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Relationship lending and the role of loan officers in China:
Empirical analysis based on the data on companies in
industrial clusters

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Abstract

Relationship lending refers to lending behavior in which a financial institution makes loan decisions based on the accumulated soft information on the borrower. Empirical studies have revealed its positive effect on lending. However, questions concerning who generates and accumulates soft information and in what ways in China have never been analyzed empirically. This paper aims to explain empirically whether loan officers play a role in generating soft information in relationship lending by using data collected through survey conducted among SMEs located in the apparel industry clusters in Zhejiang and Jiangsu provinces. Based on the results of this study, relationship banking in China pertaining to the role of loan officers seems even more important than generally recognized.

Key words: Relationship lending; Soft information; Small-and medium-sized enterprises

JEL classification : G21,G31

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1. Introduction

A vast amount of research on relationship banking—or relationship lending—accumulated since the 1990s shows the importance of this business model (e.g., positive impact on lending). For example, Boot (2000), who is known for corporate finance research, argues that relationship banking is actually the best approach to solving information asymmetry. In Japan, specific action items for regional financial institutions were laid out in the “Action Program Concerning the Enhancement of Relationship Banking Functions”, which was released by the Financial Services Agency in March 2003. The purpose of the program was to enhance the function of relationship banking.

Lending through relationship banking as a business model has also generated research interest among academics in China in recent years. For example, Hé (2010) used World Bank’s 2003 survey data on 2,400 companies to show that as interest rate lowered and the number of banks with which these companies do business with increases, the length of business relationship with a particular bank does not significantly affect the lending terms. Hé (2013) also showed that a stronger relationship reduced the collateral cost at the time of obtaining a loan. In addition, Tang (2011, 2012) conducted an empirical analysis on relationship banking based on the data collected on small and medium-sized enterprises (SMEs) located mainly in three regions, namely, Ningbo, Shaoxing, Jiaxing/Jiashan, and Huzhou, where textile industry clusters in Zhejiang Province are situated. His research showed that dealing with a smaller number of banks and cultivating a long term relationship with them had the positive effect of reducing the level of financial constraints on the borrowing parties. He also demonstrated the tendency that as the relationship between borrowing industry and the lending banks grew closer and the possibility for more intimate relationship lending in terms of financing for SMEs within industry clusters increases, the terms and conditions under which the borrowers conducted business with the banks (e.g., collateral) improved.

Previous studies on the benefit of relationship lending in China often focus on the impact on lowered interest rate, reduced funding constraints, and the availability of funding. As a result, these analyses tend to affirm theoretically expected benefits, that is, the effectiveness of relationship lending, such as reduced information asymmetry, attributed to soft information that lenders obtain through their close relationship with borrowers.

However, while relationship lending is a lending behavior in which loan decisions are made based on soft information that the financial institution has accumulated on borrowers, it is also important to explore who generates and accumulates such information and in what ways. Muramoto (2010) points out that soft information is generated more by individuals than by organizations and accumulated by loan

officers in many cases. Xu (2010) showed that the financing for SMEs by commercial banks is generally broken down into five stages: accepting the loan application, researching, screening, approving, and financing. It is conceivable that loan officers play an important role in producing and accumulating soft information during these processes.¹ However, even though the importance of loan officer's role was recognized, to date, no one has demonstrated this empirically.

Thus, using a survey conducted among SMEs located in the apparel industry clusters in the Zhejiang and Jiangsu provinces, this paper demonstrates empirically whether loan officers are playing a role in producing soft information under relationship lending in China and sheds light on our understanding of the role of loan officer in concrete terms.² There are two critical issues this paper hopes to address. First, what is the actual financing behavior of loan officers and whether they are playing an important role as generators of soft information on companies. Second, once we establish that loan officers are important and the soft information they generate actually has a positive effect on relationship lending, then we can say that relationship lending has its merit.

With these two objectives in mind, I will review previous studies on loan officers in Section 2 to show that this paper is the first empirical study on China. In Section 3, I will propose two hypotheses for the empirical study, provide an overview of the individual company data used in this paper, and analyze independent variables and descriptive statistics. In Section 4, I will conduct empirical analyses on those two hypotheses to explain the role of loan officers in China. Finally, I will summarize the main findings of this paper in Section 5 and describe future research tasks.

2. Previous Studies

Among the few previous studies on the role of loan officers, Scott (2006), for example, analyzed that financing could worsen when the loan officer changes. Garica-Appendini (2007) pointed out that soft information becomes critical when the bank and the company have a close business relationship. Based on the importance of using soft information, Godbillon-Camus and Godlewski (2007) noted that it is desirable to provide loan officers with incentives in the form of appropriate salary valuation and delegated authority. Cerqueiro (2009) discussed the issue with loan officers' discretion vs. rules in setting interest rates. The study by Berger and Black (2011) indicated that smaller financial institutions tend to emphasize relationship lending. Uchida, Udell, and Yamori (2012) empirically demonstrated that the role of loan officers is important to some extent in Japan.

¹The role of loan officers was also verified in the interview that we conducted with S City commercial bank in January 2016.

²This type of analysis method is based on Uchida, Udell, and Yamori (2012).

Meanwhile, our review indicated that no empirical study has been conducted on the activities and characteristics of loan officers relative to relationship banking, even though there are case studies. Xu (2010) looked at the Tailong Commercial Bank in Taizhou City, Zhejiang Province and found that their management model in valuing soft information has resulted in a successful bank business at Tailong Bank, which mainly serves small and micro enterprises. In their business model, Tailong Bank has a unique screening system called “three qualities and three figures.” The term “three qualities” refers to personality, collateral, and products; they indirectly check the intention to repay loans by asking employees, business partners, and people who are indirectly involved with the company about the personality of the business operator and assess a company’s actual repayment capability by examining the quality of a company’s products, sales situation, and outlook. The bank also considers it important to verify the collateral to cover the risk against the loan. Furthermore, they understand the actual production activities of the company by analyzing “three figures,” which refer to the amount of electricity usage, the amount of water usage, and customs declarations, to reduce information asymmetry.

That said, it became clear from the interview that we conducted in March 2011 with the assistant general manager of the financing division of a state-owned commercial bank branch in S City that Tailong Bank is not the only bank that focuses on soft information relative to actual financing behavior. Tang (2012) showed that banks do not necessarily trust information, such as a company’s credit rating, tax reports, and financial statements. This is because it is known that there are frequent cases of underreporting in the State Administration of Taxation filings by SMEs. Therefore, it is essential for banks to obtain information on companies through their own investigation. When doing so, the due diligence report prepared by the loan officer (project manager) becomes an important reference material to determine whether to finance. This report mainly includes the following items: 1) personal disposition of the business operator (personality, creditworthiness, etc.), 2) management tenure and position in the industry, 3) personal assets, 4) foreign investments, 5) future prospects of the industry, 6) information obtained from business partners and competitors, 7) verification of the inventory, and 8) verification of the electricity and water bills. In other words, these are what they consider important. We can see that loan officers generate and accumulate various types of soft information on the business operator and the company in the form of a report at the time of loan screening.

3. Hypotheses and Descriptive Analysis of the Data

Thus, in order to test whether such a role of loan officers actually leads to the theoretical outcome, a survey on the textile industry clusters in China was conducted between February and April of 2012

(hereinafter referred to as “2012 Survey”). It is an independent face-to-face survey with a total of 157 companies in the cotton-spinning-related industry in regions located in the Zhejiang and Jiangsu provinces. Notably, the 2012 Survey asked a wide range of questions relating to the activities of the loan officer, soft information (attributes on the company and the business operator), business relationship with financial institutions, company’s business challenges, initiatives for innovation, and desired government policies, in addition to “hard information” (e.g., financial data) of the company. The analysis in this paper will focus particularly on the role of loan officers in relationship lending based on such individual company data. Notably, the survey was also conducted in 2010 and 2011, although some questions are different; therefore, the quality of the survey can be considered consistent.

Given that soft information is considered important in relationship lending as described above, we would like to propose the following two hypotheses regarding the role of loan officers. The first hypothesis (Hypothesis 1) is that loan officers play an important role in generating soft information in relationship lending. For this hypothesis, we will use our company survey data and aim to explain what kind of activities loan officers actually undertake during the process of generating soft information, as well as to verify their role. It is represented by Equation (1) as follows:

$$\text{Amount of soft information} = f(\text{Characteristic and activities of the loan officer, strength of the relationship, control variable}) \quad (1)$$

In other words, the dependent variable in Hypothesis 1 is soft information (SOFT). Independent variables include loan officer’s characteristics and activities to produce soft information, various variables to represent the strength of the relationship, the variables to remove the hard information on the company, and various control variables to represent the characteristics of the company.

The next hypothesis (Hypothesis 2) is that if soft information is being accumulated, it must provide some kind of benefit to a company through the role of loan officers in obtaining financing. This is expressed in Equation (2) as follows:

$$\text{Benefit of the relationship} = g(\text{amount of soft information, control variables}) \quad (2)$$

In other words, the dependent variable of Hypothesis 2 is the benefit of the relationship. As independent variables, the equation uses soft information (SOFT), which is the dependent variable in Hypothesis 1, as well as a variety of variables to represent the strength of the relationship and various control variables that represent the characteristics of the company.

Under these two hypotheses, the important thing is how to measure soft information (SOFT). Following Scott (2004) and Uchida, Udell, and Yamori (2012), we prepared a set of six questions to have companies rated as to how well financial institutions know about them. They are: 1) whether they know your company, 2) whether they know your company’s management team and owner, 3) whether they

know the industry your company belongs to, 4) whether they know the market your company is involved in, 5) whether they know the local community your company belongs to, and 6) the frequency of daily contact between your company and the loan officer. We decided to use the responses to each question based on a five-point scale, where 1 means “doesn’t know at all” and 5 means “knows very well,” to perform the principal component analysis and create variables for soft information.³

Table 1 shows the percentages as to how each company rated the six items based on a five-point scale. According to the table, the most chosen rating category was 3 (knows) for all items, except for Item 5; in general, many companies rated financial institutions 3 or 4. Furthermore, among the six items, Item 1 had the highest mean score of 3.43, whereas Item 4 had the lowest mean score of 3.04. The first principal component obtained from the principal component analysis using the rating scores for the six items as described above is the dependent variable of soft information (SOFT).⁴

Table 1: Items for Companies to Rate Financial Institutions

Rating Items	1. Doesn't know at all	2. Doesn't know well	3. Knows	4. Knows well	5. Knows very well	Total (Mean)
1) Knows your company	2.3	13.2	36.4	35.7	12.4	100% (3.43)
2) Knows your company's owner and management team	1.6	18.6	41.1	26.4	12.4	100% (3.29)
3) Knows your company's industry	1.6	22.5	41.1	14.0	20.9	100% (3.30)
4) Knows the markets related to your company	1.6	26.4	41.9	27.1	3.1	100% (3.04)
5) Knows the local community your company belongs to	3.1	17.1	33.3	39.5	7.0	100% (3.30)
6) Frequency of daily contacts between your company and the loan officer	0.8	14.7	48.8	28.7	7.0	100% (3.26)

Note: Sample size =129

³Such a verification method is based on Uchida, Udell, and Yamori (2012).

⁴In addition, we have created dummy variables, which were assigned the value of 1 when the response was “Quite excellent,” and we performed the principal component analysis using those six dummy variables to create the dependent variable SOFT2 by using the first principal component obtained as a result. However, given that SOFT produced more results with better quality, we have determined to proceed with the analysis by using SOFT as the dependent variable.

Table 2: Business Activities and Relationship with the Loan Officer

	Choices	Sample size (companies)	Percentage (%)
Replacement of the loan officer	None	104	75.4
	Once	24	17.4
	Twice or more	10	7.3
	Total	138	100.0
Age of the loan officer	In his/her 20s	18	13.1
	In his/her 30s	88	64.2
	In his/her 40s or older	31	22.6
	Total	137	100.0
Meeting place	At the company	44	32.4
	At the bank	90	66.2
	Other	2	1.5
	Total	136	100.0
Contact method	Meet in person	54	39.4
	Telephone	79	57.7
	E-mail, etc.	4	2.9
	Total	137	100.0
Temporal distance to meet	5 minutes or less	43	34.1
	6 to 10 minutes	48	38.1
	More than 10 minutes	33	26.2
	Total	126	100.0

Next, the variables given below are used as independent variables. First, the following variables related to the characteristics and activities of the loan officer could come to mind as variables that affect the production and accumulation of soft information by the loan officer. In other words, the loan officer-replacement dummy variable can be used to indicate that the loan officer was never replaced in the past two years (replacement = 1 and no replacement = 0; however, the coding was reversed at the

time of analysis).⁵ Theoretically, the variable is expected to have a positive sign in relation to SOFT, given that the amount of information generated would increase when no loan officer replacement occurs.

Another one is the age group dummy variable (in his/her 30s = 1), which represents the experience of the loan officer. The variable is expected to be positive, given that those in a younger age group are generally less knowledgeable and experienced with various aspects of their clients, whereas those in their 40s or older have a richer collection of soft information on their clients. However, Uchida, Udell, and Yamori (2012) pointed out that the sign is not always clear because younger loan officers might visit their clients more frequently and strive to collect soft information.

The questionnaire also asks about the frequency of contact with the bank in terms of how many times they meet each other per month or per year. With the dummy variable for the place for meeting the loan officer (at the company = 1, at the bank = 0), having the loan officer visit the company in person rather than meeting at the bank is probably a plus for generating soft information. As for the most frequently used contact method (in person = 1, telephone, fax, QQ, etc. = 0), in-person communication should have a better effect on generating soft information than telecommunication.

The characteristics and activities of the loan officer, as described above, are shown in Table 1. Based on the table, loan officers were not replaced in approximately 75.4% of all cases, whereas the cases of one-time replacement accounted for 17.4%, and the cases with twice or more replacements accounted only for 7.3%. In the case of China, a system to rotate personnel every two to three years, similar to the one found in Japan, is rarely seen, and there is usually a system in which loan officers are held accountable until their financing projects are completely paid off.⁶ As for the age group of loan officers, those in their 20s and 30s account for 13.1% and 64.2%, respectively, for a total of 77.3%. In addition, 66.2% meet at the bank, 57.7% use the telephone, and 39.4% meet in person in terms of contact method. In addition, we can see that 72.3% are located within a 10-minute drive in terms of the temporal distance between the company and bank. This is probably attributable to the fact that many of the companies we studied are located in the suburbs or rural areas.

Table 3: Descriptive Statistics

Sample Size (companies)	Mean	SD	Min	Max
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⁵The interval based on which the loan officer is rotated probably differs by bank; however, given that the interviews we conducted indicated that loan officers at commercial banks are sometimes transferred and replaced every two to three years, we use the period of two years in this paper.

⁶In many cases, compensation, such as bonuses for the loan officer, is dependent on the repayment status of the company (according to an interview with a bank branch manager conducted by the authors in May 2015).

(1) Company and Operator Attributes					
Age of the company (years)	144	9.514	5.238	2	26
Capital (10,000 yuan)	141	549.175	1407.424	15	10000
Management tenure of the CEO (years)	144	7.951	4.891	1	24
Number of employees (individuals)	144	168.819	139.055	15	820
Asset size (10,000 yuan)	139	2441.424	4679.646	100	31061
(2) Main Variables					
Frequency of visit (per year)	135	15.585	33.174	0	240
Distance (minutes)	126	10.901	8.886	1	80
Replacement of the loan officer (times)	138	0.754	0.432	0	1
Age of the loan officer	137	0.774	0.420	0	1
Meeting place	136	0.324	0.470	0	1
Contact method	137	0.394	0.490	0	1
Number of banks financing the company	116	1.690	0.807	1	5
Longest relationship with a bank	136	4.390	3.089	1	23
Diversification of business	133	3.195	0.957	1	6

In addition, the frequency of financial statement submissions to the bank is categorized as (1) at least once a month, (2) once every three months, (3) once every six months, and (4) once a year. Here, the dummy variable is coded so that “(1) at least once a month” has the value of 1. This can be regarded as an important control variable to remove hard information because we can say that a higher frequency in which the lender company submits financial statements to the bank implies that the bank is making such a demand to the lender company and monitoring the company’s financial situation carefully. By doing this, the frequency of contact with the loan officer increases, thus helping produce soft information. As regards variables to represent the scale of the company, we asked for information about the size of

capital, size of total assets, sales, number of employees, age of company, and sales performance in the past two years, which is categorized into (1) consecutive surplus, (2) surplus to deficit, (3) deficit to surplus, and (4) consecutive deficit. Notably, the dummy variable assigns the value of 1 to “(1) consecutive surplus.”

Furthermore, as regards the characteristics of the business operator, we asked for information about the operator’s tenure as a manager, educational background, and whether he/she is a founder. It is probably easier for the loan officer to collect soft information when the company has been in the business longer. A company’s creditworthiness should also be higher if the business operator is a founder who is better educated. However, these variables do not have a considerable effect on the quantitative analysis because more than 90% of our surveyed companies’ business operators are founders, and more than 70% of them have an educational background of high school or less.

Finally, as a control variable, the temporal distance dummy variable (DISTANCE, within 10 minutes = 1, 10 minutes or more = 0) is used as an independent variable that represents the strength of the relationship between the company and the bank.⁷ According to the relationship theory, the frequency of contact between an SME and their bank increases as the distance between them becomes shorter to make it easier for them to build a close relationship. For example, Alessandrini, Presbitero, and Zazzaro (2008) analyzed and found that the amount of funding provided to the company increases as the distance between the company and bank becomes shorter. As regards the number of banks from which a company received loans, although we can expect the relationship to be stronger when there are fewer banks, the mean among SMEs remains at 1.69 banks, as shown in Table 2. The means in Japan and the United States have been reported as 4.1 to 4.2 (Ono and Uesugi, 2009) and 1.2 (Brick and Palia, 2007), respectively. In addition, the longer the company does business with their main bank, the stronger their relationship should become. Such analyses on the strength of relationship have shown the significance of the length of relationship in empirical studies, such as that by Tang (2012).

The diversity of business services also represents the strength of relationship lending because financial transactions include not only lending to companies but also such items as settlement, wealth management product investment, and foreign currency procurement. Looking at Table 2, our study shows that the mean of a bank’s business services to the company is 3.1. However, as shown by Tang (2012), it seems banks often impose that companies take a portion of the loan financed by the bank and redeposit or reinvest in wealth management products when obtaining a loan from a bank. In fact, 38 companies, or 28.6% of all companies we surveyed, are receiving wealth management service.

⁷We have also asked about spatial distance.

According to Ono and Uesugi (2009), the mean number of business services (excluding lending transactions) that SMEs receive from their main bank is 4.2. We can say that SMEs in Japan actually conduct more diversified financial transactions with their banks.

4. Estimation Results

The estimation result for Hypothesis 1 is shown in Table 4. This is the result of analyzing a loan officer's role in accumulating soft information. Based on this, the result is positive and significant when the loan officer was not replaced. It implies that the amount of soft information produced increases when the same loan officer remains in charge of the lender company on a long-term basis. The reference age

Table 4: Information Production and Activities of the Loan Officer

(Dependent Variable = SOFT)	Coefficient	Standard error	p-value
Constant term	-6.348 ^{***}	1.890	0.001
Tenure as CEO	0.046	0.028	0.105
Asset size (log)	2.919 ^{***}	0.941	0.003
Frequency of visit	-0.005	0.004	0.235
Replacement of the loan officer (no = 0, once or more = 0)	0.758 ^{**}	0.332	0.025
Age group of the loan officer (in his/her 30s =1)			
In his/her 20s	0.534	0.413	0.202
In his/her 40s or older	0.232	0.327	0.944
Meeting place (at the company = 1; at the bank = 0)	0.046	0.300	0.988
Contact method (in person = 1; telephone, fax, QQ, etc. = 0)	-0.095	0.270	0.726
Frequency of financial statement submission (once a month or more = 1; once every three months or less = 0)	1.274 ^{***}	0.301	0.000
Number of banks with loans	-0.563 ^{***}	0.181	0.003

Regional bank (regional bank = 1; state-owned bank; commercial bank = 0)	0.369	0.263	0.163
Temporal distance (within 5 minutes = 1; more than 5 minutes = 0)	0.605**	0.269	0.027
Sample size	101		
Adjusted coefficient of determination	0.315		

Note: ***, **, and * indicate that the coefficient is significant at the 1%, 5%, and 10% levels, respectively.

group of the loan officer is “in his/her 30s,” and the dummy variables were not significant for “in his/her 20s” or “in his/her 40s or older,” indicating that the collection of soft information is not associated with the level of a loan officer’s skill. In addition, it became clear that factors such as meeting place and contact method were unrelated.

We consider the results for other main independent variables. The dummy variable for submitting financial statements at least once a month was positive and significant. This suggests that frequent submissions of financial statements by the company led the bank to understand the company’s financial situation well and/or to increase the frequency of contact with the loan officer through visitation. In addition, the dummy variable of temporal distance was positive and significant, thus implying that the relationship becomes closer as the distance between the bank and the company becomes shorter. Furthermore, the number of banks the company does business with was negative and significant, thus suggesting that the relationship becomes weak because information on the borrowing company might not be sufficiently generated.

To sum up the above analysis results for Hypothesis 1, a certain level of the role played by loan officers in generating and accumulating soft information was confirmed. The next analysis task is to test Hypothesis 2 as to what is the significance of soft information. That is, if soft information is being accumulated, it is necessary to demonstrate that it has a positive impact on obtaining funding. Here, the dependent variable to represent the benefit of relationship is the question item indicating the level of difficulty that the company encounters while being evaluated for a loan. In particular, this question concerns the current screening process when they want a loan, and we provided answer options, including (1) very strict, (2) slightly strict, (3) relatively easy, and (4) don’t know (however, given that there were only several companies that said “don’t know,” (4) was excluded). Notably, among the valid sample of 134 companies, 35.8% (48 companies) chose (1), whereas 52.2% (70 companies) and 11.9% (16 companies) chose (2) and (3), respectively. If soft information had a positive impact on relationship lending, companies should choose (3), or at least (2), in terms of the level of difficulty they encounter at the time of loan screening.

Given that the choices for this question are related to preference, we are going to measure the determinants of the benefit in procuring funding in Hypothesis 2 by using an ordinal choice model. In doing so, we will also add ordinal probit analysis, which has almost the same process. This aims to test the benefit of relationship lending by incorporating the amount of soft information used in Hypothesis 1 as an independent variable.⁸

The following estimation model is conceivable:

$$y^* = \beta x + \epsilon$$

(y^* : latent variable, x : independent variable, β : coefficient vector, and ϵ : error term)

Furthermore, observed independent variable y and latent variable y^* would have the following relationship based on the mechanism of threshold k_j :

$$1. \quad y = \begin{cases} 0 & \text{if } y^* \leq k_1 \\ 1 & \text{if } k_1 < y^* \leq k_2 \\ \cdot & \\ \cdot & \\ \cdot & \\ J & \text{if } k_{j-1} < y^* \end{cases}$$

The threshold and the coefficient vector that satisfy the above relationship are determined by least squares estimation. There are two thresholds, k_1 and k_2 , to be determined to satisfy $J = 3$ in this paper's case. If there are three answer choices for the independent variable at that time, the probability of choosing each option is also expressed specifically as follows:

$$P(y = 0|x) = 1 / (1 + \exp(-k_1 + \sum \beta x))$$

$$P(y = 1|x) = 1 / (1 + \exp(-k_2 + \sum \beta x)) - 1 / (1 + \exp(-k_1 + \sum \beta x))$$

$$P(y = 2|x) = 1 - 1 / (1 + \exp(-k_2 + \sum \beta x))$$

As for the estimation for the probit model, it can be described as follows: If the choice of the economic agent y_i^* is expressed as $y^* = \beta x + \epsilon$, y^* would be observable or would be possible latent variable, and ϵ would be the error term. Given that y^* , in the case of above equation, is unobservable, y is defined to meet the following conditions:

$$y=0 \quad \text{if } y^* < 1$$

$$y=1 \quad \text{if } y^* \geq 0$$

Assuming that ϵ follows a standard normal distribution, the parameter vector β is estimated.

⁸We also used a dummy variable that coded only "(1) very strict" as 1 to indicate the level of difficulty encountered by a company at the time of obtaining a loan and then performed probit estimation (marginal effects); however, the results were almost the same.

Table 5: Determinants for the Level of Difficulty in Loan Screening

	Ordinal Logit (1)		Ordinal Probit (2)	
	Coefficient	z-value	Coefficient	z-value
Soft information	0.433***	2.82	0.252***	2.92
Tenure as CEO	-0.057	-1.62	-0.028	-1.51
Sales (log)	-8.371**	-2.27	-4.781**	-2.32
Regional bank dummy	-0.002	-0.05	-0.035	-0.15
Years doing business with the main bank	0.235***	2.72	0.129***	2.74
Temporal distance	0.474	1.09	0.246	0.99
Frequency of financial statement submission	0.252	0.56	0.080	0.31
Two-year consecutive surplus dummy	-0.001	-0.21	-0.004	-0.21
cut1	-5.849	2.489	-3.362	1.446
cut2	-2.844	2.434	-1.619	1.425
Sample size	116		116	
LR chi2(8)	28.31		27.97	
Log likelihood	-97.110		-97.282	
Pseudo R ²	0.127		0.126	

Note) ***, **, and * indicate that the coefficient is significant at the 1%, 5%, and 10% levels, respectively.

The results of the ordinal logit and ordinal probit estimations are shown in Table 5. First, looking at Equation (1) in terms of the significance and sign of the parameters, ones such as log of sales and years doing business with the main bank are significant and generally agree with the predictions made prior to the estimation. In particular, the coefficient of soft information as an independent variable was positive and significant as we expected, thus suggesting that the more soft information is accumulated, the more benefits the company enjoys when being screened for a loan. The number of years doing business with the main bank is also positive and significant, as the theory predicted. This suggests that the relationship becomes closer, which results in a positive impact on financing as the number of years doing business with the bank becomes higher. However, the temporal distance dummy variable, which was significant in Table 5, is not significant despite being positive. We can see that the significant variables and their

signs, as shown in the results of the probit model that used the same variables as Equation (1), generally agree between the equations.⁹

5. Conclusion

This paper demonstrates empirically whether loan officers at a bank play a role in generating and accumulating soft information when they perform financial transactions with SMEs. We used our own survey data on companies, set two analytical goals, proposed two corresponding hypotheses, and then tested them. The empirical results indicated that when a dedicated loan officer handles the same borrower on a long-term basis, he/she contributes to the generation of soft information to some extent. It also became clear that the soft information obtained by the loan officer provided benefits to the borrowing company because such information made funds easier to obtain and reduced funding restrictions.

Furthermore, the finding that the strength of the relationship had a positive effect on accumulating soft information and the actual lending was consistent with earlier studies by Hé (2010) and Tang (2012). Thus, our survey results demonstrated that the role of loan officers is important in relationship lending in China, particularly when a loan officer continuously handles the same company on a long-term basis (defined as no replacement for two years). Conversely, the results suggested that the potential for a company to obtain funding becomes worse when the loan officer is replaced. This is also consistent with the results shown by Scott (2006).

Based on the analysis of this paper, the importance of relationship banking in China and the role of loan officers should be appreciated more than they currently are. That being said, this paper has not considered the following two questions. First, although it is possible that the loan decision system, to which loan officers belong, varies from bank to bank, the significance of the dummy variable that distinguished state-owned banks and regional commercial banks from local financial institutions (city commercial banks, village and township banks, trust and investment corporations, etc.) was not clearly tested in this paper. Secondly, unlike Deng and Hé (2014) who have dealt with the personality and gender dimension of loan officers in their studies, this paper has left out the gender and personality in loan decision making process. Going forward, it is essential to increase the sample size of banking organizations and conduct analyses based on more detailed classifications. In addition, if soft

⁹We also performed probit estimation (marginal effects) by using the dummy variable that assigned the value of 1 to the answer "(1) very strict" relative the question on the level of difficulty in obtaining a loan, which is the dependent variable in Hypothesis 2. The results also indicated that the coefficients representing the accumulation of soft information and the number of years doing business with the main bank also had negative effects at the 1% significance level.

information is generated by loan officers, and it has a positive lending effect on the borrowing company, as the analysis results in this paper suggested, it is probably necessary to clarify what banks' actual lending technology is based on.

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