ORGANIZATIONAL MONITORING COSTS AND LOAN CONTRACT STANDARDIZATION

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Abstract

We empirically examine the relationship between monitoring costs within a banking organization and the standardization of credit terms in lending to small businesses. We find that when senior bank managers are away from a branch and monitoring of branch activity is more costly, loan officers at the branch exercise less discretion and standardize contract terms (collateral and credit amount) more. The relationship is also weaker in more competitive credit markets. Our results are consistent with the idea that costs of delegation within banking organizations affect their lending practices and external market discipline interacts with internal monitoring.

JEL Classification: D22, D83, G21, L22

Keywords: bank structure, contract terms, soft information, small business lending

1. Introduction

Extant research examines how organizational structure of banks and banking systems can impact lending practices and credit outcomes (Alessandrini et al. 2009; Liberti and Mian, 2009; Canales and Nanda, 2012; Skrastins and Vig, 2019). In general, more hierarchical structures and larger organizational distance between bank headquarters and local bank branches are associated with a disproportionate reliance on objective information in borrower selection and with a tightening of credit access conditions. The proposed explanation is that most of the information about applicants and borrowers is available locally to loan officers and is non-verifiable by senior managers at the bank headquarters, and the incentives within the bank organization might not be fully aligned. As a solution, decentralization and a shift of decision-making power toward the local loan officers can incentivize these loan officers and promote their initiative (Aghion and Tirole, 1997; Stein, 2002). This comes at a cost, however, stemming from the possible loss of control by senior bank managers and a reduction in their monitoring ability. Motivated by the latter point, we examine the empirical relationship between the degree of standardization of the contract terms of local loan contracts and the magnitude of monitoring costs of the senior bank managers at bank headquarters.

Our study builds upon two strands of evidence. First, extant work posits that contract terms are shaped by two types of information (Liberti and Mian, 2009; Cerqueiro et al. 2011; Skrastins and Vig, 2019). On the one hand, we have objective information loan officers possess about the borrowers. On the other hand, contracts reflect the judgment and discretion of these loan officers as well as their subjective and more subtle cues and knowledge about borrowers and local economic conditions. Controlling for objective information, variation in credit terms would reflect discretion of loan officers and their reliance on subjective information (Rajan et al., 2015; Skrastins and Vig, 2019). A second strand of evidence suggests that lending outcomes, and the reliance by loan officers on different types of information, is shaped by communication costs within the banking organization and the difficulty and challenges senior managers face when monitoring local loan officers (Alessandrini et al., 2009; Levine et al., 2020). Lower costs of communication and easier monitoring tend to favorably affect lending.

In this paper, we connect these two lines of research. Specifically, we examine how the costs of monitoring local loan officers by senior managers at the bank headquarters, measured by the geographical branch-headquarters distance (referred to as functional distance or organizational distance in the literature), relate to the reliance of loan officers on subjective information, reflected in the standardization of the terms of the credit contracts they make. Using the portfolio of credit lines extended by an Italian bank in 2004 and 2006 to small and mid-sized enterprises (SMEs) in two Italian provinces, we compute branch-level dispersion, captured by standard deviation, in three contract terms: credit limit, interest rate, and collateralization. Dispersion in contract terms is an inverse measure of decision-making standardization and a direct proxy of reliance on subjective information (Skrastins and Vig, 2019). We then document the finding that dispersion of credit limit and collateralization decreases with the functional distance between branch and bank headquarters. In other words, local loan officers reduce their reliance on subjective information and standardize decisions more as the monitoring costs of their senior managers increase in the cross-section, and an eventual ex-post verification of information used in the lending process becomes more difficult and challenging. By contrast, we find that standardization patterns do not extend to the cost of debt or interest rate. We subject the observed empirical relationship to several robustness checks related to alternative operationalization of standardization measures, adjustments of standard errors, and introduction of a more comprehensive set of controls.

In addition to documenting the baseline relationship, we explore heterogenous effects with respect to local market conditions motivated by research showing that the effect of organizational structure could depend on local economic environment and banking sector competition (Canales and Nanda, 2012; Skrastins and Vig, 2019). We find that the estimated relationship is more pronounced for what we refer to as "dominant" branches of the bank, i.e., branches operating in more concentrated credit markets and areas served by fewer other banks. The result is consistent with the notion that presence of a competitive market, disciplining local bank managers, could attenuate the need for intensive monitoring by senior bank managers. This also highlights possible complementarities between monitoring mechanisms.

Our paper contributes to two main streams of literature. First, we add to the research that explores determinants of standardization, as opposite of dispersion, of credit contract terms (e.g., Cerqueiro et al., 2011; Skrastins and Vig, 2019). We complement these studies by examining a more complete set of credit contract terms. We also focus on the distance between the local branch and the headquarters of the bank to complement other measures of organizational structure and hierarchies. Second, we add to the literature that explores the effects of functional distance and monitoring on bank lending (e.g., Alessandrini et al., 2009; Qian et al., 2015; Levine et al., 2020).

While most of the work focuses on availability and cost of credit, we highlight the implications for standardization of contract characteristics and their reflection of different types of information.

The rest of the paper is structured as follows. In the next section we discuss our data and empirical model. Main result and robustness tests are presented in Section 3. The moderating role of market structure is examined in Section 4. Section 5 concludes.

2. Data and empirical model

Our analysis is based on a proprietary dataset provided by an Italian bank. The dataset covers the entire portfolio of credit lines to SMEs outstanding as of September 2004 and 2006 in two Italian provinces. The provinces are close to the average level of economic development and organization of local credit markets in the Italian economy. The bank operates a network of branches in the two provinces and the unit of our analysis is at the branch level. Hence, we focus on branches present in the network of the bank in both years, which leaves us with 46 local branches. Importantly, the dataset identifies the branch where each credit line is originated and managed. Based on the lending policy of the bank, credit lines exceeding a preset threshold are managed centrally, at the bank headquarters. Credit lines assigned to the corporate segment of the bank are also managed differently. To ensure homogeneity in contracting process and terms setting, we focus on the credit lines in the small business segment of the bank's portfolio that are managed at the local bank branch, which yields a set of about 5,200 credit lines in year 2004 and 7,000 in year 2006.

The dataset contains a range of variables related to borrower characteristics, credit contract terms, nature of bank-borrower interaction, characteristics of the lending branch, and conditions of the local economy and credit market. The main variable of interest is our measure of functional distance. We compute *Distance Branch-HQ* as the metric distance between the headquarters of the bank and each local bank branch. To capture standardization in contract terms, we use the standard deviation (SD) of each term computed at branch-year level. In other words, we use all credit lines managed by each branch at a point in time to calculate standard deviation. We focus on three terms: *Amount*, which is the credit limit on the credit line, expressed in euro; *Rate*, which is the interest rate charged by the bank, expressed in percentage terms; and *% Collateral*, which is the amount of collateral as a percentage of *Amount*. Selected summary statistics of these variables are shown in Table 1. In the models we estimate, we take (natural) logarithmic transformations of the outcome variables, as operationalized in prior work (e.g., Skrastins and Vig, 2019).

[Insert Table 1 Here]

In addition to subjective assessment and discretion of loan officers, variability of contract terms should reflect variability in underlying characteristics of the borrowers as well as market conditions (e.g., Cerqueiro et al., 2011). Therefore, we incorporate a set of control variables in our models. First, we control for market structure. To this end, we use *HHI*, which is a branch-based Herfindahl-Hirschman Index and *Number Banks*, which is the total number of banks in the local credit market of the branch. We define local credit markets at municipality level and with respect to the operations of our bank (e.g., Bellucci et al., 2019). Second, we account for the size of each bank branch using total number of credit lines managed at the branch, or *Number Credit Lines*. The size of a branch can affect both extend of standardization and lending practices. Last, we incorporate variation in observable characteristics of the borrowers. Extant research suggests that credit terms depend on factors related to borrower size, nature of lending relationship, distance between lending bank and borrower, and proximity to other sources of bank capital (e.g., Petersen and Rajan, 1994; Berger and Udell, 1995; Cole, 1998; Degryse and van Cayseele, 2000; Degryse and Ongena, 2005; Bellucci et al., 2013). Hence, we construct the following variables: *Distance Borrower-Branch*, which is the natural logarithm of the metric distance between the lending branch and the borrower; *Distance Borrower-Rivals*, which is the natural logarithm of the median metric distance between the borrower and all branches in the local credit market; *Rel Length*, which is the natural logarithm of 1 plus the number of days since the borrower first started lending relationship with the bank; and *Sale*, which is a categorical variable ranging from 1 to 9 based on predetermined sales categories by the bank. To account for dispersion in these characteristics, we compute their branch-year standard deviations. Summary statistics for the variables are also reported in Table 1.

Our analysis is based on the estimation of ordinary least squares (OLS) regressions of the general form outlined in Equation (1) below:

$$Ln(SD\ Term)_{i,t} = \alpha + \beta Ln(Distance\ Branch\ HQ)_{i,t} + \gamma Controls_{i,t} + \varepsilon_{i,t} \qquad (1)$$

where *i* refers to branch and *t* refers to time. *Ln(SD Term)* is the natural logarithm of the standard deviation of a contract term (*Amount*, *Rate*, and *% Collateral*), *Ln(Distance Branch-HQ)* is the natural logarithm of the metric distance between the branch and the bank headquarters, *Controls* includes branch and market controls (*HHI*, *Number Banks*, and *Number Credit Lines*), standard deviations of borrower characteristics (*Distance Borrower-Branch*, *Distance Borrower-Rivals*, *Rel Length*, and *Sale*), and an indicator that takes value of 1 for year 2006, and 0 otherwise. We estimate the baseline model assuming the errors (ε) are independent and identically distributed, but verify the robustness of our inferences to this assumption.

3. Main results and robustness tests

The results of the estimation of the baseline model outlined in Equation (1) are shown in Table 2. We note form column (1) that an increase in the functional distance between the lending branch and the headquarters of the bank is associated with a reduction in the standardization of the amount of credit extended to a borrower. For this contract term, the coefficient of *Ln(Distance Branch-HQ)* is negative and statistically significant at the 5% level. With the log-log specification, we infer that a 1% increase in distance is associated with a .04% reduction in the standard deviation of the credit line limit. Our estimates also show that standardization of collateral requirements decreases as functional distance increases. The estimated coefficient in column (3) of the table is negative and statistically significant at the 5% level. In this case, an increase of 1% in distance is associated with a .01% reduction in the degree of standardization. Last, we do not observe a significant effect on the price of credit, reflected in the interest rate. The coefficient on *Ln(Distance Branch-HQ)* in column (2) is not statistically significant at conventional levels. Overall, our insights are consistent with the idea that higher monitoring costs of senior bank managers incentivize local loan officers to standardize contract terms and rely more on objective information.

[Insert Table 2 Here]

We next subject our main results to a series of robustness tests shown in Table 3. In panel A, we employ an alternative operationalization of our dependent variable. Specifically, we use the interquartile range (IQR) instead of the standard deviation. Our results are robust and some of the estimated effects are more pronounced. For instance, the coefficient on *Ln(Distance Branch-HQ)* in column (3) is statistically significant at the 1% level. It also indicates a reduction of .03% in the degree of standardization for every 1% increase in functional distance. In Panel B, we show that our results are not sensitive to the logarithmic transformation of the dependent variable.

Our main analysis assumes the error terms in Equation (1) are independent and identically distributed. However, we observe the same branches over two years, and this might violate the underlying assumption. Hence, we estimate the models using standard errors that are clustered at the branch level and report the results in Panel C. We also note that these estimates are based on a small number of clusters. Therefore, we also apply the wild cluster bootstrap approach (Cameron et al., 2008; Roodman et al., 2018). In square brackets below the coefficients in Panel C of the table, we report bootstrapped p-values based on block bootstrapping with 499 repetitions. Overall, our results are robust to alternative adjustments of the standard errors.

We also control for the median level of each contract term at the branch. Specifically, we add to the baseline specification for each contract term the natural logarithm of the branch-year median value of the respective term. The results of the estimation of these augmented models are reported in Panel D of the table. Our insights remain largely unchanged.

Last, we note that the small sample size makes our inferences subject to potential outlier effects. To explore the validity of our results to this concern, we apply the estimator proposed by Verardi and Croux (2009) that is robust to outliers that could potentially distort the OLS inference and lead to unreliable results. The estimations are presented in Panel E of the table and they show that our findings continue to hold.

[Insert Table 3 Here]

4. Effect of market structure

Research suggests that the effects of organizational structure on lending outcomes can interact with market structure and economic environment. Canales and Nanda (2012) show that decentralized banks are more responsive to their competitive environment. Skrastins and Vig (2019) document that hierarchical structures perform better in environments characterized by more rent-seeking activity. Hence, we explore how the estimated empirical relationship depends on the competitive structure of the local credit markets. We focus on two measures of competitiveness and market structure: *HHI* and *Number Banks*. To explore possible heterogenous effects using within-sample variation in these characteristics, we split the sample based on median values of *HHI* and *Number Banks* and estimate Equation (1) on each subsample. The results are reported in Table 4.

[Insert Table 4 Here]

In Panel A, we split the sample into concentrated (above-median *HHI*) and competitive (below-median *HHI*) markets. The odd-numbered columns show results for concentrated markets, while the even-numbered columns are based on competitive markets. In column (1), the estimated coefficient of *Ln(Distance Branch-HQ)* is negative and statistically significant at the 5% level. Hence, the magnitude of monitoring costs of senior managers is related to contract standardization when local markets are less competitive. By contrast, the coefficient estimate in column (2) is not significant at conventional levels. Moreover, it is less than half of the magnitude of the coefficient in column (1). We infer that the magnitude of monitoring costs is not related to standardization of contract terms in competitive markets, where the behavior of local loan officers can be restrained by market discipline and competition. We obtain similar results if we focus on the coefficients in columns (5) and (6), where we explore the effect on the standardization of collateral requirements. Interestingly, for interest rate the estimated coefficients in columns (3) and (4) are almost identical.

In Panel B, we repeat the analysis splitting the sample into branches in markets with larger (above-median) and smaller (below-median) number of banks. The documented differences across markets, reported in columns (1) and (2) and in columns (5) and (6), are more pronounced in this case. Consistently, the analysis reveals that the coefficient estimates of *Ln(Distance Branch-HQ)* are negative and statistically significant at the 5% and 1% levels, respectively, in columns (2) and (6). By contrast, they are not statistically significant in columns (1) and (5). Thus, we again infer that the association between the magnitude of monitoring costs and contract terms standardization is weaker in more competitive markets served by a larger number of banks, and much stronger in less competitive markets with a limited number of banking options.

5. Conclusion

In this paper we examine the empirical relationship between degree of standardization of contract terms in the context of lending to SMEs and the magnitude of monitoring costs within a banking organization. Our analysis reveals that when senior bank managers are farther away from the local bank branch and monitoring of the local loan officers becomes more difficult and costly (i.e., when the functional distance between local bank branch and bank headquarters increases), loan officers at the local branch tend to limit their discretion and rely more on subjective information for their contract setting decisions (i.e., standardization of contract terms such credit amount and collateral requirements increases). We also show that the relationship between functional distance and degree of standardization depends on the industrial organization of the local credit markets in terms of their competitiveness and structure. Specifically, we find that it is more pronounced in local credit markets that are less competitive. This highlights the interaction between discipline stemming from external mechanisms such as competitive pressure and internal monitoring within the organization.

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Table 1 Summary statistics

The table presents summary statistics for the sample used in the empirical analysis. The unit of analysis is bank branch and there are 92 observations (46 branches over 2 years). *SD Amount* is branch-year standard deviation of *Amount* (the credit line limit) for all credit lines at the branch. *SD Rate* is branch-year standard deviation of *Rate* (the interest rate on the credit line, expressed in percentage terms). *SD % Collateral* is branch-year standard deviation of *% Collateral* (amount of collateral expressed as percentage of the credit line limit). *Distance Branch-HQ* is the metric distance between the bank branch and the headquarters of the bank (expressed in kilometers). *HHI* is branch-based Herfindahl-Hirshman Index computed for the local credit market of each branch. *Number Banks* is the total number of banks present in the local credit market. *Number Credit Lines* is the total number of credit lines managed locally at the bank branch. *SD Distance Borrower-Rivals* is branch-year standard deviation of *Distance Borrower-Rivals* (natural logarithm of the median metric distance between a borrower and the branches of all banks present in the local credit market) for all credit lines at the branch. *SD Distance Borrower-Branch* is branch-year standard deviation of *Distance Borrower-Branch* (natural logarithm of the metric distance between the branch and the borrower) for all credit lines at the branch. *SD Rel Length* is branch-year standard deviation of *Rel Length* (natural logarithm of the duration of the lending relationship between a borrower and the bank) for all credit lines at the branch. *SD Sale* is branch-year standard deviation of *Sale* (categorical variable that identifies the level of sales of the borrower) for all credit lines at the branch.

	P5	Median	P95	Mean	S.D.
SD Amount	24,044	30,741	37,977	30,668	4,380
SD Rate	1.322	2.370	2.948	2.313	0.481
SD % Collateral	0.138	0.301	0.405	0.288	0.096
Distance Branch-HQ	3.40	29.75	132.00	48.18	41.36
HHI	0.085	0.203	0.556	0.265	0.197
Number Banks	2	8	39	11.95	10.91
Number Credit Lines	31	108.50	294	130.80	82.92
SD Distance Borrower-Rivals	0.571	0.896	1.744	1.007	0.377
SD Distance Borrower-Branch	0.947	1.383	1.950	1.357	0.266
SD Rel Length	0.622	1.039	1.309	1.03	0.213
SD Sale	0.668	1.183	1.483	1.151	0.232

Table 2 Functional distance and contract standardization

The table presents results of the estimation of baseline OLS regressions at branch-year level. The dependent variables measure standardization of contract terms. *SD Amount* is the standard deviation of *Amount* (credit line limit) for all contracts at the branch. *SD Rate* is the standard deviation of *Rate* (interest rate on the credit line, expressed in percentage terms). *SD % Collateral* is the standard deviation of *% Collateral* (amount of collateral expressed as percentage of credit line limit). *Distance Branch-HQ* is the metric distance between the branch and the headquarters of the bank. The remaining variables are defined in the note to Table 1. *Ln()* denotes (natural) logarithmic transformation. The table lists coefficient estimates followed by standard errors in parentheses. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.

	(1) Ln(SD Amount)	(2) Ln(SD Rate)	(3) Ln(SD % Collateral)
Ln(Distance Branch-HQ)	-0.039**	0.025	-0.010**
	(0.016)	(0.017)	(0.005)
HHI	-0.060	-0.151	-0.086***
	(0.094)	(0.100)	(0.027)
Number Banks	0.002	0.002	0.001***
	(0.002)	(0.002)	(0.000)
Ln(Number Credit Lines)	0.033	0.056**	0.009
	(0.024)	(0.026)	(0.007)
SD Distance Borrower-Rivals	-0.076	0.063	0.048***
	(0.048)	(0.051)	(0.014)
SD Distance Borrower-Branch	0.181***	-0.047	0.001
	(0.063)	(0.067)	(0.018)
SD Rel Length	-0.071	0.159**	-0.008
	(0.074)	(0.079)	(0.021)
SD Sale	0.029	0.037	-0.042*
	(0.080)	(0.085)	(0.023)
Constant	10.431***	0.496**	0.264***
	(0.217)	(0.231)	(0.061)
Year FE	Yes	Yes	Yes
Observations	92	92	92
Adjusted R-squared	0.232	0.199	0.772

Table 3 Robustness tests

The table presents results of robustness tests of the baseline model. The estimations are at branch-year level. *Distance Branch-HQ* is the metric distance between the branch and the bank headquarters. The remaining variables are defined in the note to Table 1. In Panel A, dependent variables use interquartile range (IQR) instead of standard deviation (SD) as a measure of dispersion. In Panel B, the dependent variables use the untransformed (no logarithmic transformation) of the dispersion measures based on standard deviation. In Panel C, statistical significance is based on robust standard errors clustered at branch level (in parentheses) and bootstrapped p-values (in square brackets) based on block bootstrapping with branch-level clustering and 499 repetitions. In Panel D, the specifications control for median level of the respective contract term at the branch. *Medan Amount* is the median of *Amount* (credit line limit) for all contracts at the branch. *Median Rate* is the median of *Rate* (interest rate on the credit line, expressed in percentage terms). *Median % Collateral* is the median of *% Collateral* (amount of collateral expressed as percentage of credit line limit). *Ln()* denotes (natural) logarithmic transformation. In Panel E, we present results of an estimator that is robust to outliers. All specifications include the baseline set of control variables (*Controls*) used in Table 2: *HHI*, *Number Banks*, *Ln(Number Credit Lines)*, *SD Distance Borrower-Rivals*, *SD Distance Borrower-Branch*, *SD Rel Length*, and *SD Sale*. The table lists coefficient estimates followed by standard errors in parentheses except in Panel C. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.

Panel A Dispersion measure

	(1) Ln(IQR Amount)	(2) Ln(IQR Rate)	(3) Ln(IQR % Collateral)
Ln(Distance Branch-HQ)	-0.054**	0.064	-0.028***
	(0.025)	(0.046)	(0.011)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	92	92	92
Adjusted R-squared	0.149	0.159	0.866

Panel B Log transformation

	(1) SD Amount	(2) SD Rate	(3) SD % Collateral
Ln(Distance Branch-HQ)	-1,252.894**	0.088	-0.013**
	(480.815)	(0.054)	(0.005)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	92	92	92
Adjusted R-squared	0.224	0.189	0.791

Panel C Standard errors

	(1) Ln(SD Amount)	(2) Ln(SD Rate)	(3) Ln(SD % Collateral)
Ln(Distance Branch-HQ)	-0.039***	0.025	-0.010**
	(0.014)	(0.022)	(0.004)
	[0.004]	[0.307]	[0.012]
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	92	92	92
Adjusted R-squared	0.232	0.199	0.772

Panel D Controlling for contract terms levels

	(1) Ln(SD Amount)	(2) Ln(SD Rate)	(3) Ln(SD % Collateral)
Ln(Distance Branch-HQ)	-0.028*	0.016	-0.010**
	(0.016)	(0.015)	(0.004)
Ln(Median Amount)	0.250***		
	(0.084)		
Ln(Median Rate)		1.396***	
		(0.299)	
Ln(Median % Collateral)			0.131**
			(0.062)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	92	92	92
Adjusted R-squared	0.299	0.361	0.781

Panel E Outlier effects

	(1) Ln(SD Amount)	(2) Ln(SD Rate)	(3) Ln(SD % Collateral)
Ln(Distance Branch-HQ)	-0.032***	0.008	-0.008**
	(0.010)	(0.045)	(0.004)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	92	92	92

Table 4 Effect of market structure

The table presents results of estimation of possible heterogenous effects based on market structure. The dependent variables measure standardization of contract terms. *SD Amount* is the standard deviation of *Amount* (credit line limit) for all contracts at the branch. *SD Rate* is the standard deviation of *Rate* (interest rate on the credit line, expressed in percentage terms). *SD % Collateral* is the standard deviation of *% Collateral* (amount of collateral expressed as percentage of credit line limit). *Distance Branch-HQ* is the metric distance between the branch and the bank headquarters. The remaining variables are defined in the note to Table 1. In Panel A, market structure is based on branch-based HHI computed for the local credit market of each branch. The odd-numbered columns show results for the high (above-median) HHI sub-sample, while the even-numbered columns show results for the low (below-median) HHI sub-sample. In Panel B, market structure is based on the total number of banks present in the local credit market. The odd-numbered columns show results for the high (above-median) number of banks sub-sample, while the even-numbered columns show results for the low (below-median) number of banks sub-sample. The table lists coefficient estimates followed by standard errors in parentheses. *, **, and *** indicate statistical significance at 10%, 5%, and 1% level, respectively.

Panel A Market structure based on HHI

	(1) Ln(SD Amount)	(2) Ln(SD Amount)	(3) Ln(SD Rate)	(4) Ln(SD Rate)	(5) Ln(SD % Collateral)	(6) Ln(SD % Collateral)
Ln(Distance Branch-HQ)	-0.074**	-0.035	0.031	0.035	-0.017*	-0.008
	(0.028)	(0.024)	(0.035)	(0.021)	(0.009)	(0.005)
HHI	-0.057	-0.165	-0.323*	-0.559	-0.148***	0.104
	(0.134)	(0.721)	(0.167)	(0.634)	(0.042)	(0.157)
Number Banks	0.003	0.003	0.001	0.004*	0.003***	0.001*
	(0.003)	(0.002)	(0.003)	(0.002)	(0.001)	(0.001)
Ln(Number Credit Lines)	0.017	0.040	0.032	0.056	0.011	-0.010
	(0.036)	(0.044)	(0.045)	(0.039)	(0.011)	(0.010)
SD Distance Borrower-Rivals	-0.031	-0.239*	0.012	0.190	0.049**	0.023
	(0.062)	(0.134)	(0.077)	(0.118)	(0.019)	(0.029)
SD Distance Borrower-Branch	0.261***	0.172	-0.216*	0.036	-0.002	0.035
	(0.093)	(0.117)	(0.116)	(0.103)	(0.029)	(0.025)
SD Rel Length	-0.139	-0.012	0.279**	0.083	-0.021	0.059**
	(0.110)	(0.130)	(0.137)	(0.115)	(0.034)	(0.028)
SD Sale	0.098	-0.113	-0.074	0.090	-0.077**	-0.024
	(0.106)	(0.146)	(0.132)	(0.128)	(0.033)	(0.032)
Constant	10.730***	10.615***	0.912*	0.214	0.405***	0.192***
	(0.379)	(0.322)	(0.473)	(0.283)	(0.118)	(0.070)

Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	46	46	46	46	46	46
Adjusted R-squared	0.247	0.103	0.093	0.291	0.752	0.837

Panel B Market structure based on number of banks

	(1) Ln(SD Amount)	(2) Ln(SD Amount)	(3) Ln(SD Rate)	(4) Ln(SD Rate)	(5) Ln(SD % Collateral)	(6) Ln(SD % Collateral)
Ln(Distance Branch-HQ)	-0.034	-0.080**	0.040	0.022	-0.008	-0.026***
	(0.025)	(0.031)	(0.024)	(0.036)	(0.006)	(0.008)
HHI	-0.066	-0.269	-0.032	-0.165	0.033	-0.229***
	(0.178)	(0.170)	(0.169)	(0.198)	(0.042)	(0.046)
Number Banks	0.003	-0.022	0.003	-0.008	0.001*	-0.010**
	(0.002)	(0.017)	(0.002)	(0.020)	(0.001)	(0.005)
Ln(Number Credit Lines)	0.041	0.002	0.025	0.062	-0.009	0.007
	(0.040)	(0.038)	(0.038)	(0.045)	(0.010)	(0.010)
SD Distance Borrower-Rivals	-0.157	-0.064	0.127	0.053	-0.008	0.048***
	(0.162)	(0.061)	(0.154)	(0.072)	(0.039)	(0.017)
SD Distance Borrower-Branch	0.180*	0.171*	0.023	-0.060	0.036	-0.007
	(0.101)	(0.095)	(0.096)	(0.110)	(0.024)	(0.026)
SD Rel Length	-0.004	-0.040	0.120	0.220	0.038	0.000
	(0.121)	(0.125)	(0.115)	(0.146)	(0.029)	(0.034)
SD Sale	-0.048	0.022	-0.170	0.165	-0.043	-0.091**
	(0.124)	(0.124)	(0.118)	(0.145)	(0.029)	(0.034)
Constant	10.413***	11.177***	0.631**	0.394	0.260***	0.602***
	(0.323)	(0.469)	(0.306)	(0.548)	(0.077)	(0.128)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	45	44	45	44	45	44
Adjusted R-squared	0.050	0.188	0.088	0.149	0.804	0.792