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ABSTRACT

Do Cultural Differences Between Contracting Parties Matter? Evidence from Syndicated Bank Loans*

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.

JEL Classification: F4, G21 and G3

Keywords: behavioral bias, culture, financial contracts, home bias, risk sharing and syndicated loans

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Empirical evidence suggests that sharing the same culture fosters social interaction and trust 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, may lead to cultural conflicts and are known to have caused failures in international mergers (see, for instance, Weber and Camerer, 2003). 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 outcomes when agents interact repeatedly. In particular, we ask whether the contracts written by individuals that represent organizations with different cultures or that have different nationalities are affected by their cultural differences. For this purpose, we use a large sample of syndicated bank loans around the world, combined with measures of cultural distance across countries from the World Values Survey (Inglehart, 1997).

We find that the stronger 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 level controls, we find that, *ceteris paribus*, more culturally distant borrowers are offered loans at a higher interest rate, are more likely to have to secure their loan or to need a

guarantor, and often receive smaller loans. 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.

The effects we uncover are qualitatively and quantitatively robust to a battery of robustness checks. First, differences in financial contracts could arise from the fact that culturally distant banks lend to riskier borrowers. To account for the effects of unobserved heterogeneity on loan terms, we consider different selection models. Whether we correct for selection problems by considering the choice of using a foreign as opposed to a domestic bank or by taking into account that, given the set of all potential lead banks, only one lead bank actually offered (or was chosen) to extend the loan, we find that our results are qualitatively invariant.

Second, we explore whether lead banks' private information drives the differences in loan terms, by exploring 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 has been granted, the performance of firms that borrow from culturally distant banks is worse than that of other borrowers, thus confirming that selection issues are unlikely to drive our results.

Finally, we 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.

Since we find no evidence that culturally distant banks make loans to worse borrowers, one interpretation of our results is that cultural differences between borrower and lender affect negatively the perception of the borrower and may give rise to taste-based discrimination (Becker, 1971). In this respect our findings are related to a few recent papers showing that ethnic minorities, 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). Another possible interpretation of the results is that transaction costs are higher when a lender deals with a culturally distant borrower (during the ex ante negotiation of the contract or

if episodes of financial distress or renegotiations occur), and these potential additional costs are reflected *ex ante* in the contract terms.

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. More recently, experimental economists (e.g., Henrich et al., 2001) have shown that economic decisions are influenced by culture. Guiso, Sapienza and Zingales (2006) present new evidence on the extent to which culture affects aggregate economic outcomes and individual decision-making.

While most of this literature aims to identify the effects of culture on economic outcomes, we focus on the effects of cultural differences. By focusing on cultural differences (rather than culture in general), 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). Along the same lines, Guiso, Sapienza and Zingales (2007) show 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 and, if they do offer funding, they maintain stronger control rights.

We do not focus on the concept of “trust” but on the way in which differences in opinions originating from culture affect financial contracts. Most importantly, we complement these papers by looking at financial contracting in the much deeper market

for syndicated bank loans. The depth of the syndicated loan market allows us not only to greatly increase the set of countries we examine, 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 due to cultural differences disappear following repeated interaction.

Our paper is also 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 variety of syndicated loan contracts.

Finally, our paper is related to the literature on the home equity bias. Lack of familiarity has been extensively shown to limit investment (see, for instance Coval and Moskowitz, 1999; Huberman, 2001; Chan, Covrig and Ng, 2005). Familiarity is enhanced 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 CEO's 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 showing that familiarity affects financial flows in debt markets as well. More importantly, we show that cultural biases affect not only quantities but also the structure of financial 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 introduce the methodology for identifying the effect of cultural distance on syndicated loan contracts and describe the main results. The results on the syndicate composition are presented 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).¹

While Loanware contains information on syndicated loans to local and central governments, we focus on corporate borrowers. For all corporate borrowers, we extract 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.² It is, however, possible that Loanware coverage is less

¹ 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.

² Gadanecz (2004) reports that, during the 1980s the syndicated loan market consisted mostly of sovereign loans, especially to developing countries. Only in the early 1990s did it become a significant venue for corporate finance.

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. This market is well-known to be affected by severe 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 generally unable to access the bond market because of severe asymmetric information and moral hazard problems. The perceived intensity of these problems affects contractual provisions in syndicated loans, 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 quality of 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 geographically or culturally 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 anthropologists in a variety of ways. The definition usually includes some notion of shared values, beliefs, expectations, customs, language, and rituals. Although it is difficult to produce quantitative measures of culture and cultural differences, the World Values Survey (WVS), an academic project, which has been ongoing since the early 1980s, is an ambitious attempt by social scientists to measure socio-cultural, moral, religious, and political values of different countries around the world. The WVS initially covered only 22 countries and was conducted at ten-year intervals; currently the survey covers 65 countries representing more than three quarters of the world population, 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 1000 to 3500 interviewees per country, and the average number of respondents is 1,400 per country (for more details, see Inglehart, 1997, and Inglehart and Baker, 2000).

Inglehart (1997) and Inglehart and Baker (2000) find that diverse orientations tend to cluster together in coherent patterns. Consequently, they 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.

These values are inferred from individuals' opinions on concrete aspects of life. 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 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.

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 (Inglehart, 1997; Inglehart and Baker, 2000). Cultural distance between any pair of countries can then be measured as the Euclidean distance between the traditional vs. secular/rational and the survival vs. self-expression orientations.³

The cross-country cultural differences that emerge using this methodology can be summarized in the "Inglehart-Welzel Cultural Map of the World," which is displayed in Figure 1. Although Figure 1 presents a snapshot of the WVS results, Inglehart (1997) documents that, while a society's historical heritage has an enduring influence on its value system, cultural values experience some changes during the process of development. For this reason, wherever possible, we use previous WVS surveys to

³ Typically, this measure of cultural distance does 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.

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.

To account for the fact that culture is partially affected by economic development, in all regressions, we include 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) to control for economic development (and its effect on culture and values).⁴

Finally, we attribute to each borrower the culture of its own country and to the bank the culture of the headquarters' country. Here, our maintained assumption is that the individuals writing the contracts or the executives with high decision power are nationals of the bank's or the borrower's country, or are at least heavily influenced by the culture of the organization they represent. Organizational culture may matter because multinationals are generally committed to the policies of their home countries. Thus, organizations may be more hierarchical and decision powers more concentrated in countries that stress deference to authority than in egalitarian countries. Interaction between hierarchical and flat organizations from countries that put different stress on egalitarian values may be cumbersome. Similarly, cultural clashes may arise if banks adopt policies that reflect their origin country culture, for instance, by promoting gender equality and ethnic diversity, in their local subsidiaries.

⁴ 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.

II. Descriptive statistics

Our sample includes over 100,000 loans to borrowers in 69 countries. Lead banks are from 60 countries, and the sample period ranges from 1980 to 2005. 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).

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, described in Panel A of Table I, but also on the identity of the lending banks and their nationality, 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 the participant bank) 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).⁵ 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. Besides cultural distance, our main variable of interest, we also consider physical distance, and various measures of similarity of the legal environment.

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. Thus, 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.⁶ An advantage of this variable is that it does not depend on the size of the total loan and on the number of

⁵ Our results remain unchanged if we restrict the sample to syndicated loans with one lead bank only.

⁶ 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.

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.

Panel D of Table I provides details on the loan classifications of Loanware. These categorical variables, which are discussed more in 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. Methodology

In an optimal contracting framework (see, for instance, Hart, 1995), if creditors have bad expectations about a borrower's quality or actions, they will extend credit on less favorable terms (higher interest rate; shorter maturity; stricter covenants) than what they would offer to borrowers who are regarded as more creditworthy. 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 bad expectations or high costs when dealing with culturally distant borrowers, we study 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 country dummies in all the 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 Swiss 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, and 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). 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.), 69 currency dummies, and year dummies. Finally, we include 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.

We further control for time-varying country characteristics such as the GDP per capita and creditor rights in the countries of both the borrower and the lead bank. Finally, 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, and include two dummy

variables that take value one if the two countries share the same legal tradition and the same religion, respectively. Differences in laws may be a major obstacle in doing business in different countries; therefore, we include also 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.

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 bias should be interpreted as arising from banks' tastes that discriminate against certain borrowers, pessimistic expectations or high expected transaction costs.

The matching of banks with borrowers is, of course, non-random. In particular, the question arises why firms would choose culturally distant banks if they offer worse loan terms than to culturally close borrowers. It is important to note that because we include lead bank nationality dummies in all specifications 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 lower interest rate than domestic banks to culturally distant U.S. borrowers and at the same time offer worse contract terms than local banks to culturally closer Belgian borrowers.

Nevertheless, our basic approach implicitly assumes that bank and borrower characteristics other than cultural distance drive the matching of lead banks and borrowers. Hence, borrowers may 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, may be forced 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 credit worthiness, for example because of trade ties with the lender's country.⁷

This assumption is strong but not at odd with experimental evidence showing that economic agents, who make decisions for a variety of reasons not related to culture, underestimate the importance of cultural differences on economic outcomes (Weber and Camerer, 2003). Moreover, it is important to note that the non-random selection of 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 the empirical analysis, in order to mitigate any lingering doubts that unobserved

⁷ 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.

heterogeneity may affect the relation between cultural distance and contract terms, we perform a number of robustness checks and explicitly address selection problems.

B. Loan price

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.⁸ 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 6), and a number of loan characteristics (column 6). 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.

⁸ 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 standard errors for the full set of dummies –if Stata allows it– or for a subset using the White-correction for heteroskedasticity. 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), or if we compute yearly averages of the loan characteristics received by all borrowers in a country from lead banks in a given country and run our regressions using this collapsed dataset.

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. Moreover, cultural distance is unlikely to capture other aspects of remoteness as the physical distance between the capital cities of the borrower's and the lead bank's (headquarters) countries does not appear to have a significant effect on the loan spread. This is probably due 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). Spreads appear to be larger when loans are negotiated with culturally distant lead banks even when the cost of the loan includes (variable) interest costs, but not fixed fees (column 5). 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 specific banks from specific countries. In addition, the results are also unchanged if we consider only loans issued in the Euro or the U.S. market or if we include dummies for the different interest rate bases (not reported).

We also run the regressions for groups of borrowers with the same ratings and for unrated borrowers. 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.

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 two-stage selection models.

In the first stage, we estimate the probability that a borrower will receive a loan from a foreign lead bank. We conjecture that the probability of having a foreign lead bank should be larger in countries with a less developed banking system. To the extent that borrowers can resort to the international syndicated loan market, the development of the domestic banking system should not affect the terms of the loan. Thus, we use the ratio of private credit to GDP in the borrower country as instrument in the first stage.⁹ The first stage estimates, presented in column 1, show that our instrument is indeed significant. As expected, borrowers in countries with more developed banking systems are less likely to recur to foreign lead banks.

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. In column 2, we estimate a Heckman selection model (i.e., we estimate the second stage

⁹ Since in the first stage we do not include borrower nationality fixed effects, we also include the legal origin of the borrower's country from Djankov et al. (2007).

considering only foreign banks). In column 3, instead, we estimate a treatment effect model in which we consider observations relative to both domestic and foreign banks' borrowers and include a dummy that takes value one if the lead bank is from a foreign country among the regressors.¹⁰ In either case, the effect of cultural distance on the loan spread remains positive and significant and close in magnitude to the coefficient estimates in Table III. It thus appears that selection issues do not play a major role in driving our estimates. While the positive and significant coefficient of the inverse Mills ratio in column 2 suggests that unobserved heterogeneity of foreign banks' clients tend to increase the cost of funds (for instance, because these clients demand more services), in column 3 we find that both the foreign bank dummy and the inverse Mills ratio have no significant impact on the cost of funds. Importantly, the similarity of the estimates of our variable of interest in columns 2 and 3 also shows that our results are not driven by the difference between domestic and foreign banks, but by the cultural distance of the latter.

Since we are mostly interested in the heterogeneity between banks, which may be more or less culturally close to a given borrower, allowing the choice between domestic and foreign banks to be endogenous does not fully account for selection problems in our sample. The set of possible matches for a given borrower consists of all the domestic and foreign lead banks which are active in a country. We can therefore generalize the Heckman selection model to address this issue by considering all the possible combinations of lead banks and borrowers within a country¹¹ 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. On the basis of this first

¹⁰ See Wooldridge (2002) for the difference between treatment effect models and selection models.

¹¹ We consider as possible matches only the lead banks active in a country in a given year or before.

stage, which takes into account the higher dimensionality of the matching problem, we compute the inverse Mills ratio, which controls for unobserved heterogeneity in the second stage. In the first stage, we include variables that we expect not to affect the cost of funds in the second stage: besides the proxy for banking system development in the borrower country, we include the bank rank in the country by counting the number of deals it completed up to a given year, its size in term of syndicated loans led worldwide, and the borrower country's size in terms of total amount of loans granted in the syndicated loan market. All these variables 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 and to market size, but should not affect the cost of the loan because borrowers can resort to any bank in the international syndicated loan market active in their country.

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 most the top 500 lead banks active in each country. We exclude any loans extended by lead banks that are not among the top 500.¹²

The first stage provides interesting information. Borrowers tend to obtain loans from physically close lead banks. However, cultural distance does not seem to affect the probability of a bank-borrower match, thus mitigating concerns that selection problems drive our estimates. Also, 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.

¹² Different cutoffs (50, 100, 200, and 300) all yield results that are similar to the ones we report.

Most strikingly, the effect of cultural distance is now three times larger than the one we report in the baseline specifications. Thus, as we argue above, if anything, selection problems make our results weaker.

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 in order to control asymmetric information and moral hazard problems.

Estimates in Table IV show that after controlling for the same loan characteristics as 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).¹³ Cultural distance has also a positive impact on the probability that the loan is secured by collateral. However, even though 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 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

¹³ 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 estimation of maximum likelihood 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 in this column..

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, even if the bias against a culturally distant borrower persists over time, it is possible that banks extending several loans to the same borrower develop a fairer assessment of that borrower's creditworthiness.

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. To the extent that short maturity is useful if the lender monitors the borrower, this suggests that the lender's experience may make monitoring less costly and enforcing the security interest less expensive. However, the finding that these contract terms become more restrictive suggests that neither the perception of the borrower improves nor contracting costs decrease.

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, however, the borrower has to receive 10 syndicated loans from a given lead bank with mean cultural distance. This suggests that the effect of culture on loan spreads is highly persistent and is only partially mitigated by repeated interaction with the borrower: For 75 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).¹⁴

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.

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 be able to enjoy the control rights associated with frequent renewal decisions.

¹⁴ 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.

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 completely 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, unchanged. 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.¹⁵

¹⁵ 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 only before other participants are invited to the syndicate.

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 would be 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 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.

In column 1, we present estimates of an ordered probit regression. Strikingly, 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.

Second, we consider the possibility that omitted factors, which may be correlated with cultural distance, drive our results. For example, information flows may be lower between culturally distant countries because of limited international trade and portfolio capital flows or because these countries have different economic structures. Thus, our results could be driven by the fact that lead banks, having less information, expect the

variance of return to be larger for culturally distant borrowers. This is unlikely because among the large set of control variables, we have included physical distance, which is commonly considered to capture bilateral transaction and information costs. Nevertheless, in columns 2 to 4 of Table VII, we control for these factors in turn. Even when we control for the extent of similarity in industrial structure, for trade flows, and for investment flows between the lead bank's and the borrower's countries, the effect of cultural distance on the cost of the loan remains positive and significant. We conclude that the effect of cultural distance that we document is unlikely to be a proxy for the effect of another omitted variable.

Third, even though we rely on a measure of cultural distance that is well established in the sociology literature, concerns may arise about the robustness of our results. The robustness of our results to the use of a measure of cultural distance which is based only on differences in traditional vs. rational values that are believed to be the most time invariant component of culture, and the fact that having the same religion generally affects contract terms favorably, like cultural similarity, should reduce these concerns. As a further robustness test, we examine an alternative measure of cultural distance that may be more closely related to the way firms and multinationals from different countries are organized. Surveying employees of IBM across different countries, Hostfede (2000) generates a score to capture the degree of inequality in power between a less powerful individual and a more powerful one within the context of social relations, which may include a family or a firm. We define a measure of cultural distance based on the difference in Hofstede's "power distance" scores between each pair of countries and use this alternative measure as a proxy for cultural distance. 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.

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 more 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 sub-sample 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. Thus, it appears that cultural differences may affect interaction between economic agents beyond mutual trust.

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, the interaction between borrower and lead bank is

not the only one to be affected by asymmetric information and agency problems; the interaction between lead banks and participant banks is affected as well.

Once the lead bank has extended a loan, the percentage of the syndicated loan that a lead bank is able to sell 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. Here, we explore whether cultural differences negatively affect the participant banks' perception of the lead bank. In particular, we investigate whether the difference between the share of the loan bought by a participant bank and the share of the loan retained by the lead bank is negatively affected by cultural distance. *Ceteris paribus*, a negative and significant coefficient 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 cost from dealing with the lead bank. This is the case, for instance, if the officers of the two banks in charge of negotiating the loans are more inclined to misunderstand each other, thus making negotiation longer.

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 Swiss banks, which tend to buy systematically larger proportions of loans from culturally closer German banks. We control for loan heterogeneity as we do throughout the analysis. 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.

The results, presented in Tables VIII, show that, indeed, participant banks hold smaller portions of loans syndicated by culturally remote lead banks in comparison with loans syndicated by culturally more “similar” lead banks. In column 1, a one standard deviation increase in cultural distance decreases risk sharing between two banks by nearly 5 percent. 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 25 percent.

The effect is robust across different samples. For instance, in column 3, we exclude loans to U.S. borrowers (which represent nearly half of our sample), and in column 4, loans for which the lead bank is from the U.S. Similarly, the coefficient of cultural distance is qualitatively unchanged in column 5, 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 percent. It is comforting that risk sharing improves if the lead bank is from a country with strong investor protection.

In columns 6 and 7, we explore whether the limits to risk sharing arising from cultural differences, and from distance more generally, 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 are willing to lend to borrowers and reduce the investment that participant banks are willing to 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 price and non-price terms and are persistent over time.

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Figure 1: Cultural Map of the World

Source: World Values Survey, www.worldvaluessurvey.org

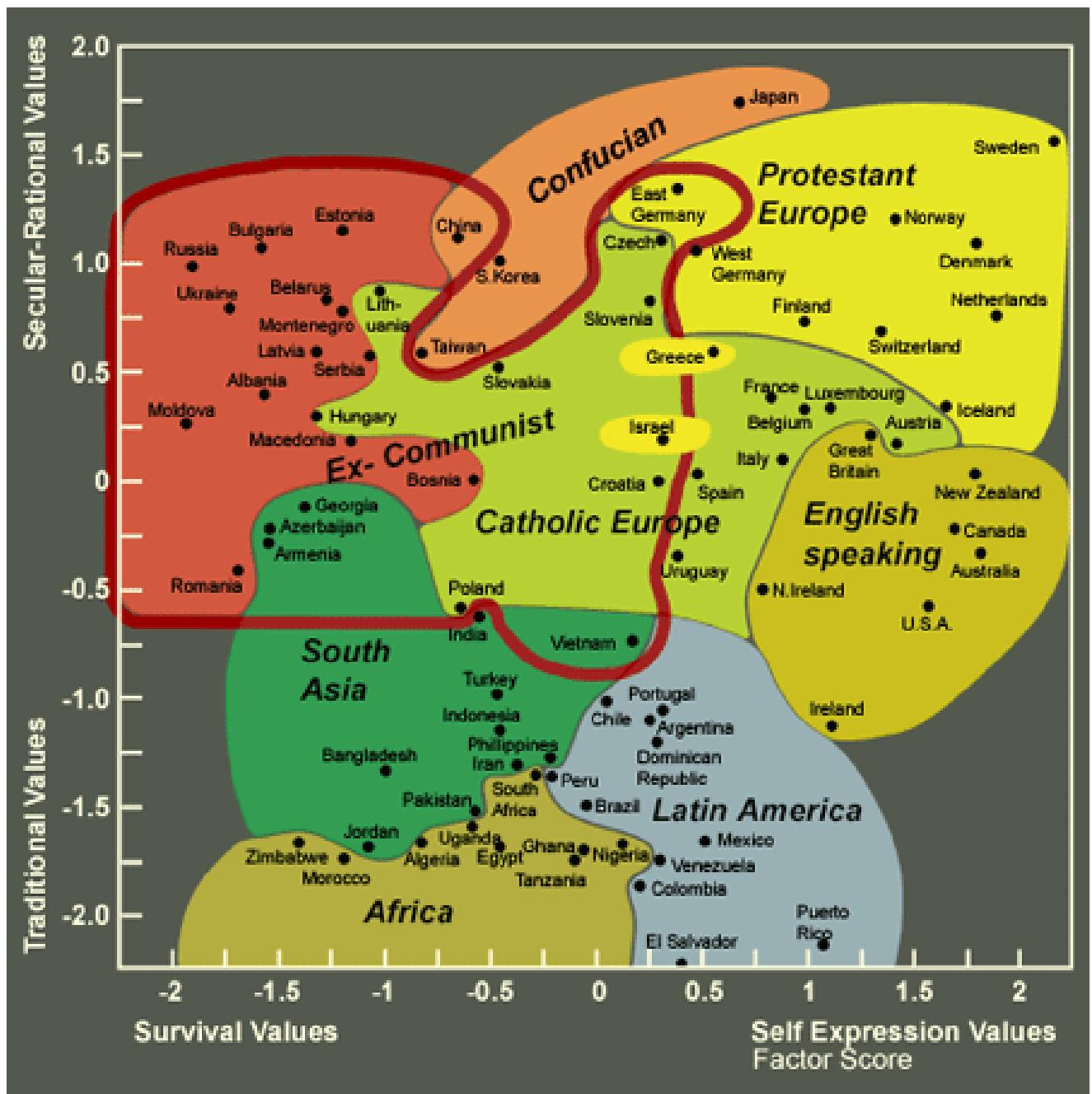


Table I – Variable Definitions and Sample Statistics

<i>Panel A. Contract characteristics</i>								
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 equals to 1 if the loan is secured and to 0 otherwise/ Loanware	0/1	0.29	0.45	0	0	1	131147
Guaranteed	Dummy equal to 1 if the loan is guaranteed and to 0 otherwise/ Loanware	0/1	0.08	0.27	0	0	0	131147
Secured or guaranteed	Dummy equal to 1 if the loan is either secured or guaranteed and to 0 otherwise/ Loanware	0/1	0.34	0.47	0	0	1	131147
Tranched	Dummy equal to 1 for loans offered in several separate tranches and to 0 otherwise /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 equal to 1 if the firms borrows from a foreign bank and to 0 otherwise / Loanware	0/1	0.26	0.44	0	0	1	131147
Lender Interaction	Number of syndicates led by the lead bank in the country of the borrower / Loanware		30.3	21.5	5	47	50	131147
Borrower Interaction	Number of previous loans of the lead bank to the borrower		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 cultures of borrower's and lead bank's countries/ WVS	see text for details	0.34	0.73	0	0	0	126100
Distance	Physical distance between the capital of the country of the lead bank's headquarters and the capital of the borrower's country/ <i>infoplease.com</i>	1000km	1.45	3.27	0	0	0	131027
<u>Discrete distance measures</u>								
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	Equals 1 if the creditor rights index is higher in lead bank's country than in borrower country/ Djankov et al. (2007)	0/1	0.11	0.31	0	0	0	130230
Same legal	Equals 1 if borrower and lead bank are from countries with same legal origin/ Djankov et al. (2007)	0/1	0.84	0.36	1	1	1	130480
Same religion	Equals 1 if borrower and lead bank are from countries with same religion/ Djankov et al. (2007)	0/1	0.81	0.39	1	1	1	131147
Power-Distance	The difference in "power-distance" scores between the borrower's and the lead bank's countries, squared /Hofstede (2000)	see text for details	99.64	373.21	0	0	0	126450

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 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 in which a participant bank has joined deals with a given lead bank/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 between the capital of the country of the lead bank's headquarters and the capital of the country of the participant bank's headquarters / <i>infoplease.com</i>	1000km	2.78	4.15	0	0	0.5	294767
Same legal-syndicate	Equals 1 if participant bank and lead bank are from countries with 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	Equals 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	Equals 1 if participant bank and lead bank are from countries with same religion/Djankov et al. (2007)	0/1	0.65	0.48	0	1	1	294936

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.	Loanware
Year	Ratings are at the time of the loan origination	
Currency	Year in which loan was issued (1980-2005)	Loanware
Borrower type	Loan currency (70 categories)	Loanware
Loan purpose	Private corporate, private bank etc. (15 categories). Government (central and local) are excluded.	Loanware
Borrower industry	Acquisition, debt repayment, general corporate purposes etc. (22 categories)	Loanware
	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	h. 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 (zero to one)	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 2001, calculated for foreign lead banks only.	Percentage	10.42	15.19	2.41	4.93	12.56	33643
Investment flows	Fraction of all capital outflows from the lead bank's country to the borrower's country/ IMF/CPIS survey 2001, 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 (5) 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) Margin	(6) Additional controls
Cultural distance	13.376*** (2.057)	10.099*** (3.359)	17.635*** (2.883)	12.842*** (4.227)	8.356*** (2.747)	9.270*** (3.428)
Distance		0.243 (0.541)	-0.343 (0.470)	-0.487 (0.698)	0.158 (0.437)	0.209 (0.551)
Same legal		3.973 (4.277)	5.062 (3.438)	6.923 (5.345)	-3.379 (3.540)	5.663 (4.380)
Same religion		-7.026* (3.846)	-8.903** (3.881)	-6.749 (4.626)	-4.166 (3.229)	-5.543 (4.057)
Creditor rights – Borrower		-8.765 (7.235)	-3.867 (5.675)	-14.477 (8.934)	-10.170 (5.989)	-7.275 (7.438)
Creditor rights - Lead bank		14.844** (6.087)	5.256 (5.414)	14.3623* (7.479)	9.582* (5.015)	13.568** (6.249)
Creditor rights distance		2.919 (2.182)	3.809* (2.102)	4.564* (2.671)	2.161 (1.802)	0.918 (2.285)
Creditor rights are better in lender country dummy		-6.927 (7.961)	-10.007 (6.744)	-4.677 (10.016)	-20.503 (6.500)	-0.186 (8.196)
Per capita GDP- Borrower	0.923 (0.983)	1.005 (1.012)	-1.654* (0.875)	2.310* (1.299)	4.297*** (0.833)	0.173 (1.032)
Per capita GDP – Lead bank	-4.184*** (1.006)	-4.576*** (1.035)	-3.447*** (0.905)	-4.829*** (1.285)	-2.594*** (0.833)	-4.234*** (1.057)
Tranched	25.089*** (1.594)	25.297*** (1.599)	12.406*** (2.206)	26.315*** (1.798)	23.062*** (1.292)	23.285*** (1.704)
Number of loan purposes	-3.388* (2.033)	-3.321* (2.037)	-1.649 (2.206)	-2.864 (2.291)	-3.107* (1.643)	-2.324 (2.107)
Rating group2	42.989*** (3.271)	43.619*** (3.281)	0.603 (4.665)	56.405*** (3.969)	65.248*** (2.690)	35.412*** (3.465)
Rating group3	136.843*** (5.968)	137.445*** (5.976)	89.787*** (15.731)	146.774*** (6.607)	182.237*** (4.835)	127.567*** (6.306)
Rating group4	51.318*** (2.993)	51.944*** (3.004)	8.417 (3.784)	65.783*** (3.732)	83.6200*** (2.473)	37.570*** (3.272)
Number of banks						-0.688*** (0.098)
Loan amount						-0.013*** (0.002)
Loan maturity						2.292***

						(0.311)
Secured <i>or</i> guaranteed					18.101***	
					(1.701)	
Observations	87213	86839	27029	72664	88358	77903
Adjusted R-squared	0.10	0.10	0.30	0.09	0.31	0.11

Table III. Addressing selection problems

The table reports the estimates of an Heckman selection model, fitted with a two-stage consistent estimator, with the exception of column 3, which reports the second stage of a treatment-effect model fitted using a two-step consistent estimator (the first stage is analogous to the one in column 1). In column 1 (first stage), the dependent variable is the foreign bank dummy. In columns 2, 3, and 5 (second stage), the dependent variable is the all-inclusive loan cost. In column 4 (first stage), we consider how a borrower is matched to all the potential lead banks; the unit of analysis is the potential borrower-lead bank match and the dependent variable is a dummy that equals 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 3, we include only observations that refer to foreign banks. In column 4 and 5, 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 equations in columns 1 and 4 include the credit to GDP in the borrower country, three legal origin dummy variables from Djankov et al. (2007), the rank of the lead bank in a country according to the number of deals concluded up to the year of the loan, the market size of the borrower's country defined as the total amount of the syndicated loans issued in the borrower's country during the year in which the contract is signed, and bank size defined as total loans issued by the lead bank in that year in the borrower's country. Standard errors are presented in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10 percent, respectively.

	(1) Foreign bank	(2) All- inclusive loan cost – foreign banks only	(3) All- inclusive loan cost – whole sample	(4) Bank-firm match	(5) All-inclusive loan cost – whole sample
Cultural distance		10.690*** (3.251)	8.984*** (3.530)	0.0166 (0.011)	37.33*** (5.59)
Distance		-0.205 (0.541)	0.201 (0.545)	-0.00292* (0.0017)	1.177 (0.86)
Same legal		4.576 (4.016)	3.100 (4.352)	0.0829*** (0.015)	-2.707 (6.13)
Same religion		-7.824* (4.082)	-6.464 (4.320)	0.0377*** (0.014)	-15.23** (6.98)
Creditor rights – Borrower	0.021 (0.034)	-8.825 (8.391)	-11.061 (7.276)	0.0525*** (0.0094)	-13.93 (9.08)
Creditor rights -Lead bank		10.177* (6.096)	16.777*** (6.137)	0.00131 (0.0090)	8.686 (9.04)
Creditor rights distance		3.704 (2.311)	3.014 (2.316)	0.0243*** (0.0089)	0.199 (3.56)
Creditor rights are better in lender country dummy		-10.622 (7.299)	-8.957 (8.064)	0.0180 (0.028)	-22.46** (10.9)
Per capita GDP - Borrower	-0.0018 (0.006)	-0.603 (1.193)	1.889 (1.076)	-0.00327*** (0.00073)	-6.06*** (1.40)
Per capita GDP-Lead bank		-4.985*** (1.305)	-5.146*** (1.083)	0.000991 (0.00090)	-1.29 (1.20)
Tranched	-0.007 (0.011)	16.019*** (3.050)	25.698*** (1.638)	0.0821*** (0.0084)	15.99*** (3.02)
Number of loan	0.008	-4.006	-3.457* (0.0913***)	0.0913*** (2.552)	

purposes					
	(0.015)	(4.219)	(2.043)	(0.011)	(3.83)
Rating group2	-0.100*** (0.023)	-0.562 (6.607)	44.557*** (3.327)	-0.0191 (0.017)	17.49*** (5.96)
Rating group3	-0.161*** (0.047)	44.655*** (14.150)	138.670*** (6.038)	-0.0759 (0.047)	79.50*** (15.8)
Rating group4	-0.138*** (0.021)	3.594 (6.168)	52.840 (3.059)	-0.0525*** (0.014)	18.24*** (5.21)
Credit to GDP-borrower	-0.001** (0.0003)			-0.00111*** (0.00012)	
Foreign bank			30.106 (22.299)	-0.146*** (0.020)	-12.92 (9.01)
English legal origin-borrower	-11.693*** (0.458)			0.0527 (0.039)	
French legal origin-borrower	-11.256*** (0.540)			0.0715* (0.038)	
German legal origin-borrower	1.067** (0.449)			0.0136 (0.040)	
Bank rank				-0.000876*** (0.000028)	
Country mkt size-borrower				-0.000000487*** (0.000000021)	
Bank size				0.00000475*** (0.00000013)	
Mills Ratio		87.391*** (20.881)	-15.636 (12.347)		-1.929 (9.787)
Observations	111259	110813	86354	350411	15963
Wald Chi-squared		45395.30	22769.65		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	-14.237** (6.2425)	0.0495 (0.036)	0.0067 (0.005)	0.019*** (0.003)
Distance	-0.118 (0.977)	-0.027*** (0.006)	-0.0003 (0.0008)	0.0009* (0.0005)
Same legal	-4.294 (8.145)	-0.041 (0.047)	-0.008 (0.006)	-0.017*** (0.004)
Same religion	23.259*** (7.301)	-0.236*** (0.043)	-0.012** (0.006)	-0.009*** (0.003)
Creditor rights -Borrower	-5.262 (12.851)	0.078 (0.074)	0.037*** (0.011)	0.014*** (0.001)
Creditor rights -Lead bank	-5.534 (11.376)	0.279*** (0.066)	0.024** (0.009)	-0.005 (0.006)
Creditor rights distance	-11.248** (3.987)	0.001 (0.023)	0.014*** (0.003)	0.006*** (0.002)
Creditor rights are better in lender country dummy	2.241 (14.533)	-0.251*** (0.084)	-0.0245** (0.012)	-0.0249*** (0.007)
Per capita GDP- Borrower	10.418*** (1.901)	0.00008*** (0.00001)	-0.0047*** (0.00157)	-0.0141*** (0.009)
Per capita GDP - Lead bank	-6.985** (2.036)	-0.00008*** (0.00001)	-0.00559*** (0.00168)	0.001 (0.001)
Tranched	-47.569*** (3.177)	0.621*** (0.018)	0.088*** (0.003)	0.005*** (0.001)
Number of loan purposes	38.450*** (4.153)	0.046** (0.023)	0.038*** (0.003)	0.003 (0.002)
Rating group2	-357.481*** (6.579)	0.401*** (0.037)	0.147*** (0.005)	-0.021*** (0.003)
Rating group3	-491.520*** (12.381)	-0.209*** (0.070)	0.311*** (0.010)	-0.010* (0.006)
Rating group4	-542.291*** (5.982)	0.106*** (0.034)	0.174*** (0.005)	-0.009*** (0.002)
Observations	117528	101842	117920	117920
Adjusted R-squared	0.14	0.38	0.25	0.20

Table V. The Dynamics of Cultural Biases

We consider only syndicated loans made after 1990. 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	7.332*** (3.985)	-15.166** (7.480)	0.087** (0.042)	-0.002 (0.006)	0.024*** (0.003)
Lead interaction	-0.309*** (0.051)	0.657*** (0.100)	-0.001 (0.001)	-0.002*** (0.000)	-.00008* (0.00004)
Cultural distance * Lead interaction	0.039 (0.074)	-0.123 (0.145)	-0.003*** (0.001)	0.001*** (0.000)	-.0002*** (0.00007)
Distance	-0.143 (0.656)	2.051 (1.199)	-0.028*** (0.008)	-0.002** (0.001)	0.001** (0.001)
Same legal	3.533 (4.680)	-2.656 (8.952)	-0.014 (0.050)	-0.008 (0.008)	-0.011*** (0.004)
Same religion	0.028 (4.164)	16.863** (7.977)	-0.300*** (0.046)	0.005 (0.007)	-0.007* (0.004)
Creditor rights -Borrower	-23.348*** (9.019)	-26.228* (15.858)	0.040 (0.088)	0.045*** (0.014)	0.008 (0.007)
Creditor rights -Lead bank	14.086** (7.292)	-11.302 (13.955)	0.187** (0.078)	0.037*** (0.012)	-0.000 (0.006)
Creditor rights distance	4.968** (2.460)	-15.263** (4.510)	-0.002 (0.026)	0.011*** (0.004)	0.006*** (0.002)
Creditor rights are better in lender country dummy	-13.561 (9.145)	18.585 (16.637)	-0.190** (0.094)	-0.033** (0.014)	-0.01 (0.008)
Per capita GDP -Borrower	3.262** (1.521)	13.461*** (2.752)	0.028** (0.015)	-0.013*** (0.002)	0.012*** (0.001)
Per capita GDP-Lead bank	-4.398*** (1.565)	-6.294*** (3.020)	-0.057*** (0.017)	-0.011*** (0.003)	-0.003** (0.001)
Tranched	26.794*** (1.667)	-46.997*** (3.332)	0.650** (0.019)	0.092*** (0.003)	0.005*** (0.002)
Number of loan purposes	-3.465* (2.064)	36.175*** (4.227)	0.037 (0.023)	0.038*** (0.004)	0.003 (0.002)
Rating group2	57.988*** (3.560)	-419.801*** (7.234)	0.586*** (0.040)	0.178*** (0.006)	-0.013*** (0.003)
Rating group3	154.735*** (6.264)	-553.529*** (13.138)	-0.025 (0.073)	0.352*** (0.011)	-0.001 (0.006)
Rating group4	66.174*** (3.304)	-604.315*** (6.666)	0.294*** (0.037)	0.201*** (0.006)	-0.001 (0.003)
Observations	79297	105857	92274	106178	106178
Adjusted R-squared	0.10	0.16	0.37	0.23	0.18

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	12.041*** (4.181)	-14.432* (7.788)	-0.006 (0.044)	0.01 (0.007)	0.022*** (0.004)
Borrower interaction	1.249** (0.726)	-2.879** (1.365)	-0.072*** (0.008)	0.005*** (0.001)	-0.002*** (0.001)
Cultural distance *					
Borrower interaction	-2.667** (1.205)	-2.796 (2.198)	0.042*** (0.012)	0.001 (0.002)	-0.001 (0.001)
Distance	-0.005 (0.655)	1.768 (1.197)	-0.029*** (0.007)	-0.001 (0.001)	0.001** (0.001)
Same legal	3.414 (4.679)	-2.999 (8.950)	-0.006 (0.050)	-0.008 (0.008)	-0.011*** (0.004)
Same religion	-2.461 (4.145)	22.263*** (7.941)	-0.305*** (0.046)	-0.011 (0.007)	-0.007** (0.004)
Creditor rights -Borrower	-23.591*** (9.021)	-25.517 (15.861)	0.041 (0.088)	0.042*** (0.014)	0.008 (0.007)
Creditor rights -Lead bank	13.286* (7.289)	-8.918 (13.949)	0.193*** (0.078)	0.03** (0.012)	0.001 (0.006)
Creditor rights distance	5.960 (2.455)	-17.162*** (4.501)	-0.001 (0.026)	0.017*** (0.004)	0.006*** (0.002)
Creditor rights are better in lender country dummy	-12.267 (9.143)	16.304 (16.636)	-0.186*** (0.095)	-0.026* (0.014)	-0.01 (0.008)
Per capita GDP -Borrower	3.088** (1.523)	13.225*** (2.756)	0.0032** (0.016)	-0.013*** (0.002)	0.012*** (0.001)
Per capita GDP-Lead bank	-4.316*** (1.566)	-5.970*** (3.023)	-0.058*** (0.017)	-0.011*** (0.003)	-0.003** (0.001)
Tranched	26.671*** (1.694)	-45.454*** (3.382)	0.672*** (0.019)	0.091*** (0.003)	0.006*** (0.002)
Number of loan purposes	-3.481* (2.065)	36.068*** (4.228)	0.038** (0.023)	0.038*** (0.004)	0.003 (0.002)
Rating group2	58.539*** (3.559)	-420.709*** (7.234)	0.588*** (0.040)	0.181*** (0.006)	-0.013*** (0.003)
Rating group3	156.076*** (6.263)	-555.323*** (13.136)	-0.021 (0.073)	0.359*** (0.011)	-0.001 (0.006)
Rating group4	67.323*** (3.301)	-606.567*** (6.660)	0.292*** (0.037)	0.208*** (0.006)	-0.001 (0.003)
Observations	79297	105957	92274	106178	106178
Adjusted R-squared	0.10	0.16	0.37	0.22	0.18

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	11.55*** (3.45)	-13.80** (6.41)	0.109*** (0.037)	-0.00155 (0.0053)	0.0211*** (0.0032)
Cultural distance* Local subsidiary	-4.924** (2.40)	-1.709 (4.68)	-0.189*** (0.027)	0.0262*** (0.0039)	-0.00862*** (0.0023)
Distance	0.261 (0.54)	-0.110 (0.98)	-0.0263*** (0.0057)	-0.000395 (0.00081)	0.000960** (0.00048)
Same legal	3.663 (4.27)	-4.774 (8.14)	-0.0483 (0.047)	-0.00822 (0.0067)	-0.0193*** (0.0040)
Same religion	-6.326 (3.85)	23.66*** (7.32)	-0.210*** (0.043)	-0.0156** (0.0060)	-0.00750** (0.0036)
Creditor rights -Borrower	-9.061 (7.24)	-5.459 (12.9)	0.0669 (0.074)	0.0385*** (0.011)	0.00502 (0.0063)
Creditor rights -Lead bank	15.05** (6.09)	-5.314 (11.4)	0.288*** (0.066)	0.0225** (0.0094)	-0.00429 (0.0056)
Creditor rights distance	3.197 (2.18)	-11.10*** (3.99)	0.00874 (0.024)	0.0134*** (0.0033)	0.00678*** (0.0020)
Creditor rights are better in lender country dummy	-7.017 (7.96)	2.002 (14.5)	-0.258*** (0.084)	-0.0233* (0.012)	-0.0247*** (0.0072)
Per capita GDP -Borrower	0.984 (1.00)	1.04*** (0.19)	0.00008*** (0.000011)	-0.005*** (0.0016)	0.014*** (0.00094)
Per capita GDP-Lead bank	-4.50*** (1.00)	-7.00*** (0.20)	-0.08*** (0.012)	-0.06*** (0.017)	0.843 (1.00)
Tranched	25.34*** (1.60)	-47.55*** (3.18)	0.623*** (0.018)	0.0878*** (0.0026)	0.00516*** (0.0016)
Number of loan purposes	-3.305 (2.04)	38.45*** (4.15)	0.0466** (0.023)	0.0378*** (0.0034)	0.00252 (0.0020)
Rating group2	43.72*** (3.28)	-357.4*** (6.58)	0.406*** (0.037)	0.146*** (0.0054)	-0.0210*** (0.0032)
Rating group3	137.7*** (5.98)	-491.4*** (12.4)	-0.200*** (0.070)	0.309*** (0.010)	-0.00979 (0.0061)
Rating group4	52.11*** (3.01)	-542.2*** (5.98)	0.113*** (0.034)	0.173*** (0.0049)	-0.00842*** (0.0029)
Observations	86839	117528	101842	117920	117920
Adjusted R-squared	0.11	0.15	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 expiration 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 as in 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 differences 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** (0.015)	15.451*** (3.359)	11.146*** (3.189)	12.548*** (3.376)		12.38** (5.84)
Industrial similarity		4.149 (23.113)				
Export flows			-0.359** (0.181)			
Investment flows				0.0561 (0.238)		
Hofstede's Power-Distance					0.008** (0.003)	
Trust						15.80 (10.70)
Distance		-0.816 (0.647)	-0.750 (0.632)	-0.057 (0.557)	1.395** (0.449)	-1.911 (5.68)
Same legal		9.265* (5.171)	6.765* (4.057)	5.669 (4.297)	-2.457 (4.268)	6.321 (6.49)
Same religion		-9.797* (5.367)	-9.876** (4.235)	-7.097* (4.331)	-4.176 (3.865)	-9.293 (5.72)
Creditor rights – Borrower	-0.129*** (0.011)	-10.236 (9.358)	-10.445 (8.142)	-8.795 (8.334)	-1.808 (7.142)	4.520 (9.06)
Creditor rights - Lead bank		6.196 (6.755)	7.901 (6.107)	13.060** (6.348)	12.945** (5.851)	5.497 (9.93)
Creditor rights distance		9.181*** (2.708)	2.721 (2.309)	3.889* (2.363)	2.745 (1.997)	6.233** (2.52)

Creditor rights are better in lender country dummy	-16.328*	-7.487	-11.028	-5.944	-2.432
	(8.735)	(7.335)	(7.523)	(7.632)	(10.2)
Per capita GDP - Borrower	0.0103*** (0.0012)	-0.507 (1.384)	-0.105 (1.056)	0.286 (1.113)	-0.134 (0.986) 0.299* (0.16)
Per capita GDP- Lead bank		-4.975*** (1.701)	-4.431*** (1.255)	-6.473*** (1.413)	-3.519*** (0.9989) -6.58*** (0.18)
Tranched		17.207*** (3.401)	16.966*** (2.969)	17.550*** (3.079)	25.821*** (1.578) 25.76*** (2.65)
Number of loan purposes		-2.376 (4.845)	-3.789 (4.135)	-3.579 (4.332)	-3.070 (2.006) -0.252 (3.15)
Rating group2	-0.0999*** (0.037)	8.204 (7.000)	6.541 (6.196)	7.378 (6.354)	42.718*** (3.232) 34.16*** (5.30)
Rating group3		51.739*** (0.057)	53.668*** (15.410)	57.275*** (13.807)	136.750** (14.113) * (5.900) 75.83*** (13.5)
Rating group4	-1.681*** (0.036)	13.690** (6.223)	12.983** (5.572)	13.912** (5.701)	51.535*** (2.950) 30.03*** (4.15)
Observations	41679	14879	18907	18088	87080
Adjusted R- squared		0.14	0.17	0.16	0.11
					16329 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 5 to 6, 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 6 and 7), 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) No U.S. loans	(4) No U.S. lead banks	(5) Foreign participants	(6) Foreign participants	(7) Foreign participants
Banks' cultural distance	-0.162*** (0.056)	-0.334*** (0.12)	-0.408*** (0.082)	-0.377*** (0.079)	-0.303* (0.17)	-0.493*** (0.14)	-0.396** (0.20)
Banks' cultural distance*Interaction-Syndicate						0.0138** (0.0068)	0.0128* (0.0069)
Interaction-Syndicate						-0.0222* (0.012)	-0.0217* (0.013)
Banks' distance					-0.121*** (0.000026)		-0.000130*** (0.000029)
Same legal-Syndicate					-0.149 (0.21)		-0.105 (0.23)
Same religion-Syndicate					0.446*** (0.17)		0.443** (0.19)
Creditor rights-Lead bank					0.349 (0.35)		0.303 (0.42)
Creditor rights-Participant bank					0.224 (0.24)		0.109 (0.27)
Creditor rights distance-Syndicate					0.234** (0.11)		0.139 (0.12)
Creditor rights better in participant bank country- Syndicate					-0.346 (0.35)		-0.0768 (0.40)
Per capita GDP-Participant bank	0.000112** (0.000050)	0.000110* (0.000066)	0.000136* (0.000075)	0.000110 (0.000069)	0.000103 (0.000069)	0.000134 (0.000085)	0.000132 (0.000089)
Per capita GDP-Lead bank	-0.0000364	-0.0000218	0.00000839	-0.0000707	-0.0000465	-0.000209**	-0.000220**

	(0.000060)	(0.000085)	(0.000086)	(0.000081)	(0.000088)	(0.00011)	(0.00011)
Tranched	-2.008*** (0.086)	-1.859*** (0.13)	-2.259*** (0.14)	-2.169*** (0.13)	-1.858*** (0.13)	-1.850*** (0.15)	-1.847*** (0.15)
Number of loan purposes	0.0383 (0.10)	-0.000338 (0.15)	-0.346** (0.17)	-0.348** (0.15)	-0.00936 (0.15)	-0.0274 (0.16)	-0.0324 (0.16)
Rating group2	0.101 (0.13)	0.355* (0.20)	0.124 (0.26)	0.00106 (0.22)	0.338* (0.20)	0.324 (0.23)	0.309 (0.23)
Rating group3	-5.616*** (0.38)	-2.896*** (0.63)	-0.717 (1.65)	-0.412 (0.78)	-2.881*** (0.63)	-3.550*** (0.72)	-3.524*** (0.72)
Rating group4	-0.174 (0.12)	-0.230 (0.19)	-0.416** (0.21)	-0.419** (0.19)	-0.240 (0.19)	-0.300 (0.22)	-0.312 (0.22)
Observations	225711	114159	115522	124073	114049	101656	101562
Adjusted R-squared	0.03	0.03	0.07	0.07	0.03	0.03	0.03