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**Effects of Building Relationships with Financial Institutions
on the Performance of Small and Medium Enterprises (SMEs) ¹**

Hikaru Fukanuma²

Lead Economist, JFC Research Institute

Ichiro Fujita,

Economist, JFC Research Institute

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² E-mail:jfcri011@nippon-kouko.jp

-Abstract-

This study empirically analyzes the effects of building relationships with financial institutions on the performance of small and medium enterprises (SMEs). Specifically, it explores the correlation with performance trends by creating an index that indicates the strength of the relationship based on changes in the frequency of consultations with financial institutions over a 10-year period.

In the analysis, we first verify what sorts of SMEs have increased the frequency of their consultations with financial institutions in the 10-year period. This was verified because there is an undeniable possibility that the frequency of consultation may have increased as a result of financial institutions approaching already well-performing companies. In addition, we verified the effect of frequency of consultation with financial institutions on the companies' current performance trends. As a result of this analysis, the following three points were revealed.

First, no significant correlation was observed between the performance trends at the beginning of the 10-year period and the changes in frequency of consultation with financial institutions during the 10-year period. There were a certain number of companies, including both those whose performance was already strong and those whose performance was not, whose frequency of consultation with financial institutions increased. This signifies that "consultations" as used in this study were not necessarily the result of approaches by financial institutions to already well-performing companies.

Second, a trend was confirmed in which the more a company did management consultations with external support institutions other than financial institutions at the beginning of the 10-year period, the higher the company's frequency of consultation with financial institutions at the time of the survey. This suggests that, during the 10-year period, the companies changed their view of financial institutions from places that merely supplies funds to places to consult on management-related topics.

Third, companies whose frequency of consultation increased in the 10-year period have stronger current performance trends than those whose frequency did not increase. This trend was observed particularly strongly at companies where the performance trend was poor at the beginning of the 10-year period. Looking at promotion of relationship banking, it is possible that building relationships with financial institutions was more effective for rebuilding a company that was performing poorly.

The building of relationships benefits companies. The role of the financial institutions is large particularly in helping to rebuild the performance of poorly-performing SMEs. It is expected that, as both financial institutions and companies recognize this fact, relationships will be increasingly deepened in the future.

1 Awareness of the Issues

When financial institutions determine the amount of credit to extend to companies, utilization not only of quantitative data from financial statements, etc., but also of qualitative data is indispensable, i.e., the manager's qualities, the innovativeness of the business model, and future prospects. There may be slight variation in emphasis depending on the stance of the financial institution, but it appears that financial institutions scrutinize both aspects before making a credit decision.

In particular, when making a credit decision concerning a SME whose financial statements are not as comprehensive as a large company's financial statements, the importance of qualitative information increases. However, this sort of information is not easy for anyone to access and cannot be obtained in a short space of time; rather, it is accumulated as a financial institution deepens its relationship with a company.

Relationship banking attracted attention as one solution to the financial crisis and the bad debt problem that occurred in Japan in the late 1990s. During that time, financial institutions worked on providing management support to SMEs using a variety of methods in addition to supplying funds, including provision of information and business matching. This support was generally received positively by the companies.

Academic research on the topic of relationship banking has advanced with the passage of time, and the advantages and disadvantages of relationship banking have been described. However, looking at the existing research, much of it is an analysis of the impact on the companies' fund procurement environments, and there is no accumulation of research on the sorts of direct effects on the companies' performance.

This study empirically analyzes what sorts of effects the building of relationships with financial institutions has on companies' performance. It explores the correlation with performance trends by creating an index that indicates the strength of a relationship based on the changes in the frequency of consultations with financial institutions over the 10-year period.

This paper is structured as follows. Section 2 presents an overview of previous

research and looks at the engagement of financial institutions in relationship banking since the year 2000. Section 3 describes the data used in this paper. Section 4 presents the results of the analysis and discusses the interpretation of the results. Section 5 presents the conclusion and sets forth topics for future research.

2 Recent Trends in Relationship Banking

The discussion of relationship banking has a lengthy history that can be traced back quite far if one looks at research conducted around the world, but this paper will deal with the trends since the year 2000 from an administrative perspective.

In 2002, Japan's Financial Services Agency announced the Financial Revitalization Program — Economic Revival through Resolution of Major Banks' Bad Debt Problem (Japan's Financial Services Agency 2002), which aimed to process the massive bad loans held by Japanese financial institutions. As indicated by the subtitle, this program mainly had in mind large-scale city banks and major regional banks, but at the same time, it specified consideration, using multifaceted measures, of the best form of relationship banking to process the bad debts of small and medium financial institutions, whose relationship banking differs from that of major banks.

In the following year, 2003, Action Program concerning enhancement of Relationship Banking Functions was formulated, and full-scale promotion of relationship banking was planned (Japan's Financial Services Agency 2003). Specifically, financial institutions were asked to prepare a Plan for Strengthening Relationship Banking Functions and to progressively implement it, based on the six pillars of (1) stronger support functions for founding and operating new businesses, (2) stronger management consultations and support functions for counterparties, (3) aggressive efforts for early business revitalization, (4) strengthened new efforts for financing for SMEs, (5) development of preparedness to provide explanations to customers and strengthening of consultation and complaint processing functions, and (6) publication of progress state.

In this program, relationship banking is defined as “a business model that obtains information on the qualities of the borrower's manager and the borrower's future

prospects through a long-term, ongoing relationship and provides loans.” This paper also adopts this definition for discussion purposes.

It is said that behind the administration’s promotion of relationship banking, in addition to the goal of improvement of the fund procurement environment of SMEs, there also is the goal of halting the deterioration in financial institutions’ profitability. Watanabe (2010) points out that relationship banking is a business method that reduces inefficiencies caused by the information asymmetry that exists between the bank and the borrower, and it has also been proposed by Japan’s Financial Services Agency as a measure for profitability improvement for regional financial institutions that continue to struggle with the downturn in profits from their core business since the end of the financial crisis. If management can be rebuilt through understanding the actual situation of the company in more detail and devising appropriate support, it will lead to improvement in the corporate rating, and proactive support of companies with unstable performance may prevent them from falling into a slump.

So, how is the promotion of relationship banking perceived from the standpoint of the companies? The Financial Services Agency (2007) put together an evaluation of relationship banking from questionnaire surveys and interviews of users of financial institutions. Looking at the percentage of positive evaluations of each item, the highest, at 51.7%, was “development of preparedness to provide explanations to customers and strengthening of consultation and complaint processing functions,” followed by 50.7% who chose “stronger management consultations and support functions” (Table-1). Although fewer than 50% positively evaluated the remaining items starting from “loans, etc., that do not excessively rely on collateral or guarantees,” 41.6% did positively evaluate “loans, etc., that do not excessively rely on collateral or guarantees,” and almost an equal number, 42.4%, negatively evaluated it. The percentages of positive evaluations were higher than the negative evaluations for “stronger support functions for founding and operating new businesses” and “human resources training.” If one excludes “efforts for business regeneration” where the positive evaluation of 24.3% was 16.4 percentage points below the negative evaluation of 40.7%, then it appears that the promotion of financial institutions’ relationship banking is generally perceived as a

positive thing by the users.

The largest factor behind positive evaluations is probably improvement in companies' fund procurement environment compared to previously due to relationship banking. Academic research has empirically established the effects of relationship banking.

Ono (2011), who comprehensively surveyed the research on relationship banking in Japan, states that empirical research on Japan generally has found interest rate levelling and improvement in fund availability due to such relationships, as suggested in the theory of relationship lending, while on the flip side, there is an increase in the interest burden due to the hold-up problem.

Meanwhile, Ono (2011) points out that relationship loans from companies' main banks with which they have built long-term, stable relationships may contribute to the improvement of fund availability for SMEs, but there is not necessarily conclusive evidence that this has led to the improvement of companies' performance, including their profitability.

Weinstein and Yafeh (1998) used financial data of large Japanese companies from 1977 to 1986 to analyze the connection between the relationship with financial institutions and corporate performance. They state that a close relationship between a bank and a company increases the availability of capital to borrowing firms but does not lead to higher profitability or growth.

However, because Weinstein and Yafeh (1998) analyzed large companies during the 1980s, prior to the promotion of stronger relationship banking, it is possible that the same conclusion would not be obtained from current small and medium business financing.

In the first place, it cannot be said that merely because a company has procured funds its performance will improve as a direct result. The goods that the company purchased with borrowed funds in order to expand sales might not sell as expected and become deadstock, or the company might have purchased new equipment to expand production but might have invested excessively if it does not receive the orders it expects. Even if companies finally obtain funds, there is no gain unless they can use them productively.

However, as seen heretofore, in the process of promoting relationship banking,

financial institutions are enhancing new services associating with loans, such as strengthening of management consulting. These efforts may increase the likelihood that funds will be used productively. Moreover, even if it does not result in a loan, companies that use these services may improve their performance, and as a result, begin credit transactions.

Therefore, this study will empirically verify what sort of effect a relationship with a financial institution has on the performance of a company.

3 Data Used and Analytical Framework

(1) Outline of survey study

The following analysis utilizes the Survey of Managers' Business Policies (hereinafter referred to as the "survey") that was implemented in July 2014 by Japan Finance Corporation Research Institute.³

The subjects of the survey were drawn from customers of Japan Finance Corporation (Micro Business and Individual Unit and SME Unit) and consist of 12,000 companies that had good histories of repayments and had been in business for five years or more at the time of the survey (Table-2). From these companies, 3,990 responses were received.⁴

The survey asked about performance trends and the management stance at two points in time, at the beginning of a 10-year period and end of it (hereinafter, "10 years ago" corresponds to the beginning of the 10-year period, and "currently" correspond to the end of the 10-year period when the survey was implemented). In addition, questions were asked about the company's profile and its management's profile.⁵ The subjects of analysis below are companies that had the same managers 10 years ago and currently.

³ The main purpose of this survey was to explore whether differences in business policies could be associated with differences in the attributes of the managers themselves, such as age or generation.

⁴ Responses include 782 sole proprietorships (19.6%).

⁵ There are also companies that were not yet founded 10 years ago and companies whose managers have changes in the past 10 years. In such cases, "10 years ago" was replaced with "when the manager was assigned his/her current position" for the purpose of responding to the questions.

(2) Outline of subjects of analysis

Let us review the profiles of the subjects of analysis.⁶ First, looking at the type of industry⁷ as a corporate attribute, 26.5% are in manufacturing and 73.5% are in non-manufacturing (Table-3). Looking at the breakdown of the non-manufacturing companies, services is the most represented, at 17.7%, followed by construction at 15.9% and retail at 13.9%.

Looking at the distribution of the number of workforces (a CEO/Entrepreneur and employees) which indicates company size, the largest category was companies with 1 to 4 workforces, at 32.5%. Next were those with 5 to 9 workforces, at 19.6%, followed by those with 20 to 49 workforces at 17.7% (Table-4). Companies with 10 or fewer workforces constitute more than half of the total. It should be noted that the subjects of analysis are relatively small companies even for SMEs. The average number of workforces is 32.2 persons.

Looking at the years the companies had been in business, the largest category was those in business for 50 years or more, at 31.3%, followed by those operating from 10 years to less than 20 years, at 21.8%, and those operating from 20 years to less than 30 years, at 17.5% (Table-5). The average number of years in business was 41.7 years.

Next, the profiles of the managers of the companies being analyzed were examined. Looking at the year when the manager was assigned his/her current position, 1991-2000 was the most frequent answer, at 35.2%, followed by 1981-1990, at 23.4% (Table 6). Since 19.0% are in the 2001-2004 category, it is likely that approximately 80% of managers personally felt the change in the stance of financial institutions based on the action program formulated by the Financial Services Agency.

Regarding the age of managers, the largest category was 61-70 years old, at 39.7% (Table-7). The average age was 61.0 years.

Looking at the generation of management, 54.2% were founders and 45.8% were successors (with 28.1% second generation successors, 11.8% third generation, and 5.8% fourth generation or later) (Table-8).

⁶ All figures represent the current status, not the status 10 years ago.

⁷ Companies that operate businesses in multiple industries responded with the industry with the highest sales.

(3) Data used

Next, we will examine the data used in this study. As stated above, several of the questions in the questionnaire inquired about conditions 10 years ago and currently. The chronological relationship of the data used in this study is summarized in Table-9. Questions 1), 2), 3), and 6) below inquire about conditions at two points in time.

For Question 1 on the frequency of consultations with a financial institution,⁸ respondents selected the frequency of their consultations with a financial institution per year from five choices, “did not consult,” “less than 1 time per year,” “1 time,” “2 to 4 times,” “5 times or more”.

For Question 2 on sales trends, respondents selected from three choices, “uptrend,” “unchanged,” or “downtrend.”

For Question 3 on the frequency of consultations with an institution other than a financial institution, as in Question 1, respondents were asked about the frequency of their consultations with nine institutions other than financial institutions that may be considered to offer management support for SMEs.

Concerning the number of workforces, respondents were asked to respond with the actual number of workforces 10 years ago and currently.

Questions 4), 5), and 7) inquire about conditions only at the current point in time. Regarding Question 4, it is possible that the type of industry changed during the 10 years, but for purposes of the analysis, it is assumed that there was no change. For Question 5 on years in business and age of manager, the question asked for respondents to subtract 10 years from the current point in time.

Concerning Question 7 on the manager’s generation, since this study is analyzing companies with the same manager 10 years ago and currently, answers at both points in time are the same.

(4) Analytical framework

Among the data shown in (3), the frequency of consultation with a financial

⁸ Japan Finance Corporation is included as a financial institution. Questions were not asked about the name of companies’ main bank or other financial institutions.

institution is used as an index indicating the relationship between the financial institution and the company. This is because it is likely that companies with high frequency of consultation also have a close relationship with the financial institution. Furthermore, since the question asks, “Are you doing management consultations?” it may be assumed that the company is approaching the financial institution for these consultations.⁹ Respondents were not asked about the specific content of the consultations.

Examining the data distribution, regarding the point in time 10 years ago, 42.2% said they “did not consult,” 10.6% said “less than 1 time per year,” and 14.0% said “1 time” (Table-1). Regarding the current point in time, 28.4% said they “did not consult,” 12.2% said “less than 1 time per year,” and 15.5% said “1 time.” Compared to 10 years ago, there is currently a tendency toward more frequent consultation with financial institutions.

Next, we regrouped the consultation frequency into “once or less per year” and “twice or more per year.” The reason why “once or less per year” was used is that many companies submit their financial statements annually if they have transactions with a financial institution, and it is conceivable that many companies consult concerning rolling over loans, etc., once or less per year. Moreover, the frequency of consultation with a financial institution at two points in time, 10 years ago and currently, was classified as shown on Table-10

The group that is negative regarding consultation is made up of companies that consulted “once or less per year” both 10 years ago and currently.

The group that started consulting consists of companies that consulted once or less per year 10 years ago but currently consults twice or more per year. In short, this is the group that has built a relationship with financial institutions during the past 10 years.

By comparing the current performance trends of the group that is negative about consultation and the group that started consulting, we can verify what sort of effect the relationship has on performance.

⁹ It is possible that financial institutions approach companies with good performance. Refer to the results of analysis of this point described below.

We use the sales trends of 10 years ago and currently as an index of performance.¹⁰ Examining the distribution of data, at the point in time 10 years ago, 37.0% of companies were in an “uptrend,” 42.5% were “unchanged,” and 20.5% were in a “downtrend” (Figure-2). Looking at the current point in time, 30.5% of companies are in an “uptrend,” 36.4% are “unchanged,” and 33.1% are in a “downtrend.” Compared to 10 years ago, currently a lower percentage of companies are in an “uptrend” and more companies are in a “downtrend.”

4 Empirical Analysis

(1) Analysis 1: What sorts of companies started consulting with financial institutions?

First, we verify what sorts of companies “started consulting with financial institutions.” In this analysis, the discussion of consultation frequency is premised on the company approaching the financial institutions for consultation, but it is also possible that financial institutions approached companies with good performance.

The definition of the variables and the descriptive statistics used in the analysis are shown on Tables 11. The method of analysis is binomial logistic regression analysis.

The dependent variable Y is the “started consulting” dummy, and it is 1 if the company “started consulting” with financial institutions and 0 if the company was “negative regarding consultation.”

X1 through X7 below are used as explanatory variables.

X1 is the “sales trend 10 years ago” dummy. It is 1 if sales 10 years ago were in an uptrend and 0 if they were unchanged or in a downtrend.

X2 is the “number of consultations with other institutions 10 years ago” (logarithm), and it is the total of the counterparties with whom the company consulted “once or more per year” from among national and local government/public institutions, Chambers of Commerce and Industry/Societies of Commerce and Industry, universities,

¹⁰ The questionnaire inquiries concerning profit trends (divided into “uptrend,” “unchanged,” and “downtrend”) and profitability (divided into “surplus,” “breaking even,” and “deficit”). However, these data are not used in this study because sole proprietorships constitute fewer than 20% of the companies analyzed and it is easy to manipulate profits.

IT professionals (including IT-related companies), specialists (tax accountants, judicial scriveners, etc.), business customers or suppliers, other managers or associations in the same industry, managers in other industries, and acquaintances/relatives.

X3 is a dummy variable that indicates the industry. It is 1 if the company mainly operates in that industry type or 0 otherwise.

X4 is the number of years in business (logarithm); X5 is the number of workforces (logarithm), and X6 is the age of the manager. Data for all three are from the point in time 10 years ago.

Finally, X7 is the “manager’s generation” dummy and is 1 if the manager is the founder or 0 if the manager is a successor.

Here, among the explanatory variables, we will pay attention to the “sales trend 10 years ago” dummy. If the hypothesis is established that consultation frequency increased as a result of financial institutions approaching well-performing companies, then the sign of the coefficient is expected to be positive. However, in this study, regardless of the companies’ performance, it is assumed that the companies approached the financial institutions for consultation, and so the coefficient of X1 is expected to be non-significant.

The results of the analysis are shown in Table-12.

The coefficient of X1, the “sales trend 10 years ago” dummy, did not produce a significant result. Moreover, X4, the number of years in business (logarithm), X5, the number of workforces (logarithm), and X7, the “manager’s generation” dummy, were not significant.

On the other hand, the coefficient of X2, “number of consultations with other institutions 10 years ago” was significantly positive, at 0.744, and the odds ratio was 2.104. This suggests that companies that started consulting with financial institutions were proactive about consulting with external institutions from the beginning. This also suggests that, during the 10-year period, the position of financial institutions as perceived by companies has changed, and financial institutions’ presence has increased as a place to consult concerning management issues, not just a source of funds.

X6, the age of the manager (logarithm) was significantly negative.

The following may be interpreted from the above results.

First, the hypothesis that consultation frequency increased as a result of financial institutions approaching well-performing companies is not supported by the statistics. The frequency of consultations with financial institutions increased for a certain number of companies, both well-performing and poorly-performing companies. This signifies that the “consultations” referred to in this study are not necessarily the result of approaches by financial institutions to companies with strong performance records.

Secondly, it was confirmed that the more a company did management consultations with external support institutions other than financial institutions at the point in time 10 years ago, the stronger its tendency toward higher consultation frequency with financial institutions up to the present. This suggests that the position of financial institutions as seen by companies has changed during the past 10 years, such that they are increasingly viewed as places for consultation on management issues, not merely sources of funds.

(2) Analysis 2: What happened to the performance of the companies that “started consulting”?

Next, we will examine the effect of changes in consultation frequency on performance by comparing the current performance trend of companies in the group “that started consulting” with financial institutions with the group “that is negative regarding consultation.”

The definition of the variables and the explanatory variables used in the analysis are shown on Table-13, respectively.¹¹ The method of analysis is binominal logistic regression.

The dependent variable Y is the current sales trend dummy. If current sales are in an uptrend, Y is 1, and if they are unchanged or in a downtrend, Y is 0.

The explanatory variables are X1 through X8.

X1 is the “started consulting” dummy. It is 1 if a company started consulting and 0 if the company is negative regarding consulting.

¹¹ The variables are numbered X1 through X8 to facilitate differentiation, but this is for the purpose of expedience only. Please note that the same variables refer to the different things in sections (1) and (2).

X2 is the “sales trend 10 years ago” dummy. It is 1 if sales 10 years ago were in an uptrend and 0 if they were unchanged or in a downtrend.

X3 is “current number of consultations with other institutions” (logarithm) and is the total number of institutions with which a company has consulted once or more per year from among national and local government/public institutions, Chambers of Commerce and Industry/Societies of Commerce and Industry and industrial associations, universities, IT professionals (including IT-related companies), specialists (tax accountants, judicial scriveners, etc.), business customers or suppliers, other managers or associations in the same industry, managers in other industries, and acquaintances/relatives.

X4 is a dummy variable that takes 1 if the company mainly operates in that industry type or 0 otherwise.

X5 is the number of years in business (logarithm); X6 is the number of workforces (logarithm), and X7 is the age of the manager. Data for all three are from the current point in time.

Finally, X8 is the “manager’s generation” dummy and is 1 if the manager is the founder or 0 if the manager is a successor.

In Analysis 2, we focus on X1, the “started consulting” dummy. The hypothesis of this study is that a higher frequency of consultation with a financial institution has a positive effect on corporate performance. Consequently, the sign of the coefficient is predicted to be positive.

The coefficient of X2, the dummy for “sales trend 10 years ago,” is expected to be insignificant because a cause-and-effect relationship cannot be expected between sales trends 10 years ago and currently.

The results of the analysis are shown in Table-14. The coefficient of X1, the dummy for “started consulting” is significantly positive at the 1% level. Moreover, the coefficient of X2, the dummy for “sales trend 10 years ago,” is significantly negative. The coefficient of X5, number of years in business (logarithm) is significantly negative. The coefficient of X6, number of workforces (logarithm) is significantly positive, and

X7, age of the manager (logarithm) is significantly negative. The coefficient of the current number of consultations with other institutions (logarithm) was not significant.

The coefficient of X1, the “started consulting” dummy, supports the hypothesis, and it is statistically supported that the more a company increased its management consultations with a financial institution during the past 10 years, the better the current trend of its performance.

However, as shown in 4(1), it needs to be noted that X7, the age of the manager (logarithm) has an effect on the determining factor “started consulting.”

So, when we look at the type of relationship between the age of the manager and “started consulting,” we observe an extreme tendency at both far ends of the age of the manager (Figure-3). When a logarithmic approximation curve is drawn, the slope is minus 14.48 and the coefficient of determination is 0.466, suggesting a moderate negative correlation.

To resolve this issue, we trimmed 1% at both ends (age 39 and under and age 81 and over) and showed the logarithmic approximation curve of the data for age 40 to age 80. This produced a gentler slope than before trimming, with a coefficient of minus 2.668 (coefficient of determination was 0.0912). That is, since the 1% at each end showed extreme tendencies, it is possible that the correlation was produced when the data was viewed as a whole.

Therefore, in the following sections, after excluding 1% at the far ends of the managers’ age distribution as outliers in the sample, we performed re-estimations of the analyses in (1) and (2).

(3) Results of Re-estimation of Analysis 1

The result of re-estimation of Analysis 1 is shown in Table-15.

It can be seen that, in contrast to the analysis conducted in (1), the coefficient of the age of the manager (logarithm) was not significant. Furthermore, the coefficient of X1, the “started consulting” dummy, was not significant either, and so there is no change in the interpretation given in 4(1).

(4) Results of Re-estimation of Analysis 2

The result of re-estimation of Analysis 2 is shown in Table-16.

The result obtained shows that the coefficients of all variables were statistically significant, except for X3, the current number of consultations with other institutions (logarithm), and X8, the manager's generation dummy. We look at each of the significant variables below.

We will examine the significant variables one by one.

The coefficient of X1, the "starting consulting" dummy, at 0.407, was significantly positive at the 5% level.

The coefficient of X2, the "sales trend 10 years ago" dummy, at minus 0.431, was significantly negative at the 1% level.

The coefficient of X5, number of years in business (logarithm), was significantly negative at the 1% level.

The coefficient of X6, the number of workforces (logarithm) is significantly positive at the 1% level.

The coefficient of X7, the age of the manager (logarithm) is significantly negative at the 1% level.

Of these, X5, X6, and X7 were added as control variables, but Fukanuma, Fujita, and Wakesu (2015) revealed that the younger the age of the manager of a company, the more that company's sales show an uptrend. Moreover, many previous studies have pointed out that the younger the age of the manager of a company, the higher the company's growth potential. The cause-and-effect relationship is not so clear with regard to the number of workforces, but as the number of workforces increases, sales expand more easily (assuming a fixed amount of sales per capita), and since expansion of a company's size may be considered a natural result of increased sales, the resulting coefficient itself causes no discomfort.

As stated in the hypothesis, the "started consulting" dummy is significantly positive, and the odds ratio $\text{Exp}(\beta)$, at 1.503, is significantly higher than 1. Comparing companies whose frequency of consultation with financial institutions increased during

the past 10 years with the other companies, the good trend currently in the performance of those companies is statistically supported.

X2, the “sales trend 10 years ago” dummy was significantly negative, contrary to expectations. This means that the worse a company’s performance trend was 10 years ago, the better its performance currently. This result is difficult to interpret.

In order to verify this point, we divide the samples into X2=1 (uptrend) and X2=0 (unchanged or downtrend), carry out estimations for each, and confirm whether there are differences in the coefficients of the X1 “started consulting” dummy and the X2 “sales trend 10 years ago” dummy.

(5) Extension of Re-estimation of Analysis 2

Estimation results are shown in Table-17. In the estimation using X2=1 (uptrend), the coefficient of X1, the “started consulting” dummy is minus 0.099, which is not a significant result. On the other hand, in the estimation using X2=0 (unchanged or downtrend), the coefficient of X1 is 0.702, which is significant at the 1% level. In this way, it is noted that differences are visible in the sign and significance of the coefficient of X1 depending on the difference in “sales trend 10 years ago.” Moreover, differences can also be seen in the significance of X3 through X8, but the signs of the coefficients are consistent.

For companies that had good performance originally, the result is that a cause-and-effect relationship is not statistically supported between the frequency of consultations with financial institutions and a positive effect on a company’s performance.

The fact that the X1 coefficient is displaying a different result could be interpreted as follows. In short, the building of relationship with financial institutions may have led to a particularly positive result for companies that did not originally have good performance. As mentioned in section 2, during the past 10 years, financial institutions have put energy into corporate management support activities along with promotion of relationship banking. The rebuilding of poorly performing companies is directly linked to the improvement of the financial institution’s own earnings and financial position.

From the viewpoint of poorly performing companies, financial institutions that have expanded their support to non-financial aspects may appear to be good consultation partners.

On the other hand, companies that had strong performance to begin with have their own strength, and so the effect on their performance of consulting with financial institutions may be small compared to the effect on a poorly performing company that rebuilds its performance by consulting with financial institutions.

5 Conclusion and Future Issues

This study conducted an empirical study on whether relationships with financial institutions affects the performance of SMEs using a survey implemented in July 2014 by Japan Finance Corporation Research Institute. The results of the study clarified the following points.

First, no significant relationship was observed between the performance trend 10 years ago and the change in the frequency of consultation with financial institutions 10 years ago and currently. There were a certain number of companies, including both companies that originally performed well and companies that originally performed poorly, whose frequency of consultation with financial institutions increased. This signifies that “consultations” as used in this study were not necessarily the result of approaches by financial institutions to companies with strong performance records.

Second, a trend was confirmed in which the more a company did management consultations with external support institutions other than financial institutions ten years ago, the higher the company’s current frequency of consultation with financial institutions. This suggests that, during these ten years, the companies changed their view of financial institutions from a place that merely supplies funds to a place to consult on management-related topics.

Third, companies whose frequency of consultation increased in the past 10 years have stronger current performance trends than those whose frequency did not increase. This trend was observed particularly strongly at companies where the performance trend was

poor 10 years ago. Looking at promotion of relationship banking, it is possible that building a relationship with financial institutions was more effective for rebuilding a company.

The building of relationships benefits companies. The role of the financial institution is large particularly in helping to rebuild the performance of SMEs. It is expected that, as both financial institutions and companies recognize this fact, relationships will be increasingly deepened in the future.

In recent years, the management strategies of SMEs are diversifying. Cases are observed in which SMEs are actively expanding overseas and are developing new businesses by entering new fields that are distant from their existing business. An important topic for financial institutions is how they can build close relationships with SMEs that have changed course by adopting more aggressive strategies and whether they can offer effective support.

Finally, we look at the research challenges for the future. First, more sophisticated empirical analysis should be implemented utilizing existing data. After conducting a robustness check on this study and reexamining the distribution of all data, researchers should proceed with deeper analysis.

Second is the accumulation of more data through the implementation of a new (or additional) survey. This study conducts analysis using data from only two points in time, 10 years ago and currently, and so it was unable to follow the dynamic changes in the relationship between companies and financial institutions. Also, the indexes used for the performance of the companies were affected by the subjectivity of the respondents, and moreover, they are not indexes that indicate the efficiency of the companies. These considerations should be utilized in future research.

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¹² Materials denoted with titles in Japanese are written in Japanese. Official English titles are also given if they exist; for materials with no official English title, the authors provide tentative translation.

Table-1 Evaluation of Relationship Banking

(unit:%)

	Positive Evaluation	Negative Evaluation
Development of preparedness to provide explanations to customers and strengthening of consultation and complaint processing functions	51.7	25.3
Stronger management consultations and support functions	50.7	32.8
Loans, etc., that do not excessively rely on collateral or guarantees	41.6	42.4
Stronger support functions for founding and operating new businesses	39.5	38.3
Human resources training	35.6	33.4
Efforts for business regeneration	24.3	40.7

Source: Financial Services Agency (2007).

Note: The positive and negative evaluations do not total 100% due to responses of “don’t know.”

Table-2 Outline of Survey Implementation

Name	Survey of Managers’ Business Policies
Survey Date	July 2014
Survey Targets	12,000 businesses operating for at least five years that were customers of Japan Finance Corporation’s Micro Business and Individual Unit and SME Unit
Survey Method	Surveys sent and returned by postal mail; surveys were anonymous
Responses	3,990 businesses (33.3% response rate)

Source: Survey of Managers’ Business Policies by the Japan Finance Corporation Research Institute. (The same applies to figures and table below.)

Table-3 Industries of Analyzed Companies

(unit:%)

Manufacturing	26.5
Services	17.7
Construction	15.9
Retail	13.9
Wholesale	11.7
Transport(including warehouses)	4.6
Bars and Restaurants	4.4
Real Estate	2.1
IT	1.5
Lodging	0.9
Other	0.7

Note:"Services" includes "Healthcare and Welfare" (2.9%), "Education and Learning Support" (0.8%) and "Goods Leasing" (0.4%).

Table-4 Distribution of Number of Workforces at Analyzed Companies

(unit:%)

1-4 persons	32.5
5-9 persons	19.6
10-19 persons	13.1
20-49 persons	17.7
50-99 persons	10.0
100-199 persons	4.8
200 persons or more	2.3

Note: Workforces are an CEO/entrepreneur and employees.
(The same applies to figures and table below.)

Table-5 Distribution of Number of Years in Business of Analyzed Companies

(unit:%)

10 to less than 20 years	21.8
20 to less than 30 years	17.5
30 to less than 40 years	14.2
40 to less than 50 years	15.2
50 years or more	31.3

Table-6 Distribution of Year Manager Assumed Position at Analyzed Companies

(unit:%)

1951-1980	22.4
1981-1990	23.4
1991-2000	35.2
2001-2004	19.0

Table-7 Distribution of Managers' Age at Analyzed Companies

(unit:%)

Ages 34-40	2.1
Ages 41-50	13.5
Ages 51-60	28.4
Ages 61-70	39.7
Ages 71-80	15.0
Ages 81 and over	1.3

Table-8 Managers' Generation at Analyzed Companies

(unit:%)	
Founder	54.2
2 nd Generation	28.1
3 rd Generation	11.8
4 th Generation or Later	5.8

Table-9 Chronological Relationship of Data Used in This Study

Variables	【A】 10 years ago	【B】 Change	【C】 Currently
① Frequency of consultations with financial institutions	○	△	○
(mentioned later)	○	— (not used)	○
② Sales trends	○	— (not used)	○
(uptrend, downtrend, or unchanged)	×	← Assuming no change in industry type	
③ Frequency of consultations with institutions other than financial institutions	△	← Subtract 10 years	
(same as Question 1)	○	— (not used)	○
④ Industry type	×	← Year manager assumed office ≤ 2004	

Figure-1 Distribution of Frequency of Consultation with Financial Institutions

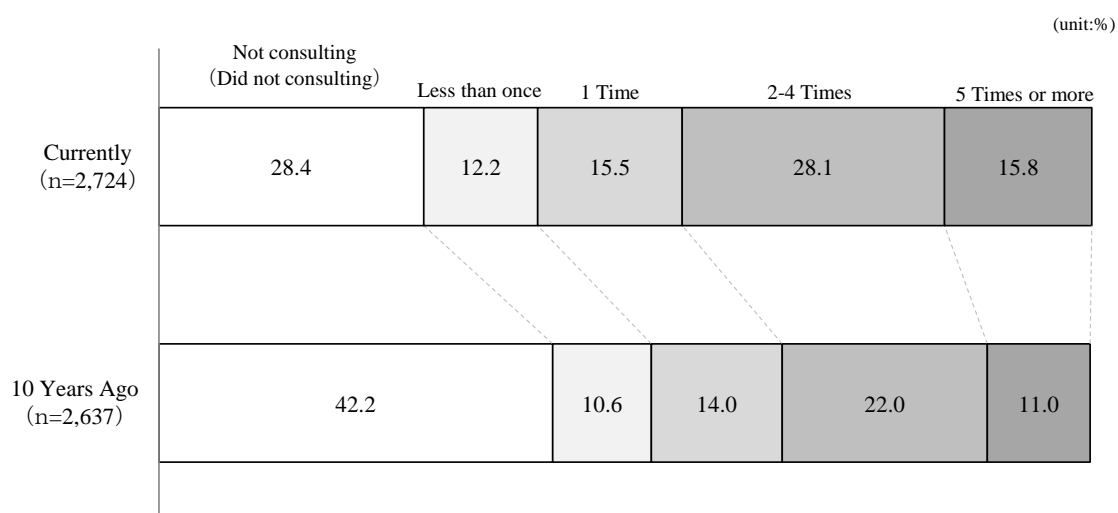


Table-10 Classification of Consultation Frequency with Financial Institutions

		【Currently】	
		"Once or less per year"	"Twice or more per year"
【10 Years ago】	"Once or less per year"	Group that is negative regarding consultation (n=1,294)	Group that started consulting (n=405)
	"Twice or more per year"	Group that stopped consulting (n=139)	Group that is positive regarding consultation (n=716)

Figure-2 Distribution of Sales Trends

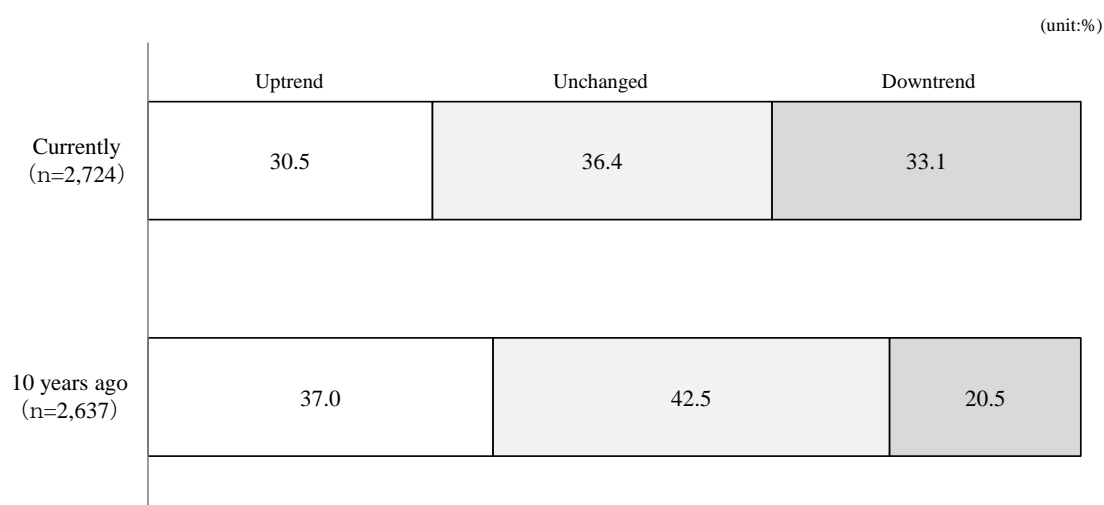


Table-11 Definition and descriptive statistics of Variables (Analysis 1)

Variable Used	Definition	Frequency	Minimum	Maximum	Average	Standard Deviation
Y "Started consulting" DM	"Started consulting"=1, "Did not consult"=0	1,699	0	1.00	0.238	0.426
X1 "Sales trend 10 years ago" DM	"Uptrend" =1, "Unchanged or Downtrend"=0	1,658	0	1.00	0.373	0.484
X2 "Number of consultations with other institutions 10 years ago" (logarithm)	LN(Number of external institutions consulted excluding "financial institutions"(1 time or more per year) +1)	1,516	0	2.30	0.799	0.668
X3 Industry DM	Dummy variable for industry type where "Mainly operate in that industry"=1 and "Does not mainly operate in that industry"=0	—				
X4 Number of years in business (logarithm)	LN (Years in business at time of survey – 10 + 1))	1,699	0	5.68	2.944	1.078
X5 Number of workforces (logarithm)	LN (Number of workforces 10 years ago)	1,470	0	6.51	2.02	1.303
X6 Age of manager (logarithm)	LN (Age of manager at time of survey – 10)	1,699	3.18	4.38	3.889	0.208
X7 Generation of manager DM	"Founder" = 1, "Successor" = 0	1,696	0	1.00	0.582	0.493

Note: Data of industry types are omitted. (The same applies below.)

Table-12 Results of Analysis (Analysis 1)

Variables	β	Exp(β)	Significant Probability
X1 "Sales trend 10 years ago" DM	0.225	1.252	0.138
X2 "Number of consultations with other institutions 10 years ago"(logarithm)	0.744	2.104	0.000 ***
X3 Industry DM	(Manufacturing is the base category)		
X4 Number of years in business (logarithm)	-0.074	0.929	0.454
X5 Number of workforces (logarithm)	0.069	1.072	0.277
X6 Age of manager (logarithm)	-0.952	0.386	0.013 **
X7 Generation of manager DM	0.075	1.078	0.701
Constant	1.977	7.221	0.145
Cox-Snell R ²	0.071		
Nagelkerke R ²	0.108		
Hosmer-Lemeshow test	0.685		
Number of observations	1,280		

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The same applies below.

Table-13 Definition and descriptive statistics of Variables (Analysis 2)

Variable Used	Definition	Frequency	Minimum	Maximum	Average	Standard Deviation
Y "Current sales trend" DM	"Uptrend" =1, "Unchanged or Downtrend"=0	1,672	0	1.00	0.305	0.461
X1 "Started consulting" DM	"Started consulting"=1, "Did not consult"=0	1,699	0	1.00	0.238	0.426
X2 "Sales trend 10 years ago" DM	"Uptrend" =1, "Unchanged or Downtrend"=0	1,658	0	1.00	0.373	0.484
X3 "Number of consultations with other institutions currently" (logarithm)	LN(Number of external institutions consulted excluding "financial institutions"(1 time or more per year) +1)	1,513	0	2.30	0.992	0.697
X4 Industry DM	Dummy variable for industry type where "Mainly operate in that industry"=1 and "Does not mainly operate in that industry"=0	—				
X5 Number of years in business (logarithm)	LN (Years in business at time of survey)	1,699	2.30	5.71	3.456	0.638
X6 Number of workforces (logarithm)	LN (Number of workforces at time of survey)	1,699	0	6.65	2.106	1.367
X7 Age of manager (logarithm)	LN (Age of manager at time of survey)	1,699	3.53	4.50	4.079	0.170
X8 Generation of manager DM	"Founder"=1, "Successor"=0	1,696	0	1.00	0.582	0.493

Table-14 Results of Analysis (Analysis 2)

Variables	β	Exp(β)	Significant Probability
X1 “Started consulting” DM	0.429	1.503	0.007 **
X2 “Sales trend 10 years ago” DM	-0.471	0.650	0.001 ***
X3 “Number of consultations with other institutions currently” (logarithm)	0.065	1.084	0.517
X4 Industry DM	(Manufacturing is the base category)		
X5 Number of years in business (logarithm)	-0.429	0.647	0.008 ***
X6 Number of workforces (logarithm)	0.499	1.639	0.000 ***
X7 Age of manager (logarithm)	-1.566	0.214	0.000 ***
X8 Generation of manager DM	0.195	1.217	0.290
Constant	5.522	229.907	0.001 ***
Cox-Snell R ²	0.127		
Nagelkerke R ²	0.178		
Hosmer-Lemeshow test	0.453		
Number of observations	1,310		

Figure-3 Relationship between the “Age of the Manager” and “Started Consulting” Dummies

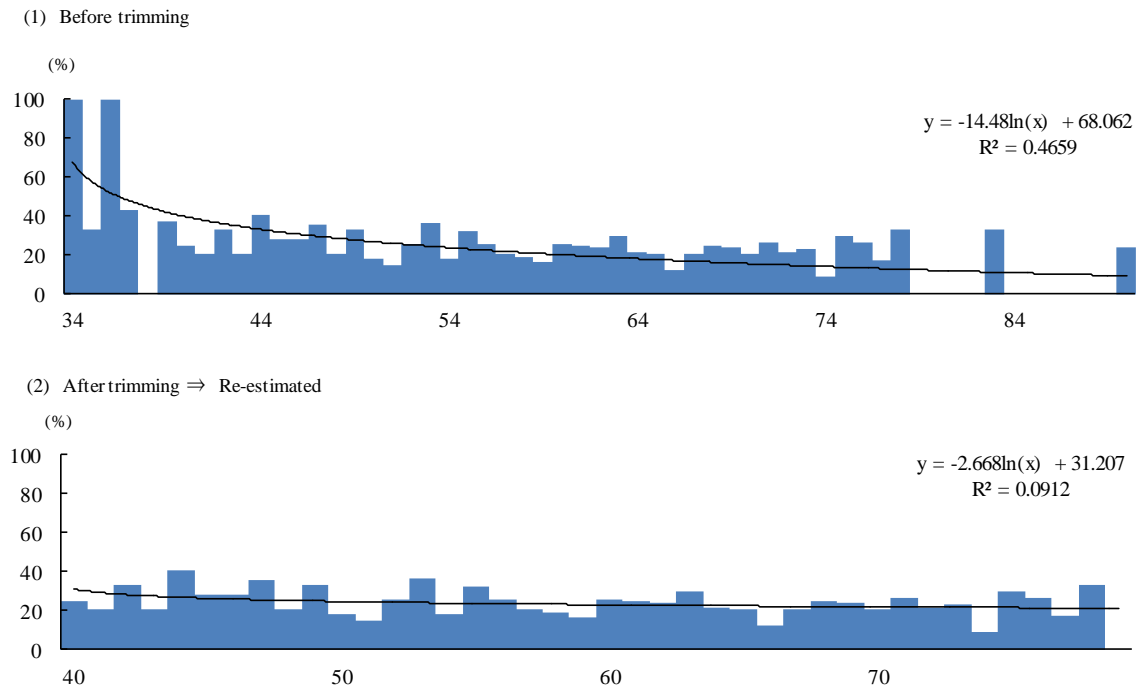


Table-15 Results of Re-estimation (Analysis 1)

Variables Used	β	Exp(β)	Significant Probability
X1 “Sales trend 10 years ago” DM	0.241	1.272	0.118
X2 “Number of consultations with other institutions 10 years ago” (logarithm)	0.733	2.081	0.000 ***
X3 Industry DM	(Manufacturing is the base category)		
X4 Number of years in business (logarithm)	-0.073	0.929	0.467
X5 Number of workforces (logarithm)	0.058	1.059	0.373
X6 Age of manager (logarithm)	-0.563	0.569	0.177
X7 Generation of manager DM	0.025	1.025	0.900
Constant	0.513	1.670	0.733
Cox-Snell R ²	0.064		
Nagelkerke R ²	0.098		
Hosmer-Lemeshow test	0.570		
Number of observations	1,244		

Note: The analysis target in the re-estimation is companies where the age of the manager is 40 to 80 years old. (The same applies below.)

Table-16 Results of Re-estimation (Analysis 2)

Variable Used	β	$\text{Exp}(\beta)$	Significant Probability
X1 “Started consulting” DM	0.407	1.503	0.012 **
X2 “Sales trend 10 years ago” DM	-0.431	0.650	0.003 ***
X3 “Number of consultations with other institutions currently” (logarithm)	0.081	1.084	0.429
X4 Industry DM	(Manufacturing is the base category)		
X5 Number of years in business (logarithm)	-0.436	0.647	0.007 ***
X6 Number of workforces (logarithm)	0.494	1.639	0.000 ***
X7 Age of manager (logarithm)	-1.540	0.214	0.001 ***
X8 Generation of manager DM	0.197	1.217	0.291
Constant	5.438	229.907	0.002 ***
Cox-Snell R^2	0.120		
Nagelkerke R^2	0.169		
Hosmer-Lemeshow test	0.636		
Number of observations	1,274		

Table-17 Extension of Re-estimation Results of Analysis 2

Variable Used	Case of X2=1 (Uptrend)			Case of X2=0 (Unchanged or Downtrend)		
	β	Exp(β)	Significant Probability	β	Exp(β)	Significant Probability
X1 "Started consulting" DM	-0.099	0.906	0.716	0.702	2.017	0.001 ***
X2 "Sales trend 10 years ago" DM	—			—		
X3 "Number of consultations with other institutions currently" (logarithm)	-0.138	0.871	0.433	0.197	1.218	0.126
X4 Industry DM	(Manufacturing is the base category)			(Manufacturing is the base category)		
X5 Number of years in business (logarithm)	-0.886	0.412	0.001 ***	-0.197	0.821	0.354
X6 Number of workforces (logarithm)	0.736	2.088	0.000 ***	0.372	1.450	0.000 ***
X7 Age of manager (logarithm)	-1.464	0.231	0.052 *	-1.790	0.167	0.004 ***
X8 Generation of manager DM	0.435	1.544	0.195	0.106	1.112	0.649
Constant	6.009	407.276	0.035 **	5.649	284.070	0.013 **
Cox-Snell R ²	0.191			0.116		
Nagelkerke R ²	0.268			0.163		
Hosmer-Lemeshow test	0.142			0.832		
Number of observations	477			797		