] Taste-based discrimination can be related to non-pecuniary costs arising from dealing with culturally distant counterparties.

female borrowers, and less attractive individuals pay higher interest rates and receive smaller loans for reasons that are unrelated to their risk (Alesina, Lotti, and Mistrulli, 2008; Ravina, 2008).

The paper is related to several other strands of the literature. The link between culture and economic behavior has fascinated social scientists ever since Max Weber in the early twentieth century. Guiso, Sapienza and Zingales (2006) present new evidence on the extent to which culture affects aggregate economic outcomes and individual decision-making. Most of this literature explores the effects of culture on macroeconomic outcomes. A few notable exceptions are Guiso, Sapienza, and Zingales (2004), Chui, Titman, and Wei (2008), Griffin, Li, Yue and Zhao (2008), and Hilary and Hui (2009) who use micro data to study the impact of different cultural traits on corporate and individual decision-making.

We do not investigate the effects of culture *per se* but focus on cultural differences. By focusing on cultural differences, we limit concerns that our estimates are affected by omitted factors since we can include both bank nationality and borrower nationality fixed effects. In this respect, our paper is closer to the literature showing that cultural differences affect the flows of foreign direct investment (Kogut and Singh, 1988; Siegel, Licht and Schwartz, 2007). A related strand of literature initiated by Guiso, Sapienza and Zingales (2007) explores the effects of "trust" and shows that trade and investment flows are larger between countries that exhibit higher mutual trust. Even more closely related to us, Bottazzi, Da Rin and Hellmann (2007) provide evidence that venture capitalists are less likely to fund entrepreneurs in countries whose citizens they trust less.

We do not focus on mutual trust but on the way in which differences in the opinions of individuals or organizational differences originating from national cultures affect financial contracts. In other words, we ask whether cultural similarity eases economic interaction. Furthermore, we look at financial contracting in the large market for syndicated bank loans. The depth of the syndicated loan market allows us not only to greatly increase the set of countries in comparison with the existing literature, but also to explore the effects of cultural differences on financial contracts over a long time series. This is important because, by exploiting 25 years of data, we can test whether any effects of cultural differences disappear following repeated interaction.

Our paper is also related to the literature on the home equity bias. Many studies have shown that lack of familiarity limits investment (see, for instance Coval and Moskowitz, 1999; Huberman, 2001; Chan, Covrig and Ng, 2005) because of informational asymmetries and behavioral biases. Familiarity is enhanced not only by geographical closeness, but also by cultural (e.g., language or religious) similarity. For example, Grinblatt and Keloharju (2001) show that investors in Finland prefer to hold equity in firms whose CEOs have similar cultural origins even after controlling for the language of corporate reports and the physical distance from the company's headquarters. Our paper contributes to this literature by introducing a new proxy for familiarity and by showing that it enhances financial flows in debt markets as well. More importantly, we show that familiarity affects not only quantities but also the structure of financial contracts.

Finally, our work is related to papers analyzing how asymmetric information and moral hazard problems affect the structure of syndicated loans (see, for instance, Sufi

2007; Ivashina, 2007). Typically, these papers investigate the implications of financial imperfections within a country. A few notable exceptions are Esty and Megginson (2003), Qian and Strahan (2007), and Bae and Goyal (2008) who show how creditor protection and law enforcement in the borrower's country shape financial contracts. Our contribution is to show that distance, and in particular cultural distance, also helps explain the great variation in syndicated loan contracts.

The remainder of the paper is organized as follows. Section I describes the institutional background and the data sources. Section II introduces the main variables of the analysis and some summary statistics. In Section III, we describe the methodology for identifying the effect of cultural distance on loan terms and present the main results. The results on the syndicate composition are discussed in Section IV. Section V concludes.

I. Background and data sources

A. Syndicated loans

Data on syndicated loans are from Dealogic's Loanware Database, which provides information on borrowers, lenders, loan price and non-price terms at origination, but no information on the repayment history. This database is widely used for studying the international syndicated loan market (see, for instance, Esty and Megginson, 2003; Carey and Nini, 2007).[5]

While Loanware contains information on syndicated loans to local and central governments, we focus on corporate borrowers. For all corporate borrowers, we extract

[5] Another similar data source that has been widely used in the literature is Dealscan, which also provides data on syndicated loan contracts at origination. While approximately 50 percent of the loans are to US borrowers, Loanware provides better coverage of syndicated loans to non-US borrowers. Therefore, given the international focus of our paper, Loanware is the most appropriate data source.

information on contracts from 1980 to 2005. Less than 15 percent of the contracts are signed in the first 10 years, reflecting the fact that the syndicated loan market was still underdeveloped during the 1980s.[6] It is, however, possible that Loanware coverage is less complete at the beginning of the period; therefore, in the empirical analysis we make sure that our results do not hinge upon the inclusion of the 1980s.

In syndicated loan markets, the loan is jointly extended by a group of banks. A syndicate includes one or sometimes a few lead banks and many participant banks. Prior to signing the loan contract, lead banks need to assess borrower quality, negotiate terms and conditions, and prepare an information memorandum for the participant banks. Only once the key terms and conditions are in place, are participant banks invited to decide how large a stake of the syndicated loan to buy. The role of lead banks is important also after the deal is signed, as lead banks have to monitor the borrower and its compliance with the loan covenants, and are in charge of negotiations in case of default.

The syndicated loan market represents an ideal environment to explore the effects that differences of opinions originating from different cultures may have on economic interaction and financial contracting because this market is well-known to be affected by asymmetric information and moral hazard problems concerning both the interaction between the lead bank and the borrower and the interaction between the lead bank and the participant banks.

Regarding the interaction between the lead bank and the borrower, Dennis and Mullineaux (2000) argue that syndicated loan borrowers are often associated with severe asymmetric information and moral hazard problems. The (perceived) intensity of these

[6] Gadanecz (2004) reports that, during the 1980s the syndicated loan market consisted mostly of sovereign loans, especially to developing countries. It became a significant venue for corporate finance only in the early 1990s.

problems affects contractual provisions, including the overall cost of the loan and whether the borrower needs to provide guarantees or collateral. Similarly, the relationship between participant banks and lead banks is hampered by information asymmetries and agency problems. There is an information asymmetry between lead and participant banks regarding the borrower and the quality of the information that lead banks provide. Lead banks also need incentives to monitor the borrower after the loan is granted. Thus, lead banks have to retain a share of the loan in order to signal the quality of the borrower (Leland and Pyle, 1977). The fraction of the loan they are able to sell depends on the perceptions of participant banks. In line with this view, Esty and Megginson (2003), Sufi (2007) and Ivashina (2007) document that, indeed, more severe information asymmetries and agency problems between the participants in the syndicate force lead banks to retain a larger proportion of the loan. This limits lead banks' ability to diversify their exposure to borrowers.

In this context, we ask whether information asymmetries and agency problems are perceived to be more severe by agents from culturally (or otherwise) distant countries. In particular, cultural differences between borrowers and lead banks or between lead banks and participant banks may increase the (perceived) intensity of information asymmetry and moral hazard problems and motivate the use of more restrictive contractual provisions or limit risk sharing between banks. Alternatively, cultural differences may increase pecuniary and non-pecuniary costs associated with financial contracting, thus leading to worse contractual terms for the borrower and to less risk sharing between banks.

B. Measuring cultural distance

Culture is defined by sociologists in a variety of ways. The definition usually includes some notion of shared values, beliefs, language, and practices. Although it is difficult to produce quantitative measures of culture and cultural differences, the World Values Survey (WVS), an academic project, which has been on-going since the early 1980s, is an attempt by social scientists to measure cultural values around the world. The WVS initially covered only 22 countries and was conducted at ten-year intervals; currently the survey covers about 80 countries and is updated every five years. The survey consists of a detailed questionnaire (about 250 questions in the most recent rounds) administered in face-to-face interviews; the questionnaires are dispensed to about 1,000 to 3,500 interviewees per country, and the average number of respondents is 1,400 per country (for details, see Inglehart, 1997, and Inglehart and Baker, 2000).

Inglehart (1997) and Inglehart and Baker (2000) find that diverse orientations on concrete aspects of life tend to cluster together in coherent patterns. Consequently, they focus on a subset of ten survey questions and use factor analysis to summarize the salient features of different cultures along two dimensions (values): (1) The extent to which a society emphasizes traditional as opposed to secular and rational values; (2) The extent to which a society emphasizes values related to survival as opposed to self-expression.[7]

In societies with traditional values, individuals emphasize religion, family values, parent-child ties, and deference to authority; they tend to have high levels of national pride and to oppose divorce, abortion, euthanasia, and suicide. In contrast, societies in

[7] The traditional vs. secular/rational and the survival vs. self-expression dimensions explain more than 70 percent of the cross-national variance in a factor analysis of ten survey questions, and each of these dimensions is strongly correlated with a variety of other social orientations.

which secular-rational values are important tend to have opposite preferences on these issues.

Survival values are considered to be predominant in societies with low interpersonal trust, which tend to be intolerant of ethnic and cultural minorities, do not support gender equality or environmental protection, and often favor authoritarian governments. By contrast, societies that take survival for granted tend to view positively ethnic and cultural diversity, gender equality, the protection of the environment, and democratic governments.

Cultural distance between any pair of countries can be measured as the Euclidean distance between the traditional vs. secular/rational and the survival vs. self-expression orientations.[8] The cross-country cultural differences that emerge are summarized in a cultural map of the world, which we reproduce in Figure 1. Figure 1 presents a snapshot based on the most recent edition of the survey. Although the time-series variation of cultural distance is limited, whenever possible, we use previous WVS surveys to measure culture in the country of the borrower and the bank as close as possible to the time at which the loan contract is signed.

We attribute to each borrower the culture of its own country and to the bank the culture of its headquarters' country, reflecting the premise that cultural differences may affect contractual outcomes because the individuals writing the contracts or the executives with high decision power are nationals of the bank's and the borrower's countries. The measure of cultural distance based on the WVS is well suited to capture some of the cultural conflicts that may arise. For example, in countries that stress

[8] Typically, measures of cultural distance do not reflect differences in culture between geographic areas or socio-economic groups within a country. These and other measurement errors bias the results against finding any effect of cultural distance on loan contracts.

traditional and survival values, individuals tend to favor and rely on members of a specific group, whereas non-cooperation characterizes the relations between members of different groups. This may hamper relations with individuals from more secular and self-expression-oriented societies that value self-reliance and exhibit more social capital (generalized morality).[9] More generally, communication is known to be more effective when the source and the receiver share common meanings, attitudes, and beliefs (Rogers and Bhowmik, 1970).

The hypothesis that the national culture of the contracting parties matters is consistent with evidence from international mergers showing that national cultural differences between the organizations involved in the merger predict stress, negative attitudes towards the merged organization, and reduced cooperation (Weber, Shenkar, and Raveh, 1996). It is plausible that similar reactions may arise in other situations such as financial contracting.

We are well aware of the fact that international banks tend to have an international workforce and to hire locals in their foreign subsidiaries. Even if the representatives of foreign banks have the same nationality as the counterparty, cultural conflicts may still arise because of differences in organizational culture. Bloom, Sadun and Van Reenen (2007) provide empirical evidence showing that, indeed, multinational firms "take their culture abroad" even when all their employees are locals: In their international sample, subsidiaries of firms headquartered in countries with a high share of hierarchical religions are significantly less decentralized than domestic firms. Interactions between hierarchical and flat organizations from countries that have different views on

[9]Consistently with this interpretation, Bornhorst et al. (2008) find that in playing a "trust game" subjects are penalized for showing low trust towards others (that is, for a cultural trait) rather than for not being trustworthy themselves (that is, a feature that affects the counterparty's payoff).

egalitarian values may be cumbersome. Similarly, cultural clashes may arise if banks adopt policies reflecting the culture of their country of origin, for instance, by promoting gender equality and ethnic diversity in their local subsidiaries. Therefore, we ask whether cultural differences between individuals or between the organizations they represent have an effect on financial contracting.

To capture cross-country differences in firm organization more directly and explore the robustness of our results to alternative measures of cultural distance, we also use an alternative proxy that is more closely related to the way firms and multinationals from different countries are organized. Surveying employees of IBM across different countries, Hofstede (2000) generates a "power-distance" score that aims to capture a country's acceptable degree of inequality in power between a less powerful individual and a more powerful one. In countries where a high degree of inequality in power is the norm, subordinates behave submissively, are unlikely to contradict their bosses, and, as a result, decision power is more centralized.[10] Frictions may thus arise if during contract negotiations junior members of organizations from a low power distance country contradict the senior representatives of the counterparty. Similarly, reaching a mutual understanding may be more difficult if representatives of the counterparty are reluctant to clearly voice their views. We attempt to capture these potential frictions by using the Euclidean distance of power-distance scores between each pair of countries as an alternative a proxy for the cultural distance measure from WVS.

Finally, we validate the two main proxies for cultural distance described above by considering alternative measures. First, in most specifications, given that religion has

[10] Bloom, Sadun and Van Reenen (2007) show that Hofstede's power distance score has an 80 percent correlation with the degree of firm decentralization.

an important role in shaping cultural values, we include a dummy variable that takes value one if the country of the borrower and the lead bank (or of the lead bank and the participant bank) share the same religion. For instance, hierarchical religions, such as Catholicism and Islam, may lead managers to have weaker preferences for autonomous decision making. By including the same religion dummy, we can evaluate whether cultural similarities improve loan terms and facilitates risk sharing. Second, we use as alternative proxies for cultural distance, the Euclidean distance between each of the measures of a country's personal values developed by Schwartz (1999, 2006). These different proxies for cultural distance confirm the results obtained when using the other proxies and, for brevity, are not tabulated.[11]

II. Descriptive statistics

Our sample includes over 100,000 loans to 40,081 borrowers from 70 countries, from 1980 to 2005. There are 6,546 lead banks from 61 countries and 8,133 participant banks. The list of borrower and lead bank nationalities and the distribution of loans are presented in the Appendix. In the empirical analysis, sample composition varies due to missing observations for some variables.

As documented in Panel A of Table I, we have extensive information about *ex ante* loan characteristics. The loan characteristic on which we focus most of the analysis is the all-inclusive loan cost, which measures the basis point spread over the LIBOR, inclusive of all fees. An alternative measure of price terms is the margin, which is measured as spread over the specific base used in the loan contract, most often the LIBOR, and which does not include fixed fees (it is based primarily on the interest rate).

[11] See Schwartz (2006) for a comparison between his measures of cultural distance and those of the WVS.

Non-price terms can be as important as price terms for understanding the lender's propensity to treat favorably a given borrower. We observe the loan amount, its maturity, and whether the loan is secured by some assets or guaranteed by a third party. Loan maturity and covenants are important to evaluate how strong agency problems and asymmetric information are perceived to be. For instance, short maturity is considered an effective contracting tool if the borrower is perceived to have a high probability of default (Diamond, 2004). Guarantees and collateral may similarly be used to mitigate agency problems.

Loanware provides information not only on the terms offered to the borrower, but also on the identity of the lead banks and their nationalities, as well as on the composition of the syndicate. As explained in Section I, a syndicate includes lead banks and participant banks. For over 75 percent of the loan contracts in our sample, there is only one lead bank. We thus consider the lead bank as *the* lending bank (as is customary in the literature) and use the lead bank nationality to define cultural distance from the borrower (or from each of the participant banks) and all the other lead bank nationality-based variables. In the few cases in which there are several lead banks, to be as conservative as possible, we define all the variables with respect to the lead bank which is culturally closest to the borrower (or to each of the participant banks when we focus on syndicate composition).[12] As mentioned above, we define bank nationality on the basis of the location of the bank headquarters.

Panel B of Table I presents descriptive statistics of various measures of distance between borrower and lender. Physical remoteness and differences in laws may also cause segmentation in financial markets as they may increase transaction costs and make

[12] Our results remain unchanged if we restrict the sample to syndicated loans with one lead bank only.

information asymmetries more severe. Thus, besides cultural distance, our main variable of interest, we also consider physical distance and various measures of similarity of the legal environment. We also include dummies for whether countries share the same language or have colonial ties, features that have been shown to favor international trade (Rose, 2004) and that could have a similar effect on financial contracts. Here, we also present descriptive statistics for the alternative measure of cultural distance, based on Hofstede's power-distance scores.

Panel C of Table I summarizes the salient features of the bank syndicate composition. Our main goal here is to explore how risk sharing within the syndicate depends on the cultural distance between the lead bank and each of the participants. As explained above, if there are multiple lead banks, we select the lead bank that is culturally closest to a given participant. Under perfect risk sharing between (similar) banks in the syndicate, any given loan would be equally funded by all banks (lead banks and participant banks); we define risk sharing as the loan provided by a given participant bank standardized by the loan that each bank in the syndicate would provide under perfect risk sharing, minus the loan amount provided by the lead bank, also standardized by the loan that each bank would extend with perfect risk sharing.[13] An advantage of this variable is that it does not depend on the size of the total loan and on the number of participants in the syndicate. It is thus well-suited to measure a participant bank's willingness to share risk with a particular lead bank.

All the distance variables used to explain within-syndicate risk sharing are defined using the countries of the participants' and of the lead bank's headquarters.

[13] In the empirical analysis, we control for bank characteristics, such as their nationalities, that may be related to the bank's regulatory environment and thus affect their propensity to share risk.

Panel D of Table I provides details on how loans are classified in Loanware. These categorical variables, which are discussed in more detail in the next section, are used as controls for borrower heterogeneity. Finally, other time-varying country characteristics based on borrower and bank nationalities are presented in Panel E of Table I.

III. The effects of borrower-lenders cultural differences on loan contracts

A. Empirical approach

In an optimal contracting framework (see, for instance, Hart, 1995), creditors with pessimistic expectations about a borrower's quality or actions extend credit on unfavorable terms (high interest rate; short maturity; strict covenants). High (pecuniary or non-pecuniary) costs of dealing with borrowers in certain countries should have similar effects on price and non-price loan terms. To examine if lenders have distorted expectations or high costs when dealing with culturally distant borrowers, we estimate reduced form equations[14] and examine whether the contractual terms described in Section II co-vary with the cultural distance between the borrower and the lender, controlling for other factors.

The nationality of the borrower and the lender may systematically affect contract terms. For instance, the expected repayment may be systematically lower for borrowers in countries with weak creditor protection (Qian and Strahan, 2007). Similarly, the cost of extending a loan may be systematically higher for banks in countries with higher cost of funding. To control for these confounding factors, we include borrower and lead bank

[14] The various contract characteristics are clearly determined simultaneously at the time of the loan. We lack, however, comprehensive theories offering predictions on how the different contract characteristics are interrelated (e.g., whether the loan amounts or the presence of a guarantor determine the cost or vice versa). Therefore, we simply consider reduced form equations in which contract terms are posited to depend on loan and country characteristics.

country dummies in all specifications. In this way, we compare whether borrowers from a given country, say, the United States, get systematically more favorable terms from culturally close lenders, such as domestic banks or British banks, in comparison with culturally more distant lenders, such as French banks.

Clearly, within a country, borrowers have different characteristics which may affect the loan contract. For this reason, we include three dummy variables capturing borrower rating at the time the contract is signed, 56 industry dummies, 21 dummies capturing the loan purpose (e.g., whether the loan is needed to finance an acquisition, to buy a specific asset, or as working capital), and 11 borrower type dummies capturing whether the borrower is publicly or privately owned and whether it is a bank, another type of financial institution, a utility company, or a company in another industry. All these borrower characteristics and, in particular, the credit rating should capture differences in the risk of firm assets and capital structure (Kisgen, 2006). In addition, we include 46 dummies capturing the loan instrument type (e.g., whether the loan is a credit line, a term loan, a bridge facility etc.) and 69 currency dummies.[15] Finally, we include year dummies to control for differences in credit market conditions over time.

We further control for time-varying country characteristics such as the supply of credit in the borrower's country and creditor rights and GDP per capita in the countries of both the borrower and the lead bank.[16] Controlling for GDP per capita is particularly important, because Inglehart (1997) documents that, while a society's historical heritage

[15] We are aware that these dummies may, to some extent, reflect endogenously chosen contract features. Nevertheless, their inclusion may help capture the risk of the loan. The omission of currency and loan instrument type dummies does not affect our estimates.

[16] In unreported specifications, we also include interactions of borrower nationality and year dummies thus controlling for any possible changes in the borrower's economic environment. The effect of cultural distance is once again similar to the one we report.

has an enduring influence on its value system, cultural values experience some changes during the process of development. By including GDP per capita in the borrower and the lead bank countries (and the participant bank country when we look at risk sharing within the syndicate), we control for economic development (and its effect on culture and values).[17]

Since our proxy for cultural distance may be correlated with physical distance or other similarities in laws and institutions, we control for the physical distance between the capital cities of the borrower's and the lender's countries, for whether the countries share the same language, a border, or whether they have a common colonial heritage. Differences in laws may be a major obstacle in doing business in different countries; therefore, we include a dummy variable that takes value one if the two countries share the same legal tradition, the absolute value of the difference between the index of creditor rights in the borrower's and lead bank's countries and a dummy that takes value one if creditor protection is stronger in the lead bank's country.[18]

This extensive set of controls should capture borrower heterogeneity and risk as well as the possibility that banks from different countries may have clients with systematically different characteristics. Thus, any effect of cultural distance on loan terms

[17] In addition, since the survival vs. self-expression dimension of cultural values is considered to be influenced by economic development to a larger extent than the traditional vs. rational dimension, in some robustness checks, we measure cultural distance using only the latter factor. Since results are qualitatively equivalent to the ones we report below, we omit them.

[18] We also include additional controls for institutional differences, such as the degree of efficiency with which debt contracts are enforced (from Djankov et al., 2008), proxies for the rule of law and for the extent of corruption (from the World Bank's Worldwide Governance Indicators, http://info.worldbank.org/governance/wgi/index.asp). These variables have the expected signs (i.e. in countries where debt contracts are efficiently enforced and where governance indicators are high, loan spreads tend to be low), but the coefficient on cultural distance remains positive and significant. For brevity, these results are not tabulated.

should be interpreted as arising from culturally distant banks' policies toward (similar) borrowers.

The matching of banks with borrowers is, of course, non-random. In particular, the question arises why firms would choose culturally distant banks. It is important to note that because we include lead bank nationality dummies, a positive effect of cultural distance on the cost of the loan does not necessarily imply that the borrower receives funding at a higher cost (in absolute terms) from a culturally distant bank than from a domestic bank. For example, a French bank could extend loans at a lower interest rate than domestic banks to culturally distant U.S. borrowers and, at the same time, offer worse contract terms to U.S. borrowers than to culturally closer Belgian borrowers.

Nevertheless, our basic approach rests on the assumption that bank and borrower characteristics unrelated to cultural distance drive the matching of lead banks and borrowers. Hence, borrowers do not necessarily rely on the closest lead bank. For example, if banks have an upward sloping cost of supplying funds or some capacity constraints, some borrowers are forced to borrow from a culturally distant (and possibly more expensive) bank. Alternatively, borrowers may match with distant banks for other reasons that are unrelated to their creditworthiness, for example because of trade ties with the lender's country.[19]

The latter conjecture would be consistent with experimental evidence showing that economic agents, who make decisions for a variety of reasons not related to culture, understate the importance of cultural differences on economic outcomes (Weber and Camerer, 2003). Moreover, it is important to note that the non-random selection of

[19] Degryse and Ongena (2005), who examine physical distance between banks and their clients, report that many clients do not necessarily rely on loans from the closest bank and argue that other factors, similar to the ones we consider above, are important.

borrowers into culturally distant banks could bias our estimates against finding any negative effect of cultural distance on loan contract terms. Degryse and Ongena (2005) find that physically distant banks charge relatively low rates. Even more importantly, Mian (2006), Houston et al. (2007), Berger et al. (2008), and Giannetti and Ongena (2008) report that foreign banks extend loans primarily to the safest borrowers, who, because of their creditworthiness, should be offered favorable contract terms. Our dataset is consistent with these findings: Foreign lead banks grant a larger proportion of loans to rated borrowers in comparison with domestic banks (78 vs. 74 percent of all loans); moreover, a slightly higher percentage of foreign lead banks' clients has an A rating (7.1 percent vs. 6.5 percent).

The above studies suggest that unobserved factors and non-random selection of borrowers may bias downward the effect of cultural distance. Nevertheless, in subsection B.2, we introduce instruments and explicitly address selection problems.

B. Loan price

B.1 Basic specifications

Our main variable of interest is the all-inclusive loan cost. If cultural differences between the borrower and the lead bank make expectations about the borrower pessimistic, or increase the pecuniary and non pecuniary costs of dealing with the borrower, we should observe that similar borrowers in the same country are offered systematically different terms by culturally distant and culturally close lead banks.

The results in Table II consistently show that this is indeed the case.[20] In column 1, a one-standard deviation increase in cultural distance increases the all-inclusive cost by approximately 10 basis points, or around 7 percent of the median all-inclusive cost of the loan. To explore the robustness of the effect of cultural distance, we include different controls for physical distance, creditor rights (columns 2 to 7), and a number of loan characteristics (column 7). The latter are admittedly jointly determined with the interest rate on the loan; yet, it is important to check whether our result is robust to their inclusion because they may help in further controlling for borrower heterogeneity. In addition in column 7, we account for the possible effects of risk sharing within the syndicate on the cost of the loan by including the number of participant banks, and for the fact that the price of the loan may depend on its size by including the loan amount.

We find that the effect of cultural distance on the loan spread is consistently positive and significant. The importance of cultural similarity is also supported by the fact that the loan spread is generally lower if the lead bank and the borrower come from countries that share the same religion. Sharing the same language or colonial history seems largely irrelevant. Moreover, cultural distance is unlikely to capture other aspects of remoteness, since we control for the physical distance between the capital cities of the borrower's and the lead bank's countries and include a common border dummy, both of which do not appear to have a significant effect on the loan spread. This is probably due

[20] The standard errors we report in the empirical analysis are not corrected for heteroskedasticity (or clustered). This is because, with the large set of dummy variables we include as controls, in a few instances Stata is unable to compute the White correction for heteroskedasticity. This inconvenience disappears if we exclude some of the dummy variables, such as the instrument type dummies. For all specifications, we compute White-corrected standard errors including a subset of dummies or the full set – if Stata allows it. In all cases, the magnitude of standard errors is similar to the one we report. Furthermore, our main variable of interest remains positive and statistically significant if we cluster standard errors by borrower nationality, lead bank nationality, or year (which is possible when Stata can calculate the White correction for heteroskedasticity) and if we compute yearly averages of the loan characteristics received by all borrowers in country *i* from lead banks in country *j* and run our regressions using this collapsed dataset.

to the fact that many lead banks have subsidiaries in the country of the borrower or in nearby countries, which may mitigate the effect of geographical but not of cultural distance; we revisit this issue in the robustness section.

Cultural distance is positively related to the loan spread in a robust way across different samples. The effect is substantially larger if U.S. borrowers are excluded (column 3) and somewhat larger when government-owned firms are excluded (column 4). In column 5, we include only loans extended by foreign lead banks. Our estimates are qualitatively unchanged showing that our results are not driven by the difference between domestic and foreign banks, but by the cultural distance of the latter.

Spreads appear to increase with cultural distance even when the cost of the loan includes (variable) interest costs, but not fixed fees (column 6). In addition, the effect of cultural distance remains unchanged when lead banks from the U.S. or the U.K. are excluded (results not reported) suggesting that the effect is not driven by the behavior or monopoly power of the largest and most reputable banks, which tend to be headquartered in the U.S. and the U.K. Results are also unchanged if we control for the size of the lead bank (measured by the number of previous syndicate loans led or the total amount of syndicated loans led), another proxy for bank reputation and market power.

We also run the regressions for groups of borrowers with the same ratings and for unrated borrowers, loans issued in either the Euro or the U.S. market, and include dummies for the different interest rate bases. The estimates (not reported) show that the effect of cultural distance is once again unchanged. Finally, we also consider whether the effect of cultural distance changes over time. The results are qualitatively unchanged if

we drop the loans issued during the 1980s; however, the effect of cultural distance is about 30 percent larger than the one we report in column (2) of Table II during the 1980s.

Some insights can be gained from the coefficients of the control variables. Interestingly, differences in creditor rights protection between the country of the borrower and of the lender seem to lead to higher loan spread. However, the effect has only weak statistical significance. It is comforting that loan spreads are higher for borrowers with ratings below A; unrated borrowers obtain credit at lower interest rates than borrowers with C or lower ratings. Furthermore, stronger creditor rights in the borrower's country tend to decrease the loan cost, even though – unsurprisingly given that we always include borrower fixed effects – the coefficient is not statistically significant at conventional levels.

B.2 Addressing sample selection problems

Even though we control for a large number of loan and country characteristics, it is possible that, because of an informational disadvantage, culturally distant lead banks attract borrowers that are systematically worse along some dimensions that we do not observe. To further examine whether unobserved heterogeneity biases our estimates of the effect of cultural distance, in Table III, we directly address this issue using a two-stage selection model.

The set of possible matches for a given borrower consists of all the domestic and foreign lead banks that ever extended (syndicated) loans to borrowers from the same country up to a given year. We consider all the possible combinations of lead banks and borrowers within a country and estimate the probability of observing a given match

between a particular lead bank and a particular borrower as a function of borrower, country, and lead bank characteristics (selection equation, first stage).

To obtain instruments, we pursue an identification strategy similar to the one suggested by Ackeberg and Botticini (2002) and pursued in a context similar to ours by Bottazzi, Da Rin and Hellmann (2008), who argue that the distribution of investors (banks in our context) active in a country is exogenous.[21] We thus characterize these exogenous market characteristics by including the bank rank in the country by counting the number of deals it completed up to a given year. In addition, the probability that a borrower receives the loan from a close bank (a bank from a country that shares the border with the country of the borrower in our specification) depends on the number of physically and culturally close banks (banks with physical or cultural distance below the mean physical and cultural distance for loans in the sample).

Our instruments affect the probability that a particular bank-firm match occurs because they are related to the importance of a given lead bank in the borrower's country, but should not directly affect the cost of the loan because borrowers can resort to any bank in the international syndicated loan market active in their country and because we control for the borrower's country credit market conditions by including the ratio of credit to GDP and country fixed effects in the second stage.

Finally, in order to keep the size of the dataset manageable, we rank lead banks according to the loans issued up to a given year in a country and keep in the sample at

[21] Sorensen (2008) adopts a similar identifying restriction. Because of assumptions specific to his context, Sorensen uses a Bayesian approach to estimate his system of equations. Like Bottazzi, Da Rin and Hellmann (2008), we use the classic approach.

most the top 500 lead banks active in each country. We exclude any loans extended by lead banks that are not among the top 500.[22]

The first stage estimates, presented in column 1, show that our instruments are statistically significant. Borrowers do not appear more likely to obtain loans from physically close lead banks; the probability that a loan is obtained from a foreign bank with which the borrower shares a border is decreasing in the number of physically close banks and in the number of culturally distant banks active in the country. In addition, cultural distance does not affect the probability of a bank-borrower match. While this finding may appear surprising, it is consistent with existing empirical evidence: Notwithstanding the common perception that differences in national culture between merging companies disrupt post-merger integration, difficulties to meet initial financial targets appear to surprise the management (Weber, Shenkar, and Raveh, 1996). In experiments too, individuals severely understate the negative impact of differences in culture on post-merger performance (Weber and Camerer, 2003). Thus, the finding that cultural distance does not affect the probability that a borrower receives a loan from a given lead bank should mitigate concerns that selection problems drive our estimates.

We then use the first stage estimates to compute the inverse Mills ratio that we include in the second stage in order to capture borrower unobserved heterogeneity. The second stage results suggest that selection problems are unimportant as the coefficient of the inverse Mills ratio is not statistically significant. Moreover, the negative sign would indicate that on the basis of factors we do not observe, borrowers choose lead banks that can extend loans at lower cost. Most strikingly, the effect of cultural distance is now

[22] Different cutoffs (50, 100, 200, and 300) all yield results that are similar to the ones we report.

almost twice larger than the one we report in the baseline specifications. Thus, as we argue above, if anything, selection problems make our results weaker.

We are aware that the instruments chosen for the identification of the selection model cannot be proven to provide exogenous variation. However, the identification problem arises because of the binary nature of the match with a given bank. Importantly, column 7 of Table II shows that our results remain unchanged when we include the amount of the loan and the other contract terms, which, as suggested by Li and Prabhala (2007) in a context very similar to ours, are related to the magnitude of the latent propensity to lend to a given borrower (or equivalently to borrow from a given bank). In this case, exclusion restrictions are no longer needed (see Li and Prabhala, 2007, p. 46), and it is comforting that our results are robust and the magnitude of the coefficient of cultural distance is virtually unchanged.

C. Non-price contract terms

If cultural differences increase the lead bank's pessimism about the borrower's creditworthiness or transaction costs associated with the loan extension, we should observe that the bank offers more restrictive non-price terms for the loan.

Estimates in Table IV show that, after controlling for the loan characteristics described in Subsection III.A, culturally distant banks provide smaller loans (column 1) and are more likely to request loan guarantees from a third party (column 4).[23] Cultural distance has also a positive impact on the probability that the loan is secured by

[23] Parameters in columns 3 and 4 are estimated using a linear probability model. In column 3 estimates would be similar if we used a logit model, while the maximum likelihood estimation does not converge in column 4 if we include the complete set of dummies; if we exclude some dummies, such as the loan instrument type, logit estimates are similar to the estimates we report.

collateral. However, although a one-standard deviation increase in cultural distance increases the probability that a loan is secured by about 5 percent, the effect is not statistically significant at conventional levels (the *p*-value is approximately 12 percent). Similarly, we find no effect of cultural distance on loan maturity.

D. Repeated interaction, local subsidiaries, and cultural biases

Cultural biases in lending may disappear with repeated interaction. We construct two variables to capture two alternative mechanisms through which interaction could eliminate cultural biases. First, as a lead bank makes more deals within a country, it should become acquainted with the local culture and this should allow it to have a fairer perception of the borrowers' risk or to reduce transaction costs. Second, banks extending several loans to the same borrower should develop a fairer assessment of that borrower's creditworthiness or have lower transaction costs.

We explore these two hypotheses in Table V. In order to avoid biases deriving from the fact that previous interactions are, by construction, very few at the beginning of the sample period, we only include loans signed after 1990. In Panel A, we find only very weak evidence that the effect of cultural distance disappears after a lead bank has concluded more deals within a country: Only the propensity to ask for a third party guarantee appears to decrease. However, if we take cultural distance at its mean, its effect vanishes only if the foreign lead bank has made over 100 deals within a country. This is a large number as we have censored the number of deals that a bank concludes in a country to 50 and even without censoring the median bank has led 47 deals in a country.

In addition, maturities seem to be shorter and the loan is more likely to be secured when a culturally distant lender has accumulated more experience in a country. Short maturity and collaterals are useful if the lender monitors the borrower. The finding that these contract terms become more restrictive suggests that the lender's experience makes monitoring less costly and enforcing the security interest less expensive, and that the reduction in the marginal cost of monitoring and establishing security interests is larger than any improvement in perception of the borrower or any decrease in contracting costs.

In Panel B, we do find some evidence that repeated interaction with a given borrower mitigates the effect of cultural distance. For the effect of cultural distance on the loan's cost to disappear, the borrower has to receive more than three syndicated loans from a given lead bank (over six if domestic banks are excluded). This suggests that the effect of culture on loan spreads is persistent and is only partially mitigated by repeated interaction with the borrower: For 95 percent of the loans in the sample, the borrower received at most two previous loans from a given lead bank (the median number of loans from a given bank is only one implying that repeated interaction is a rare occurrence in the sample).[24]

Repeated interaction with a culturally distant lead bank also appears to enable the borrower to receive loans of longer maturity. The effects of repeated interaction on the size of the loan and on the probabilities that collateral or third party guarantees are required do not appear to depend on repeated interaction. To the extent that the effect of cultural distance persists after repeated interaction with a given borrower, these findings suggest that cultural distance does not only capture higher information gathering costs

[24] Interestingly, in unreported regressions we find that the number of loans that a borrower receives from a given lead bank decreases with cultural distance. This further supports the conclusion that the effect of cultural distance we identify is persistent over time.

–that should be most relevant for first time borrowers– but also other types of transactions costs and biased perceptions. Distinguishing between different channels is, however, beyond the scope of this paper.

The coefficient of the number of previous loans received by a given lead bank on loan terms provides additional interesting insights. Repeated interaction with the same bank increases the cost of the loan, suggesting that the lead bank can enjoy an informational rent, as documented in the context of syndicated loans by Ferreira and Matos (2007) and Santos and Winton (2008). Possibly because of a mechanical effect, borrowers that interact repeatedly with their bank receive smaller loans with shorter maturity. The shorter maturity of the loan, however, may also depend on the fact that banks that have repeated interaction with a borrower monitor more and want to enjoy the control rights associated with frequent renewal decisions.

Finally, we explore whether the effects of cultural distance can be overcome if the lead bank has a subsidiary in the borrower's country. Following the literature on foreign banks (see, for instance, Mian, 2006), we identify the nationality of the bank with the country of its headquarters. If the lead bank has a local subsidiary, however, many of the lead bank's employees structuring the loan are culturally and otherwise close to the borrower. The effect of cultural distance should thus be smaller. The cultural bias may nevertheless persist if –as is often the case– the managers of the subsidiary in charge of approving the loans are from the headquarters country or if the culture of the country of origin affects the corporate culture of the subsidiary.

The results of Table VI show that having a local subsidiary in the country of the borrower mitigates but does not eliminate the effect of the lead bank's cultural distance.

The all inclusive cost of the loan (column 1) and the effect of cultural distance on the probability of having a loan guarantor are almost halved (column 5). The negative effect of cultural distance on the size of the loan is, however, magnified. Furthermore, similarly to what we find for banks that have led many deals within a country (Panel A of Table V), culturally distant banks with local subsidiaries grant loans with shorter maturity, possibly because having a local subsidiary enables monitoring at a lower cost and cultural distance increases the expected benefit of monitoring. The higher propensity of culturally distant banks to secure the loan also mirrors the results in Panel A of Table V and can be explained along the same lines, as banks with a local presence may be better able than other foreign banks to enforce their security interest.[25]

Overall, these results suggest that cultural distance between borrowers and lenders can segment syndicated loan markets in a persistent way even if borrowers and lenders interact repeatedly over time or if banks have subsidiaries in the country of the borrower.

E. Further robustness

In Table VII, we further explore the robustness of our results. First, we reconsider the possibility that culturally distant banks may either have negative information about the borrowers or a rational concern about the possibility of attracting clients with poor credit prospects. If this were the case, we should observe that the performance of loans granted by culturally distant banks is worse than that of the average loan. While we have only limited information on the performance of the borrower after the loan is granted, we can explore this possibility by looking at credit rating changes. In particular, we examine

[25] Note that having a local bank participating in the syndicate without leading it is not expected to affect the loan terms because the contractual terms are determined by the lead bank and its characteristics before other participants are invited to join the syndicate.

whether a borrower's rating has been upgraded, downgraded or has remained unchanged after the extension of the loan and before the loan is due.[26]

In column 1, we present estimates of an ordered probit model. Strikingly, after controlling for loan and borrower country characteristics, culturally distant borrowers are more likely to be upgraded, not downgraded. This confirms that the loan terms offered by culturally distant banks are not justified by the fact that these banks attract borrowers with poor credit prospects. If anything, the clients of culturally distant banks have unobservable characteristics that make them more creditworthy, suggesting that culturally distant banks have no information disadvantage. The notion that culturally distant banks are as discerning as other banks is also consistent with the findings that the variance of contract terms offered by banks to borrowers in a given country does not depend on cultural distance, even after controlling for the variance of borrower characteristics (results unreported).

Second, we consider the possibility that omitted factors, which may be correlated with cultural distance, drive our results. For example, Portes and Rey (2005) show that limited information decreases international trade and portfolio capital flows. Less economic exchange leading to lower information flows may be correlated to cultural distance and explain our results. Alternatively, information acquisition costs may be higher because culturally distant countries have different economic structures (not because of cultural distance). In columns 2 to 4 of Table VII, we consider only loans from foreign banks and control for these factors in turn. The effect of cultural distance on the cost of the loan remains positive and significant. We conclude that the effect of

[26] In this context, an upgrade cannot be interpreted as incorporating positive information generated by the granting of the loan as this information is already incorporated in the borrower rating issued when loan is granted, which is included as a control variable in all regressions.

cultural distance that we document is unlikely to be a proxy for the effect of another omitted variable.

Third, although we rely on a measure of cultural distance that is well established in the sociology literature, concerns may arise about robustness. The robustness of our results to the use of a measure of cultural distance which is based only on the most time invariant component of culture (i.e., differences in traditional vs. rational values) and the fact that having the same religion generally affects contract terms favorably, like cultural similarity, should reduce these concerns.[27] As a further robustness test, we use the difference in "power distance" scores developed by Hofstede (2000). The estimates in column 5 of Table VII suggest that the effect of cultural distance on the cost of the loan is robust to the use of this alternative proxy, which, as we argue in Subsection II.B, is more directly related to the way firm hierarchies are organized in different countries. Interestingly, if we include the difference in power distance scores and the measure of cultural distance developed by Inglehart in the same regression, both proxies have a positive and significant effect on the loan spread. To the extent that the Hofstede measure is more closely related to organizational conflicts and the Inglehart measure to disagreements between individuals, this result would suggest that both types of cultural differences are relevant to financial contracts. It is beyond the scope of this paper, however, to establish the precise mechanism through which cultural conflict arises.[28]

[27] We also explore whether the effect of cultural distance is asymmetric by analyzing whether borrowers from countries that tend to stress more traditional and survival values and for this reason may have less "social capital" obtain worse terms. While we find no evidence of this, the effect of cultural distance is qualitatively unchanged.

[28] As mentioned above, we also examine specifications with several measures of cultural distance from Schwartz (1999, 2006). All of these variables turn out to have a positive and significant effect on loan spreads and provide additional evidence on the robustness of the results.

Finally, we examine to what extent cultural distance simply captures "trust" between nations. While the interpretation of our results would not change if trust turned out to be relevant, given the wide use of trust in the literature, we believe that it is important to understand whether our measure of cultural distance captures something beyond trust. For this reason, we run a "horse race" between our measure of cultural distance and the proxy for trust proposed by Guiso, Sapienza, and Zingales (2007). For the subsample for which the measure of trust is available, we find that while our proxy for cultural distance is positive and statistically significant, trust is not significant.[29] Thus, it appears that cultural differences may affect interaction between economic agents beyond mutual trust (as argued also by Guiso, Sapienza and Zingales).

This result is important also for another reason. The trust measure is not available for most emerging markets. The fact that our findings on the effect of cultural distance hold in the sub-sample of relatively wealthy economies for which trust data are available shows that our results are not driven by rich country banks that charge a premium to emerging market borrowers.

IV. Cultural distance between banks and risk sharing within the syndicate

If cultural differences affect interaction between economic agents as our results so far suggest, we should observe their effects beyond the loan contract terms. As discussed in Section I, in syndicated bank loans, not only the interaction between borrower and lead bank is affected by asymmetric information and agency problems, but also the interaction between lead banks and participant banks.

[29] Interestingly, trust tends to decrease the cost of the loan in several specifications in which we do not include the proxy for cultural distance.

Once the lead bank has extended a loan, the percentage of the syndicated loan that a lead bank is able to sell to a given participant bank depends on the buyer's perception of the lead bank's incentive to misrepresent information about the borrower's creditworthiness and to monitor the borrower after the extension of the loan. *Ceteris paribus*, a negative and significant effect on the difference between the share of the loan bought by a participant bank and the share of the loan retained by the lead bank would suggest that cultural distance with the lead bank worsens the participant bank's expectations about the lead bank's provision of truthful information and incentives to monitor. Alternatively, cultural differences may increase pecuniary and non-pecuniary costs from dealing with the lead bank.

Note that we include both lead bank nationality and participant bank nationality dummies; thus, a negative and significant coefficient of cultural distance implies that British lead banks are able to sell a larger proportion of a loan to culturally close American banks than to culturally more remote French banks, which tend to buy systematically larger proportions of loans from culturally closer Belgian banks.

Since our unit of analysis is now the borrower-lead bank match and each loan has, on average, several participant banks, we have multiple observations for each loan. For this reason, we cluster standard errors at the loan level. In most of specifications, we control for loan heterogeneity as we do throughout the analysis.

The results, presented in Tables VIII, show that, indeed, participant banks hold smaller portions of loans syndicated by culturally remote lead banks. In column 1, a one standard deviation increase in cultural distance decreases risk sharing between two banks by nearly 5 percent (with respect to the mean of the risk sharing proxy). The effect is

even more pronounced if we exclude observations for which the lead and participant banks share the same nationality (column 2). In this case, a one-standard-deviation increase in our cultural distance proxy decreases risk sharing by over 10 percent.

These results are comforting as they suggest that cultural distance between lead and participant banks hampers risk sharing in the same way that cultural distance between borrower and lender worsens the terms of the loan. This is consistent with the notion that cultural differences worsen the perception of the counterparty or increase transaction costs, but harder to explain with an omitted factor as there is no reason to believe that an omitted factor should be similarly correlated to the cultural distance between borrower and lender as well as to the cultural distance between lead bank and participant banks.

Since we have multiple observations for each loan, we can perform a more stringent test for unobserved borrower heterogeneity. In column 3, we include loan fixed effects. The estimates show that, even for the same loan, culturally distant participants share less risk with the lead bank than culturally closer participants.

The effect of cultural distance appears robust also across different samples. For instance, in column 4, we exclude loans to U.S. borrowers (which represent nearly half of our sample), and in column 5, loans for which the lead bank is from the U.S. Similarly, the coefficient of cultural distance is qualitatively unchanged in column 6, when we include different controls for distance and investor protection.

Some of the coefficients on the control variables offer further interesting insights. Risk sharing is higher if the participant bank is from a country with the same religion as that of the lead bank's country, but significantly lower if banks are from physically

remote countries. A one-thousand kilometer increase in distance decreases the risk sharing measure by 12 percentage points. In unreported specifications, we also control for the size of the lead bank and the participant bank in terms of the syndicated loans they held during the previous year. As expected, large lead banks share risk less; however, the size of the participant bank does not seem to affect the portion of the loan they buy. More importantly, the effect of cultural distance on risk sharing is unchanged.

In columns 7 and 8, we explore whether the limits to risk sharing arising from cultural differences decline in importance after the participant bank has taken part in a number of deals with the lead bank. To capture this, we use the number of deals in which a participant bank has participated with a given lead bank within a country. We focus on interaction within a country to capture the possibility that employees of different subsidiaries (or headquarters) responsible for a given country may learn to interact with the representatives of the lead bank in that country. Also in this case, in order to avoid biases resulting from the fact that previous interactions are, by construction, very few at the beginning of the sample period, we only include loans signed after 1990.

We find that, indeed, the effect of cultural distance becomes smaller as the number of deals previously concluded with a given lead bank increases. Nevertheless, the pace at which the negative effect of cultural differences dies out is very slow and over 30 deals are needed to fully offset the effect of cultural distance on risk sharing. The mean (median) number of deals that a participant concludes with a given lead bank is, however, only eight (two). This suggests that cultural differences not only severely limit risk sharing, but also that their effect is quite persistent.

V. Conclusion

This paper shows that professional decision-makers are inclined to offer better terms to borrowers and to share risk with counterparties that are more similar to them. In particular, we show that cultural differences limit the amount of funds that lead banks lend to borrowers, increase the loan spread, and reduce the investment that participant banks make in a loan syndicate. Thus, familiarity seems to be as important in debt markets as in equity markets (Coval and Moskowitz, 1999; Grinblatt and Keloharju, 2001). Furthermore, cultural differences appear to affect not only quantities but also price and non-price terms and their negative effects are persistent over time. This opens new avenues for research on the effects of familiarity and home bias on financial transactions.

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Figure 1: Cultural Map of the World

Source: World Values Survey, www.worldvaluessurvey.org

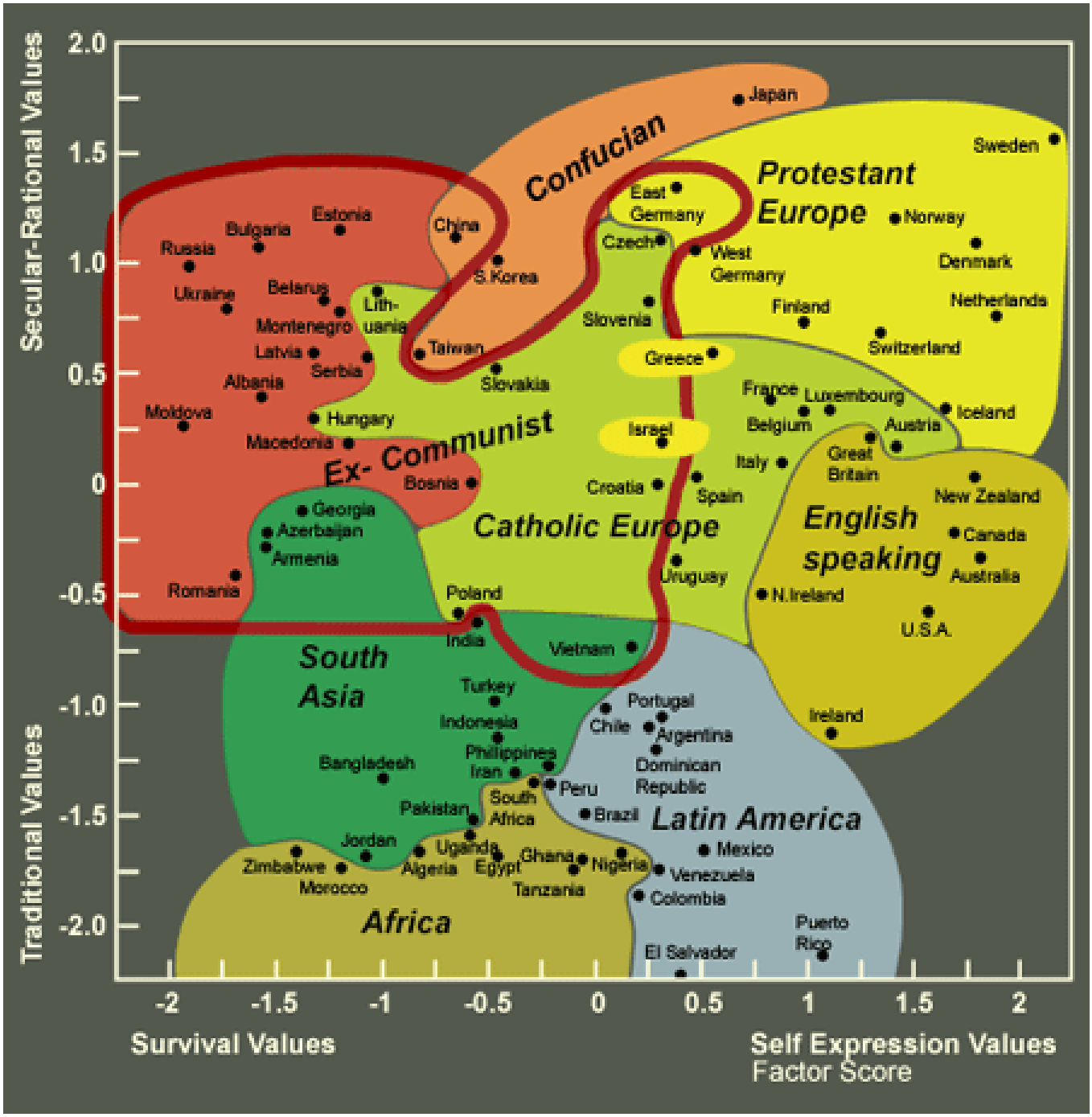

Table I – Variable Definitions and Sample Statistics

Panel A. Contract characteristics

Variable	Definition/ Source	Units	Mean	Std	25%	Median	75%	Obs
All-inclusive loan cost	Loan cost including all fees/Loanware	Basis points p/a above LIBOR	187	215	62.5	150	250	96011
Margin	Loan cost including only variable fees / Loanware	Basis points p/a above a basis (e.g. LIBOR)	179	203	56.25	140	250	97362
Loan amount	Loanware	Million US $	188.5	529	20	60	165	130498
Loan maturity	Loanware	Years	4.4	3.3	2	4.2	6	112889
Secured	Dummy which takes the value 1 if the loan is secured/ Loanware	0/1	0.29	0.45	0	0	1	131147
Guaranteed	Dummy which takes the value 1 if the loan is guaranteed/ Loanware	0/1	0.08	0.27	0	0	0	131147
Secured or guaranteed	Dummy which takes the value 1 if the loan is either secured or guaranteed/ Loanware	0/1	0.34	0.47	0	0	1	131147
Tranched	Dummy which takes the value 1 if the loan is offered in several separate tranches/ Loanware	0/1	0.42	0.49	0	0	1	131147
Number of loan purposes	Such as acquisition, debt repayment, property purchase, etc. / Loanware	Up to five primary purposes	3.0	4.4	1	1	3	131147
Number of banks	Number of banks in the syndicate		6.9	8.5	1	4	9	131147
Foreign bank	Dummy which takes the value 1 if the firm borrows from a foreign bank/ Loanware	0/1	0.26	0.44	0	0	1	131147
Lender Interaction	Total number of syndicates led by the lead bank in the borrower's country/ Loanware		30.3	21.5	5	47	50	131147
Borrower Interaction	Total number of loans(including current) of the lead bank to the borrower/Loanware		1.5	1.1	1	1	2	131147

Panel B. Measures of Distance between Borrower and Lead Bank

Variable	Definition/ Source	Units	Mean	Std	25%	Median	75%	Obs
<u>Continuous distance measures</u>								
Cultural distance	Euclidean distance between the cultures of the borrower's and the lead bank's countries/ WVS	See text for details	0.34	0.73	0	0	0	126100
Power-Distance	The difference in "power-distance" scores between the borrower's and the lead bank's countries, squared	see text for details	99.64	373.21	0	0	0	126450

	/Hofstede (2000)							
Distance	Physical distance between the capital of the country of the lead bank's headquarters and the capital of the borrower's country/ *infoplease.com*	1000km	1.45	3.27	0	0	0	131027
Discrete distance measures								
Creditor rights distance	Absolute value of the difference between creditor rights in the lead bank's country and in the borrower's country/ Djankov et al. (2007)	0 to 4	0.33	0.77	0	0	0	130230
Creditor rights are better in lender country dummy	Dummy which takes the value 1 if the creditor rights index is higher in the lead bank's country than in the borrower's country/ Djankov et al. (2007)	0/1	0.11	0.31	0	0	0	130230
Same legal	Dummy which takes the value 1 if the borrower and the lead bank are from countries of the same legal origin/ Djankov et al. (2007)	0/1	0.84	0.36	1	1	1	130480
Same religion	Dummy which takes the value 1 if the borrower and the lead bank are from countries with same religion/ Djankov et al. (2007)	0/1	0.81	0.39	1	1	1	131147
Same language	Dummy which takes value 1 if the borrower and the lead bank are from countries that share the same language/ Rose (2004)	0/1	0.84	0.36	1	1	1	117194
Colonial ties	Dummy which takes value 1 if the borrower and the lead bank are from countries that had colonial ties in the past/ Rose (2004)	0/1	0.78	0.42	1	1	1	117194
Border	Dummy which takes value 1 if the borrower and the lead bank are from countries that share a common border/ Rose (2004)	0/1	0.80	0.39	1	1	1	117194

Panel C. Syndicate composition and characteristics

Variable	Definition/ Source	Units	Mean	Std	25%	Median	75%	Obs
Risk sharing	(Loan held by participant *i*)/(Loan amount/Number of Banks)- (Loan held by the lead bank) /(Loan amount/Number of banks) /Loanware		-2.47	18.07	-1.85	-1.00	-0.51	242726
Interaction-syndicate	No. of previous deals of a participant bank with a lead bank, including current/Loanware		8.28	11.45	1	2	10	294993
Banks' cultural distance	Cultural distance between the participant bank's and lead bank's countries / WVS	See text for details	0.67	0.88	0	0	1.23	294936
Banks' distance	Physical distance	1000km	2.78	4.15	0	0	0.5	294767

	between the capital of the country of the lead bank's headquarters and the capital of the country of the participant bank's headquarters/ *infoplease.com*							
Same legal-syndicate	Dummy which takes the value 1 if the participant bank and the lead bank are from countries of the same legal origin/ Djankov et al. (2007)	0/1	0.68	0.47	0	1	1	294936
Creditor rights distance-syndicate	Absolute value of the difference between creditor rights in the participant bank's country and in the lead bank's country	0 to 4	0.62	0.92	0	0	1	294921
Creditor rights better in participant bank country – syndicate	Dummy which takes the value 1 if creditor rights are better protected in the country of the participant bank than in the country of the lead bank	0/1	0.21	0.41	0	0	0	294921
Same religion-syndicate	Dummy which takes the value 1 if the participant bank and the lead bank are from countries with the same religion/ Djankov et al. (2007)	0/1	0.65	0.48	0	1	1	294936
Same language-syndicate	Dummy which takes the value 1 if the participant bank and the lead bank are from countries with the same language/ Rose (2004)	0/1	0.72	0.45	0	1	1	294993
Colonial ties-syndicate	Dummy which takes the value 1 if the participant bank and the lead bank are from countries that had colonial ties in the past/ Rose (2004)	0/1	0.61	0.49	0	1	1	294993
Border-syndicate	Dummy which takes the value 1 if the participant bank and the lead bank are from countries that share a common border/ Rose (2004)	0/1	0.66	0.47	0	1	1	294993

Panel D. Loan Characteristics: Categorical Variables

Variable	Definition	Source
Loan instrument type	Type of loan such as working capital, overdraft facility, construction loan, etc. (47 categories)	Loanware
Rating group (1 through 4)	The lower rating between Moody's and S&P, where group 1 corresponds to all A-letter ratings, group 2 corresponds to all B-letter ratings, group 3 corresponds to C and lower ratings, and group 4 is unrated. Ratings are at the time of the loan origination	Loanware
Year	Year in which loan was issued (1980-2005)	Loanware
Currency	Loan currency (70 categories)	Loanware
Borrower type	Private corporate, private bank etc. (15 categories). Government (central and local) are excluded.	Loanware
Loan purpose	Acquisition, debt repayment, general corporate purposes etc. (22 categories)	Loanware
Borrower industry	57 categories	Loanware

Panel E. Country Characteristics

Variable	**Definition/Source**	**Units**	Mean	Std	25%	Median	75%	obs
Per capita GDP-Lead bank	World Development Indicators	Th. USD	26.451	9.195	21.364	28.747	33.748	129974
Per capita GDP-Borrower	World Development Indicators	Th. USD	25.175	10.953	20.039	28.747	33.748	129732
Per capita GDP- Participant bank	World Development Indicators	Th. USD	26.808	8.316	21.212	28.365	34.483	294921
Creditor rights -Lead bank	Index of protection of creditor rights/Djankov et al. (2007)	0 to 4	1.63	1.06	1	1	2	130894
Creditor rights –Borrower	Index of protection of creditor rights/Djankov et al. (2007)	0 to 4	1.55	1.03	1	1	2	130293
Creditor rights-Participant bank	Index of protection of creditor rights/Djankov et al. (2007)	0 to 4	1.10	0.10	1	2	3	294921
Credit to GDP-Borrower	World Development Indicators	Percentage	177.27	77.72	117.66	181.83	233.77	125180

Industrial similarity	Correlation between the ranks of industry outputs for each pair of lead bank-borrower countries/UNIDO 1991, calculated for foreign lead banks only.	Correlation coefficient (0 to 1)	0.64	0.20	0.51	0.67	0.81	125837
Export flows	Percent of the borrower country's exports which are sold in the lead bank's country /IMF bilateral trade data, calculated for foreign lead banks only.	Percentage	10.42	15.19	2.41	4.93	12.56	33643
Investment flows	Percent of all capital outflows from the lead bank's country which is destined to the borrower's country/ IMF/CPIS survey, calculated for foreign lead banks only.	Percentage	12.15	17.00	0.25	2.40	16.98	31694

Table II. The Determinants of Syndicated Loan Spreads

The dependent variable is the all-inclusive loan cost, except for regression (6) where the margin is used instead. All regressions include 21 primary loan purpose dummies, 46 loan instrument dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business (industry) dummies, year dummies, borrower nationality dummies, lead bank nationality dummies and the constant term. All variables are defined in Table I. Parameters are estimated by ordinary least squares. Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) Full Sample	(2) Full Sample	(3) Excluding the US	(4) Private Borrowers	(5) Foreign banks only	(6) Margin	(7) Additional controls
Cultural distance	13.10***	8.712**	17.48***	11.40**	11.18***	6.663**	8.217**
	(2.09)	(3.53)	(3.06)	(4.45)	(3.26)	(2.88)	(3.60)
Distance		-0.0371	-0.0222	-0.996	-0.975	-0.0251	-0.0247
		(0.60)	(0.51)	(0.78)	(0.60)	(0.49)	(0.61)
Border		-10.05	-7.192	-11.68	-23.05***	-7.933	-8.094
		(7.31)	(6.31)	(9.16)	(7.47)	(6.05)	(7.54)
Same legal		7.635	6.480*	8.372	8.590*	4.030	7.580
		(5.19)	(3.92)	(6.81)	(4.67)	(4.28)	(5.25)
Same religion		-7.800*	-9.817**	-6.668	-10.77**	-3.759	-5.858
		(4.47)	(4.03)	(5.60)	(4.22)	(3.70)	(4.60)
Same language		-5.478	-7.158	1.823	-0.105	-13.75***	-2.911
		(6.30)	(4.98)	(8.17)	(6.58)	(5.21)	(6.40)
Colonial ties		3.714	12.62*	-0.620	-12.30	1.468	1.802
		(6.57)	(6.73)	(7.82)	(21.3)	(5.51)	(6.95)
Creditor rights –Borrower		-10.53	-5.233	-17.64*	-10.90	-11.11*	-9.371
		(7.29)	(5.74)	(9.01)	(8.22)	(6.03)	(7.50)
Creditor rights -Lead bank		16.80***	8.090	17.43**	9.071	11.88**	15.39**
		(6.15)	(5.48)	(7.56)	(6.18)	(5.07)	(6.31)
Creditor rights distance		2.288	4.494**	3.040	3.180	1.288	0.426
		(2.39)	(2.19)	(2.99)	(2.33)	(1.96)	(2.47)
Creditor rights are better in lender country dummy		-8.285	-9.567	-4.984	-8.545	-22.72***	-1.874
		(8.11)	(6.92)	(10.2)	(7.36)	(6.62)	(8.35)
Credit to GDP-Borrower	0.0541	0.0616	0.106*	0.0881	0.317***	0.301***	0.0494
	(0.066)	(0.067)	(0.057)	(0.079)	(0.092)	(0.055)	(0.068)
Per capita GDP-Borrower	-4.547***	-5.024***	-3.796***	-5.435***	-4.730***	-3.258***	-4.602***
	(1.04)	(1.07)	(0.94)	(1.34)	(1.31)	(0.88)	(1.10)
Per capita GDP – Lead bank	1.091	1.222	-1.386	2.551*	-0.899	3.030***	0.682
	(1.10)	(1.13)	(0.94)	(1.47)	(1.23)	(0.93)	(1.16)
Tranched	25.07***	25.27***	12.10***	26.30***	16.62***	22.98***	22.67***
	(1.60)	(1.61)	(2.24)	(1.81)	(3.00)	(1.30)	(1.71)
Number of	-3.548*	-3.480*	-2.240	-2.982	-3.893	-3.166*	-2.778

loan purposes							
	(2.04)	(2.04)	(2.86)	(2.30)	(4.17)	(1.65)	(2.12)
Rating group2	43.26***	44.01***	1.406	56.85***	7.769	65.75***	34.62***
	(3.28)	(3.29)	(4.71)	(3.98)	(6.26)	(2.70)	(3.48)
Rating group3	137.0***	137.7***	91.43***	147.2***	56.21***	182.6***	126.1***
	(5.98)	(5.99)	(15.8)	(6.62)	(13.8)	(4.84)	(6.32)
Rating group4	51.54***	52.30***	8.799**	66.19***	13.80**	84.08***	37.05***
	(3.01)	(3.02)	(3.83)	(3.75)	(5.64)	(2.48)	(3.29)
Number of banks							-0.646***
							(0.098)
Loan amount							-0.0135***
							(0.0016)
Loan maturity							2.319***
							(0.31)
Secured *or* guaranteed							-5.101
							(3.74)
Observations	86701	86354	26544	72275	18616	87873	77427
Adjusted R-squared	0.11	0.11	0.31	0.09	0.18	0.31	0.12

Table III. Addressing selection problems

The table reports the estimates of a Heckman selection model fitted with a two-stage consistent estimator. In column 1 (first stage), we consider how a borrower is matched to all top 500 potential lead banks in the country; the unit of analysis is the potential borrower-lead bank match and the dependent variable is a dummy which takes the value one if a firm receives a loan from a given lead bank that has been operational in its country in the past, and equals zero if the firm does not receive the loan from a particular lead bank. In column 2, we consider all loans issued by the top 500 lead banks in country. Both first and second-stage regressions include 21 primary loan purpose dummies, 46 loan instrument type dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business dummies, year dummies, borrower nationality dummies, lead bank nationality dummies, and the constant term. In addition to the variables defined in Table I, the selection equation in columns 1 includes the rank of the lead bank in a country according to the number of deals concluded up to the year of the loan, the number of close foreign banks (foreign banks from countries with capital city less than 2000 km from the capital city of the country of the borrower), and the number of culturally distant foreign banks (foreign banks with cultural distance above the median cultural distance from the country of the borrower). Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) Bank-firm match	(2) All-inclusive loan cost – whole sample
Cultural distance	-0.0178	17.59**
	(0.012)	(7.03)
Distance	0.000702	3.275**
	(0.0026)	(1.43)
Border	-0.624***	6.207
	(0.043)	(13.6)
Same legal	0.0592***	-6.064
	(0.018)	(8.58)
Same religion	0.0164	-35.91***
	(0.018)	(9.47)
Same language	-0.0768***	-19.64
	(0.025)	(13.6)
Colonial ties	0.450***	20.01
	(0.028)	(17.7)
Creditor rights –Borrower	0.0712***	-1.807
	(0.012)	(10.7)
Creditor rights -Lead bank	-0.0146	4.295
	(0.012)	(10.7)
Creditor rights distance	0.0121	-9.217*
	(0.011)	(4.94)
Creditor rights are better in lender country dummy	-0.0224	-5.578
	(0.036)	(15.6)
Credit to GDP-Borrower	-0.0479	-0.00184***
	(0.10)	(0.00016)
Per capita GDP –Borrower	-0.00184***	-0.0479
	(0.00016)	(0.10)
Per capita GDP-Lead bank	0.000438	-1.683
	(0.00090)	(2.04)
Tranched	-0.00282***	-2.693
	(0.00100)	(1.89)
Number of loan purposes	0.0552***	15.41***
	(0.0097)	(3.47)
Rating group2	0.0851***	1.003
	(0.013)	(4.49)
Rating group3	-0.0567***	19.57***

	(0.019)	(6.72)
Rating group4	-0.297***	68.15***
	(0.056)	(20.7)
Bank rank	-0.102***	
	(0.015)	
Number close banks	-0.790***	
	(0.032)	
Border * Number close banks	-0.0791***	
	(0.0061)	
Number culturally distant banks	0.109***	
	(0.0073)	
Border* Number culturally distant banks	-0.0859***	
	(0.0067)	
Mills Ratio		-5.748
		(-0.43)
Observations	350411	15963
Wald Chi-squared		7726.77

Table IV. The Determinants of Other Contractual Features

The dependent variables are loan amount, loan maturity and binary variables denoting secured or guaranteed loans. All regressions include 21 primary loan purpose dummies, 46 loan instrument dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business dummies, year dummies, borrower nationality dummies, lead bank nationality dummies, and the constant term. All variables are defined in Table I. Parameters are estimated by ordinary least squares. Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) Loan amount	(2) Loan maturity	(3) Secured	(4) Guaranteed
Cultural distance	-3.986***	0.0421	0.00481	0.0199***
	(0.86)	(0.037)	(0.0054)	(0.0032)
Distance	0.455***	-0.0177***	-0.00130	0.000203
	(0.14)	(0.0063)	(0.00090)	(0.00053)
Border	2.550	0.241***	-0.0236**	-0.0109
	(1.82)	(0.080)	(0.011)	(0.0068)
Same legal	-5.031***	-0.0996*	-0.00531	-0.0281***
	(1.32)	(0.056)	(0.0083)	(0.0049)
Same religion	3.257***	-0.209***	-0.0109	-0.0119***
	(1.11)	(0.049)	(0.0070)	(0.0041)
Same language	0.977	-0.0472	0.000722	0.0273***
	(1.58)	(0.068)	(0.0099)	(0.0059)
Colonial ties	8.910***	-0.0374	-0.00230	0.00116
	(1.66)	(0.074)	(0.010)	(0.0062)
Creditor rights –Borrower	-1.666	0.0606	0.0406***	0.00147
	(1.71)	(0.075)	(0.011)	(0.0064)
Creditor rights -Lead bank	-2.345	0.267***	0.0264***	0.000607
	(1.51)	(0.066)	(0.0095)	(0.0056)
Creditor rights distance	-1.826***	0.0299	0.0106***	0.00502**
	(0.57)	(0.025)	(0.0036)	(0.0021)
Creditor rights are better in lender country dummy	6.354***	-0.260***	-0.0241**	-0.0196***
	(1.95)	(0.086)	(0.012)	(0.0072)
Credit to GDP- Borrower	-0.0258*	-0.00461***	0.000436***	0.000323***
	(0.015)	(0.00066)	(0.000096)	(0.000057)
Per capita GDP- Borrower	-0.0180	-0.0827***	-0.00631***	0.000714
	(0.28)	(0.012)	(0.0017)	(0.0010)
Per capita GDP - Lead bank	1.955***	0.104***	-0.00835***	0.0106***
	(0.28)	(0.012)	(0.0017)	(0.0010)
Tranched	-17.27***	0.625***	0.0889***	0.00491***
	(0.42)	(0.018)	(0.0026)	(0.0016)
Number of loan purposes	7.696***	0.0423*	0.0371***	0.00217
	(0.55)	(0.023)	(0.0034)	(0.0020)
Rating group2	-19.69***	0.401***	0.148***	-0.0212***
	(0.87)	(0.037)	(0.0055)	(0.0032)
Rating group3	-52.12***	-0.208***	0.312***	-0.0101*
	(1.63)	(0.070)	(0.010)	(0.0060)
Rating group4	-76.64***	0.105***	0.175***	-0.00894***
	(0.79)	(0.034)	(0.0050)	(0.0029)
Observations	116803	101202	117194	117194
Adjusted R-squared	0.31	0.38	0.25	0.20

Table V. The Dynamics of Cultural Biases

We consider only syndicated loans made after 1990. All regressions include 21 primary loan purpose dummies, 46 loan instrument dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business dummies, year dummies, borrower nationality dummies, lead bank nationality dummies, and the constant term. Parameters are estimated by ordinary least squares. Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

Panel A. Lead bank experience in the country of the borrower

	(1) All-inclusive loan cost	(2) Loan amount	(3) Loan maturity	(4) Secured	(5) Guaranteed
Cultural distance	9.712***	-3.693***	0.0848**	-0.00216	0.0240***
	(3.65)	(0.89)	(0.039)	(0.0056)	(0.0033)
Lead interaction	-0.310***	0.280***	-0.000878	-0.00180***	-0.0000884*
	(0.049)	(0.013)	(0.00055)	(0.000079)	(0.000047)
Cultural distance * Lead interaction	-0.0594	-0.0367**	-0.00319***	0.000627***	-0.000305***
	(0.069)	(0.018)	(0.00077)	(0.00011)	(0.000065)
Distance	0.0141	0.470***	-0.0162***	-0.00156*	0.000329
	(0.60)	(0.14)	(0.0063)	(0.00090)	(0.00054)
Border	-7.895	1.273	0.266***	-0.0175	-0.00884
	(7.32)	(1.82)	(0.080)	(0.011)	(0.0068)
Same legal	7.126	-4.880***	-0.109*	-0.00523	-0.0290***
	(5.19)	(1.31)	(0.056)	(0.0083)	(0.0049)
Same religion	-6.684	2.448**	-0.198***	-0.00656	-0.0110***
	(4.47)	(1.11)	(0.049)	(0.0070)	(0.0041)
Same language	-6.976	2.023	-0.0553	-0.00561	0.0267***
	(6.31)	(1.57)	(0.068)	(0.0099)	(0.0059)
Colonial ties	7.437	5.332***	-0.0328	0.0216**	0.00152
	(6.60)	(1.66)	(0.074)	(0.010)	(0.0062)
Creditor rights –Borrower	-10.23	-2.284	0.0643	0.0443***	0.00190
	(7.29)	(1.70)	(0.075)	(0.011)	(0.0064)
Creditor rights -Lead bank	16.80***	-2.481	0.260***	0.0283***	-0.000194
	(6.15)	(1.51)	(0.066)	(0.0095)	(0.0056)
Creditor rights distance	2.226	-1.625***	0.0335	0.00891**	0.00527**
	(2.39)	(0.57)	(0.026)	(0.0036)	(0.0021)
Creditor rights are better in lender country dummy	-9.467	6.732***	-0.271***	-0.0254**	-0.0206***
	(8.12)	(1.94)	(0.086)	(0.012)	(0.0072)
Credit to GDP-Borrower	0.0643	-0.0337**	-0.00456***	0.000484***	0.000327***
	(0.067)	(0.015)	(0.00066)	(0.000096)	(0.000057)
Per capita GDP -Borrower	-5.110***	0.110	-0.0812***	-0.00729***	0.000807
	(1.07)	(0.27)	(0.012)	(0.0017)	(0.0010)
Per capita GDP-Lead bank	1.597	1.622***	0.103***	-0.00603***	0.0105***
	(1.14)	(0.28)	(0.012)	(0.0017)	(0.0010)
Tranched	25.29***	-17.27***	0.628***	0.0888***	0.00507***
	(1.61)	(0.42)	(0.018)	(0.0026)	(0.0016)
Number of loan purposes	-3.506*	7.703***	0.0419*	0.0371***	0.00214
	(2.04)	(0.54)	(0.023)	(0.0034)	(0.0020)
Rating group2	43.68***	-19.38***	0.402***	0.146***	-0.0211***
	(3.29)	(0.86)	(0.037)	(0.0054)	(0.0032)
Rating group3	136.7***	-51.18***	-0.208***	0.306***	-0.0101*
	(5.99)	(1.62)	(0.070)	(0.010)	(0.0061)
Rating group4	51.49***	-75.88***	0.105***	0.170***	-0.00903***
	(3.02)	(0.79)	(0.034)	(0.0050)	(0.0029)

Observations	86354	116803	101202	117194	117194
Adjusted R-squared	0.11	0.32	0.38	0.25	0.20

Panel B: Number of deals of a borrower with a lead bank

	(1) All-inclusive loan cost	(2) Loan amount	(3) Loan maturity	(4) Secured	(5) Guaranteed
Cultural distance	14.50***	-3.481***	-0.0143	0.00420	0.0201***
	(3.85)	(0.94)	(0.041)	(0.0059)	(0.0035)
Borrower interaction	1.526**	-1.748***	-0.0678***	0.00489***	0.00268***
	(0.71)	(0.17)	(0.0074)	(0.0011)	(0.00064)
Cultural distance * Borrower interaction	-4.319***	-0.406	0.0412***	0.000524	-0.000143
	(1.14)	(0.28)	(0.012)	(0.0017)	(0.0010)
Distance	-0.0130	0.460***	-0.0178***	-0.00131	0.000208
	(0.60)	(0.14)	(0.0063)	(0.00090)	(0.00053)
Border	-10.06	2.516	0.241***	-0.0235**	-0.0110
	(7.31)	(1.82)	(0.080)	(0.011)	(0.0068)
Same legal	7.468	-5.044***	-0.0984*	-0.00528	-0.0281***
	(5.19)	(1.31)	(0.056)	(0.0083)	(0.0049)
Same religion	-7.530*	3.282***	-0.211***	-0.0110	-0.0119***
	(4.47)	(1.11)	(0.049)	(0.0070)	(0.0041)
Same language	-5.631	0.825	-0.0496	0.00111	0.0271***
	(6.30)	(1.58)	(0.068)	(0.0099)	(0.0059)
Colonial ties	3.269	9.124***	-0.0291	-0.00291	0.00149
	(6.57)	(1.65)	(0.074)	(0.010)	(0.0062)
Creditor rights –Borrower	-10.78	-1.673	0.0639	0.0405***	0.00149
	(7.29)	(1.70)	(0.074)	(0.011)	(0.0064)
Creditor rights -Lead bank	16.75***	-2.236	0.270***	0.0261***	0.000763
	(6.15)	(1.51)	(0.066)	(0.0095)	(0.0056)
Creditor rights distance	2.278	-1.774***	0.0301	0.0104***	0.00508**
	(2.38)	(0.57)	(0.025)	(0.0036)	(0.0021)
Creditor rights are better in lender country dummy	-8.147	6.314***	-0.262***	-0.0239*	-0.0196***
	(8.11)	(1.94)	(0.086)	(0.012)	(0.0072)
Credit to GDP-Borrower	0.0633	-0.0262*	-0.00465***	0.000437***	0.000322***
	(0.067)	(0.015)	(0.00066)	(0.000096)	(0.000057)
Per capita GDP -Borrower	-4.884***	0.0426	-0.0829***	-0.00646***	0.000786
	(1.07)	(0.28)	(0.012)	(0.0017)	(0.0010)
Per capita GDP-Lead bank	1.045	1.942***	0.106***	-0.00834***	0.0106***
	(1.13)	(0.28)	(0.012)	(0.0017)	(0.0010)
Tranched	25.21***	-16.43***	0.648***	0.0867***	0.00612***
	(1.64)	(0.42)	(0.018)	(0.0027)	(0.0016)
Number of loan purposes	-3.529*	7.666***	0.0425*	0.0372***	0.00213
	(2.04)	(0.55)	(0.023)	(0.0034)	(0.0020)
Rating group2	44.00***	-19.55***	0.404***	0.148***	-0.0210***
	(3.29)	(0.86)	(0.037)	(0.0055)	(0.0032)
Rating group3	137.9***	-51.89***	-0.205***	0.312***	-0.00984
	(5.99)	(1.63)	(0.070)	(0.010)	(0.0060)
Rating group4	52.47***	-76.67***	0.104***	0.176***	-0.00900***
	(3.02)	(0.79)	(0.034)	(0.0050)	(0.0029)
Observations	86354	116803	101202	117194	117194
Adjusted R-squared	0.11	0.31	0.38	0.25	0.20

Table VI. Local Subsidiaries

The dependent variables are all-inclusive loan cost, loan amount, loan maturity, and binary variables denoting secured or guaranteed loans. All regressions include 21 primary loan purpose dummies, 46 loan instrument type dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business dummies, year dummies, borrower nationality dummies, lead bank nationality dummies, and the constant term. All variables are defined in Table I. In addition to the previously defined variables, Local subsidiary is a dummy variable that takes the value one if the lead bank has a local subsidiary in the country of the borrower and zero otherwise. Parameters are estimated by ordinary least squares. Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) All-inclusive loan cost	(2) Loan amount	(3) Loan Maturity	(4) Secured	(5) Guaranteed
Cultural distance	10.11***	-2.484***	0.107***	-0.00381	0.0229***
	(3.62)	(0.89)	(0.039)	(0.0056)	(0.0033)
Cultural distance* Local subsidiary	-4.195*	-4.696***	-0.201***	0.0269***	-0.00939***
	(2.44)	(0.62)	(0.027)	(0.0039)	(0.0023)
Distance	0.00293	0.503***	-0.0155**	-0.00157*	0.000298
	(0.60)	(0.14)	(0.0063)	(0.00090)	(0.00053)
Border	-9.328	3.257*	0.271***	-0.0277**	-0.00950
	(7.32)	(1.82)	(0.080)	(0.011)	(0.0068)
Same legal	7.480	-5.251***	-0.110*	-0.00404	-0.0286***
	(5.19)	(1.32)	(0.056)	(0.0083)	(0.0049)
Same religion	-7.358	3.830***	-0.186***	-0.0142**	-0.0108***
	(4.47)	(1.11)	(0.049)	(0.0070)	(0.0041)
Same language	-5.596	0.903	-0.0536	0.00113	0.0271***
	(6.31)	(1.58)	(0.068)	(0.0099)	(0.0059)
Colonial ties	3.868	8.963***	-0.0302	-0.00260	0.00126
	(6.57)	(1.65)	(0.074)	(0.010)	(0.0062)
Creditor rights –Borrower	-10.74	-1.916	0.0526	0.0420***	0.000969
	(7.29)	(1.70)	(0.075)	(0.011)	(0.0064)
Creditor rights -Lead bank	16.90***	-2.183	0.271***	0.0254***	0.000933
	(6.15)	(1.51)	(0.066)	(0.0095)	(0.0056)
Creditor rights distance	2.584	-1.544***	0.0416	0.00894**	0.00559***
	(2.39)	(0.57)	(0.026)	(0.0036)	(0.0021)
Creditor rights are better in lender country dummy	-8.397	6.210***	-0.265***	-0.0232*	-0.0199***
	(8.11)	(1.95)	(0.086)	(0.012)	(0.0072)
Credit to GDP- Borrower	0.0620	-0.0255*	-0.00458***	0.000434***	0.000323***
	(0.067)	(0.015)	(0.00066)	(0.000096)	(0.000057)
Per capita GDP -Borrower	-4.884***	0.135	-0.0757***	-0.00719***	0.00102
	(1.08)	(0.28)	(0.012)	(0.0017)	(0.0010)
Per capita GDP-Lead bank	1.150	1.892***	0.101***	-0.00799***	0.0104***
	(1.13)	(0.28)	(0.012)	(0.0017)	(0.0010)
Tranched	25.31***	-17.22***	0.628***	0.0886***	0.00501***
	(1.61)	(0.42)	(0.018)	(0.0026)	(0.0016)
Number of loan purposes	-3.461*	7.706***	0.0429*	0.0370***	0.00219
	(2.04)	(0.55)	(0.023)	(0.0034)	(0.0020)
Rating group2	44.10***	-19.59***	0.405***	0.148***	-0.0210***
	(3.29)	(0.87)	(0.037)	(0.0055)	(0.0032)
Rating group3	137.9***	-51.90***	-0.199***	0.311***	-0.00969
	(5.99)	(1.63)	(0.070)	(0.010)	(0.0060)

Rating group4	52.43***	-76.48***	0.112***	0.174***	-0.00860***
	(3.02)	(0.79)	(0.034)	(0.0050)	(0.0029)
Observations	86354	116803	101202	117194	117194
Adjusted R-squared	0.11	0.31	0.38	0.25	0.20

Table VII. Further Robustness Checks

In column 1, the dependent variable takes the value 1 (-1) if the borrower was upgraded (downgraded) by Moody's or S&P after the loan issuance and before its maturity and the value zero if the rating remained unchanged; for borrowers that were unrated at the loan issuance date, obtaining a rating is treated as an upgrade. Besides the independent variables shown in column 1, we also control for year dummies, borrower type dummies and the time since the loan was issued. Estimates are obtained using an ordered probit model. In the remaining columns, the dependent variable is the all-inclusive loan cost and estimates are obtained by ordinary least squares. In addition to previously defined variables, trust is defined following Guiso, Sapienza and Zingales (2007) as the percentage of individuals from the lead bank's country who claim to trust individuals from the borrower's country. The samples in columns (2) through (4) include only observations where the lead bank is foreign. In column 5 cultural distance is replaced by the squared difference in Hofstede's Power-Distance score. In column 6, the sample includes only countries for which trust data are available. All ordinary least squares regressions include 21 primary loan purpose dummies, 46 loan instrument type dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business dummies, year dummies, borrower nationality dummies, lead bank nationality dummies, and the constant term. Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) Upgrades	(2) All-inclusive loan cost	(3) All-inclusive loan cost	(4) All-inclusive loan cost	(5) All-inclusive loan cost	(6) All-inclusive loan cost
Cultural distance	0.0340**	15.43***	11.29***	13.32***		17.91***
	(0.015)	(3.94)	(3.27)	(3.47)		(6.25)
Industrial similarity		17.06				
		(24.1)				
Export flows			-0.0625			
			(0.22)			
Investment flows				49.23*		
				(26.3)		
Hofstede's Power-Distance					0.00708*	
					(0.0037)	
Trust						-1.631
						(13.5)
Distance		-1.223*	-0.999	-0.960	0.753	1.815
		(0.72)	(0.65)	(0.62)	(0.53)	(6.35)
Border		-13.43	-21.48**	-28.38***	-9.145	-12.83
		(9.61)	(8.84)	(8.30)	(7.00)	(8.96)
Same legal		9.217	8.915*	10.10**	5.872	8.897
		(6.27)	(4.70)	(4.95)	(5.26)	(7.00)
Same religion		-12.24**	-10.94**	-9.215**	-2.017	-12.75**
		(5.56)	(4.32)	(4.47)	(4.41)	(5.95)
Same language		6.258	-0.325	-3.291	-10.11*	4.376
		(9.07)	(6.58)	(6.94)	(6.10)	(9.14)
Colonial ties		-28.13	-12.35	-24.96	-6.704	31.62**
		(24.2)	(21.3)	(23.4)	(6.07)	(12.7)
Creditor rights – Borrower	-0.129***	-10.39	-10.94	-9.676	-4.872	7.000
	(0.011)	(9.44)	(8.23)	(8.40)	(7.16)	(9.14)
Creditor rights - Lead bank		7.255	9.224	14.28**	15.60***	9.665
		(6.84)	(6.18)	(6.41)	(5.88)	(10.1)
Creditor rights distance		8.326***	2.987	3.298	1.094	8.273***
		(2.82)	(2.35)	(2.42)	(2.15)	(2.95)

Creditor rights are better in lender country dummy		-15.02*	-7.929	-9.040	-11.24	0.400
		(8.92)	(7.43)	(7.67)	(7.67)	(10.5)
Credit to GDP-Borrower		0.233**	0.319***	0.289***	-0.0206	-0.235***
		(0.11)	(0.092)	(0.095)	(0.062)	(0.088)
Per capita GDP - Borrower	0.0103***	-1.050	-0.926	-0.466	0.309	5.039***
	(0.0012)	(1.59)	(1.23)	(1.28)	(1.06)	(1.69)
Per capita GDP-Lead bank		-4.754***	-4.676***	-6.297***	-3.650***	-7.154***
		(1.73)	(1.31)	(1.43)	(1.01)	(1.85)
Tranched		17.04***	16.64***	17.26***	25.85***	25.56***
		(3.44)	(3.01)	(3.11)	(1.58)	(2.66)
Number of loan purposes		-2.735	-3.859	-3.604	-3.238	-0.551
		(4.88)	(4.17)	(4.36)	(2.01)	(3.16)
Rating group2	-0.0999***	9.596	7.841	8.914	43.16***	32.90***
	(0.037)	(7.06)	(6.26)	(6.41)	(3.24)	(5.32)
Rating group3	-0.439***	52.93***	53.54***	58.19***	137.1***	74.33***
	(0.057)	(15.5)	(13.9)	(14.2)	(5.91)	(13.6)
Rating group4	-1.681***	14.75**	13.86**	15.02***	51.99***	29.20***
	(0.036)	(6.29)	(5.64)	(5.76)	(2.96)	(4.17)
Observations	41679	14662	18604	17829	86654	16232
Adjusted R-squared		0.16	0.18	0.18	0.11	0.34

Table VIII. Risk Sharing within the Syndicate

The dependent variable is risk sharing as defined in Table I. For each loan we have a number of observations equal to the number of participant banks. In columns 2 and 6 to 8, we include only observations for which the nationality of the lead bank is different from the nationality of the participant bank (foreign participants). Additionally, in the regressions in which we include the number of bank interactions (columns 7 and 8), we consider only syndicated loans made after 1990. All regressions include 21 primary loan purpose dummies, 46 loan instrument type dummies, 69 currency dummies, 11 borrower type dummies, 56 borrower business dummies, year dummies, borrower nationality dummies, lead bank nationality dummies, participant banks nationality dummies and the constant term. Parameters are estimated by ordinary least squares. Standard errors are presented in parentheses. Errors are clustered at the loan level and corrected for heteroskedasticity. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) Whole sample	(2) Foreign participants	(3) Loan FE Whole sample	(4) No U.S. loans	(5) No U.S. lead banks	(6) Foreign participants	(7) Foreign participants	(8) Foreign participants
Banks' cultural distance	-0.162***	-0.334***	-0.0367**	-0.408***	-0.377***	-0.300*	-0.493***	-0.387*
	(0.056)	(0.12)	(0.015)	(0.082)	(0.079)	(0.17)	(0.14)	(0.20)
Banks' cultural distance*Interaction-Syndicate							0.0138**	0.0129*
							(0.0068)	(0.0069)
Interaction-Syndicate							-0.0222*	-0.0237*
							(0.012)	(0.013)
Banks' distance						-0.122***		-0.132***
						(0.026)		(0.029)
Border-Syndicate						-0.683*		-0.752*
						(0.36)		(0.40)
Same legal-Syndicate						-0.122		-0.0648
						(0.21)		(0.23)
Same religion-Syndicate						0.456***		0.450**
						(0.17)		(0.19)
Same language-Syndicate						-1.207***		-1.336***
						(0.29)		(0.32)
Colonial ties-Syndicate						1.545***		1.688***
						(0.36)		(0.40)
Creditor rights-Lead bank						0.348		0.341
						(0.35)		(0.42)
Creditor rights-Participant bank						0.188		0.0722
						(0.24)		(0.27)
Creditor rights distance-Syndicate						0.225**		0.124

						(0.11)		(0.12)
Creditor rights better in participant bank country-Syndicate						-0.315		-0.0252
						(0.35)		(0.40)
Per capita GDP-Participant bank	0.112**	0.110*	-0.00652	0.136*	0.110	0.104	0.134	0.132
	(0.050)	(0.066)	(0.016)	(0.075)	(0.069)	(0.069)	(0.085)	(0.089)
Per capita GDP-Lead bank	-0.0364	-0.0218	0.0116	0.00839	-0.0707	-0.0595	-0.209**	-0.241**
	(0.060)	(0.085)	(0.013)	(0.086)	(0.081)	(0.089)	(0.11)	(0.11)
Tranched	-2.008***	-1.859***		-2.259***	-2.169***	-1.848***	-1.850***	-1.830***
	(0.086)	(0.13)		(0.14)	(0.13)	(0.13)	(0.15)	(0.15)
Number of loan purposes	0.0383	-0.000338		-0.346**	-0.348**	-0.0237	-0.0274	-0.0503
	(0.10)	(0.15)		(0.17)	(0.15)	(0.15)	(0.16)	(0.16)
Rating group2	0.101	0.355*		0.124	0.00106	0.368*	0.324	0.349
	(0.13)	(0.20)		(0.26)	(0.22)	(0.20)	(0.23)	(0.23)
Rating group3	-5.616***	-2.896***		-0.717	-0.412	-2.812***	-3.550***	-3.459***
	(0.38)	(0.63)		(1.65)	(0.78)	(0.63)	(0.72)	(0.72)
Rating group4	-0.174	-0.230		-0.416**	-0.419**	-0.198	-0.300	-0.268
	(0.12)	(0.19)		(0.21)	(0.19)	(0.19)	(0.22)	(0.22)
Observations	225711	114159	227752	115522	124073	114049	101656	101562
Adjusted R-squared	0.03	0.03	0.89	0.07	0.07	0.03	0.03	0.03

Appendix

	Number of loans by borrower nationality	Number of loans by lead bank nationality
Albania	2	
Algeria	65	1
Argentina	491	111
Australia	2207	2058
Austria	68	225
Azerbaijan	3	
Bangladesh	8	2
Belarus	7	
Belgium	320	696
Brazil	759	218
Bulgaria	27	
Canada	3046	4694
Chile	346	44
China	1007	681
Colombia	198	23
Croatia	99	2
Czech Republic	153	26
Denmark	213	187
Egypt	113	93
El Salvador	30	
Finland	323	242
France	1037	2990
Germany	1346	4910
Ghana	55	30
Greece	377	246
Hong Kong	1437	176
Hungary	207	60
India	663	276
Indonesia	1219	326
Iran	46	12
Ireland	348	289
Israel	56	131
Italy	2009	2174
Japan	3219	6911
Jordan	21	17
Latvia	17	6
Lithuania	21	1
Mexico	832	105

Moldova	1	
Morocco	33	13
Netherlands	1059	2782
New Zealand	412	36
Nigeria	64	10
Norway	653	477
Pakistan	116	32
Peru	82	26
Philippines	369	137
Poland	178	23
Portugal	243	228
Puerto Rico		13
Romania	82	30
Russian Federation	422	121
Saudi Arabia	47	97
Singapore	653	724
Slovakia	54	
Slovenia	67	2
South Africa	266	177
South Korea	1864	1209
Spain	1832	2023
Sweden	702	762
Switzerland	395	1177
Tanzania	8	
Turkey	795	168
Uganda	2	
Ukraine	28	
United Kingdom	8382	9480
United States	75717	69387
Uruguay	15	3
Venezuela	161	87
Vietnam	37	5
Zimbabwe	60	2