

CARF Working Paper

CARF-F-522

How do bank lenders use borrowers' financial statements? Evidence from a survey of Japanese banks

Takuma Kochiyama
Associate Professor
The Graduate School of Business Administration,
Hitotsubashi University

Ryosuke Nakamura
Associate Professor
The Faculty of Business Sciences,
University of Tsukuba

Akinobu Shuto
Associate Professor
The Graduate School of Economics,
The University of Tokyo

First Draft: October 22, 2021

CARF is presently supported by Nomura Holdings, Inc., Sumitomo Mitsui Banking Corporation, The Dai-ichi Life Insurance Company, Limited, The Norinchukin Bank, MUFG Bank, Ltd. and Ernst & Young ShinNihon LLC. This financial support enables us to issue CARF Working Papers.

CARF Working Papers can be downloaded without charge from:
<https://www.carf.e.u-tokyo.ac.jp/research/>

Working Papers are a series of manuscripts in their draft form. They are not intended for circulation or distribution except as indicated by the author. For that reason Working Papers may not be reproduced or distributed without the written consent of the author.

How do bank lenders use borrowers' financial statements?

Evidence from a survey of Japanese banks

Takuma Kochiyama

Associate Professor

*The Graduate School of Business Administration,
Hitotsubashi University*

Ryosuke Nakamura

Associate Professor

*The Faculty of Business Sciences,
University of Tsukuba*

Akinobu Shuto*

Associate Professor

*The Graduate School of Economics,
The University of Tokyo*

First Draft: October 22, 2021

* Corresponding author: The Graduate School of Economics, The University of Tokyo. 7-3-1, Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan. E-mail: shuto@e.u-tokyo.ac.jp.

Acknowledgements: We thank Koken Ozaki (University of Tsukuba) for helpful comments on our survey instruments. This work has received financial supports from *The Center for Advanced Research in Finance* (CARF) at The University of Tokyo. All remaining errors are the sole responsibility of the authors.

How do bank lenders use borrowers' financial statements?

Evidence from a survey of Japanese banks

ABSTRACT

Previous studies suggest that Japanese suppliers of capital, such as main banks, have private sources of information, and thus, the quality of public accounting information may be less relevant to their decisions. Studies also indicate that the firm–bank relationship in Japan has weakened with time, potentially increasing the importance of public accounting information in the Japanese loan market. Given these contradictory results, we survey bank lenders in Japan—a bank-centered economy—and provide evidence on whether and how they use borrowers' accounting information. Using responses from 99 Japanese banks, we examine bank lenders' views on (1) the main bank system, (2) the use of accounting information, and (3) financial covenants. Whereas main bank lending has declined over time, nearly all respondents agreed that the main bank system is still prevalent in loan markets. Moreover, bank lenders tend to use accounting information for lending decisions and continuous monitoring purposes, prefer persistent accounting earnings tied to cash flows, and modify borrowers' working capital conservatively. We also find that bank lenders mainly use financial covenants in syndicated loans as tripwires to obtain bargaining power in the event of borrower financial distress. The evidence complements archival studies and provides additional insights on the importance of accounting information in lenders' practice. (207 words)

Keywords: Bank lender; Financial statement; Earnings attribute; Main bank system; Relationship banking; Financial covenants; Agency theory; Incomplete contracting theory

JEL Codes: G21; G32; G33; G34; M41

How do bank lenders use borrowers' financial statements?

Evidence from a survey of Japanese banks

1. Introduction

We survey Japanese banks and provide evidence on whether and how bank lenders use borrowers' accounting information. As symbolized by the main bank system, the firm–bank relationship in Japan is much closer than in the United States (US), and is characterized by long-term concentrated lending, equity ownership, and control of settlement accounts (Jacobson and Aaker, 1993; Aoki et al., 1994). Upon comparing the US and Japan, Biddle and Hilary (2006) find that accounting quality influences investment efficiency in the US, but not in Japan. They suggest that Japanese suppliers of capital, such as main banks, have private sources of information, and thus, the quality of public accounting information may be less relevant to their decisions. Meanwhile, recent studies show that the firm–bank relationship in Japan has become weaker than before (Arikawa et al., 2017; Enomoto et al., 2020; Kochiyama and Nakamura, 2021), which has potentially increased the importance of public accounting information in the Japanese loan market. In this study, we use the survey to examine the significance of accounting information for current bank lenders in Japan's bank-centered economic environment. Specifically, we ask bank lenders about their views on (1) the main bank system, (2) the use of accounting information, and (3) financial covenants.

This study extends and complements archival research in three ways. First, we provide direct evidence regarding lenders' perceptions of the quality of borrowers' financial statements and reported earnings. Archival studies have devoted significant effort to identifying creditors' demands and preferences for accounting information, mainly by examining the impact of financial statements and earnings quality on debt contracting (e.g., Ahmed et al., 2002; Francis et al., 2005; Bharath et al., 2008; Zhang, 2008), and the performance measurements and adjustment methods used in

financial covenants (e.g., Leftwich, 1983; Beatty et al., 2008; Christensen and Nikolaev, 2012). An advantage of the survey approach is that it can directly explore the assumptions underlying the theories in archival studies and facilitate improved understanding of where academic research and real-world practices are consistent and where they appear to diverge (Graham et al., 2005). Second, a survey allows us to reveal the internal *processes* in lenders' use of accounting information and their areas of emphasis, which are challenging to uncover with archival data (Armstrong et al., 2010). Since bank lenders are less likely to use borrowers' financial statements as reported (Li, 2010; Shivakumar, 2013), their modification processes are an essential issue; nonetheless, there is only sparse evidence on the topic. Third, we cover a wide variety of Japanese bank lenders, including large commercial banks (*Megabank*), community-based regional banks, and non-profit Shinkin banks.¹ Since many Japanese banks lend to local small and medium-sized enterprises (SMEs) rather than to listed companies, our survey covers lending practices in relation to unlisted SMEs, which are often omitted from archival studies.

To conduct the survey, we developed and mailed a postal questionnaire to all the lender banks registered in Japan. The survey instrument consists of three sections. The first addresses the status and functions of the main bank system. Although Japan has been considered a bank-centered country, the role of the main bank may have changed since the 1980s due to financial regulations and the collapse of the *Keiretsu* system (Peek, 2011; Hoshi et al., 2018; Enomoto et al., 2020). Thus, before examining the lenders' use of accounting information, we first review the roles of main banks and their evolution to understand the current status of Japan's bank–firm relationships. The second part of the survey asks whether and how bank lenders use and evaluate borrowers' reported financial

¹ A Shinkin bank is a non-profit lending institution governed by the Financial Service Agency and the Shinkin Bank Act. Unlike commercial banks, Shinkin banks are restricted in terms of their operating areas, with their clients limited to members in certain operating areas.

statements. This section includes questions that uncover lenders' views on earnings benchmarks and reported earnings attributes as well as their modifications of reported financial statements. The third part focuses on debt covenants in loan contracts. While Kochiyama and Nakamura (2021) have examined debt covenants in Japanese firms, their findings may be subject to sample bias because they use data based on voluntary disclosure. We ask about the frequency and types of debt covenants used and how bank lenders respond to covenant violations.

We sent the questionnaire to 427 banks in 2019 and obtained 99 valid responses. The collection rate is 23.2%, which is relatively high compared to prior survey studies in accounting (e.g., Graham et al., 2005; Donelson et al., 2017). We confirm that the sample is representative of the Japanese banking sector and primarily consists of city, regional, and Shinkin banks. Most respondents are the general/vice general managers and section chiefs of each bank's loan and credit assessment departments, who have enough experience and knowledge of accounting and lending practices.

We start with questions about the main bank system. Following Aoki et al. (1994), we define the main bank system as close bank–firm relationships characterized by factors such as concentrated lending, control of settlement account, equity ownership, and bond-issuance related services. Approximately 85% of our survey respondents reported that the main bank system still exists in some form. Meanwhile, the share of loans made as main banks has decreased from 47.0% in the 1980s to 39.8% in the 2010s, suggesting that the bank–firm relationship has weakened with time. Regarding the facets of main bank–firm relationships, respondents tend to focus on concentrated lending, settlement account control, and management advice.

Additionally, we asked how lenders detect and respond to borrowers' financial distress as main banks. The respondents stated that “periodical meetings with borrowers” and “publicly reported financial statements” are particularly important in detecting financial distress, suggesting

that bank lenders utilize both private information channels and public accounting information for monitoring purposes. Moreover, in contrast to Hoshi et al. (2018), who report a decline in bank-led corporate restructuring, we find that the proportion of restructuring—compared to liquidation—has increased slightly over the past four decades. Respondents predominantly emphasized “planning for restructuring” and “providing grace periods for repayment” in times of borrowers’ financial distress. These findings are generally consistent with the traditional notion of the main bank and suggest that the main bank system remains intact in the 21st century.

In the second part, we asked whether and how bank lenders use borrowers’ reported financial statements. First, respondents confirmed that they used accounting information primarily for “lending decisions” and “continuous monitoring,” while they had a neutral position regarding the use of accounting information “as a trigger for intervention toward borrower firms.” Regarding earnings benchmarks to focus on when assessing borrowers’ credit risks, lenders are likely to value “previous year earnings,” “reporting a profit,” and “management earnings forecast.” While previous literature reports that the management earnings forecast is the most important earnings benchmark in the Japanese capital market (Suda and Hanaeda, 2008; Ota, 2010), for bank lenders, its importance is relatively lower compared to reported accounting earnings benchmarks such as declines and losses. This may be because lenders’ profit claims are largely fixed and thus, less relevant to future-oriented estimates than those of market participants.

Furthermore, we asked bank lenders about their perceptions of the desirable attributes of *reported* earnings. Many respondents answered that “earnings supported by cash flows,” “persistent earnings,” and “less volatile earnings” are desirable. In contrast to the predominant findings of extant literature, we found that lender’s demand for earnings conservatism was relatively less pronounced. We also asked lenders to choose accounting items/financial metrics that they consider to be the most important when evaluating borrowers’ credit risks. For the accounting items, respondents tend to

focus on “cash flows from operating activities,” “debt balance,” and “ordinary income (earnings before taxes and special items)”; for financial metrics, they chose “equity capital ratio,” “free cash flow,” and “return on sales.” Finally, we asked whether and how bank lenders uniquely modify borrowers’ *reported* financial statements. Specifically, we requested lenders to list the accounting items that they adjust, and to specify whether the adjustments increase or decrease the amount of the items. Nearly 80% of the respondents confirmed that they uniquely adjust borrowers’ reported financial statements, and that they were more likely to modify the balance sheet items. The most frequently modified items were “receivables,” “inventory,” and “loan receivables,” with these usually being evaluated downward. This result indicates the importance of accounting conservatism for lenders, as argued in prior studies (Watts, 2003; Jayaraman and Shivakumar, 2013; Penalva and Wagenhofer, 2019).

In the final part of the questionnaire, we asked about debt covenants in loan contracts. First, we queried the use of debt covenants and found that debt covenants are rarely used in bilateral loans but are included in approximately half of all syndicated loans. This prevalence among syndicated loans is similar to findings of U.S. studies (Dichev and Skinner, 2002; Bradley and Roberts, 2015). Regarding the types of debt covenants, the most frequently used covenants are “maintenance of net assets” and “maintenance of earnings.” By contrast, direct restrictions on dividends and investments are less frequently used, consistent with the findings of Kochiyama and Nakamura (2021).

Based on the traditional agency theory and incomplete contracting theory, we asked about the expected role of financial covenants. The agency theory argues that debt covenants improve debt contract efficiency by restricting specific opportunistic managerial actions *ex ante* (Smith and Warner, 1979). By contrast, the incomplete contracting theory predicts that debt covenants serve as tripwires that give lenders control rights and an option to renegotiate, contingent on future events (Christensen et al., 2016). Respondents generally supported the incomplete contracting theory. They

expected debt covenants to “detect deterioration in borrowers’ performance in a timely manner and obtain bargaining power” rather than “restrict borrowers’ dividends, investments, and debt issuance in advance.” Consistent with this result, further questions on lenders’ response to covenant violations revealed that respondents are more likely to choose “contract modification” rather than “immediate full repayment” in the case of a breach. These results align with Dichev and Skinner (2002) and Kochiyama and Nakamura (2021) and support the implications of the incomplete contracting theory.

We conducted comparative tests to examine the robustness of the obtained results. Approximately 60% of our sample consists of non-profit Shinkin banks, and their characteristics may affect the results. While we find no significant difference between responses from commercial and Shinkin banks for many of our questions, we observe several noteworthy exceptions. For instance, we find that the decline in loans as main banks is more pronounced for commercial banks. Moreover, commercial banks typically focus on more facets in the main bank–firm relationship and utilize more varied measures in case of borrowers’ financial distress; commercial banks are more likely to use debt covenants than Shinkin banks are. These results can stem from the differences in firm size, resources, and banks’ clients between the two types of banks. Overall, while both banks share the same perception about being a main bank, commercial banks may be able to provide more multifaceted and sophisticated services than Shinkin banks can.

This study makes several contributions to the literature. First, we provide evidence on the status and roles of Japan’s current main bank system. Prior studies have indicated that the main bank system has reduced the prominent role of monitoring and lost its significance in the Japanese economic environment (e.g., Peek and Rosengren, 2005; Arikawa and Miyajima, 2007; Hoshi et al., 2018). Our evidence indicates that, although lending as main banks has been trending downward, nearly all lender banks continue to perceive themselves as main banks. Moreover, we show that concentrated lending, settlement account control, and management advice are key elements in main

bank–firm relationships. Among these, management advice has grown increasingly important over the last two decades, consistent with the Financial Service Agency (FSA)’s policy of accelerating intimate relationship banking in local banks.

Second, we contribute to the literature on debt contracting, and particularly to studies on the use of accounting information by bank lenders (see Armstrong et al., 2010; Shivakumar, 2013 for a literature review) and the relative importance of public accounting information (e.g., Biddle and Hilary, 2006; Cassar et al., 2015; Enotomo et al., 2020). Our evidence suggests that, with the weakening main bank–firm relationship, the use of accounting information is now more universal in the Japanese loan market. While this does not necessarily indicate that publicly reported accounting information is more important than lenders’ private information channels are, it does suggest that lenders utilize both private and public information for lending decisions and detecting financial distress.

Third, we reveal that while bank lenders generally prefer reported earnings tied to cash flows, they tend to modify borrowers’ reported financial statements, making downward adjustments for working capital. This confirms the view that accrual quality matters to debt contracting (Francis et al., 2005; Bharath et al., 2008) and supports the theory of accounting conservatism in debt contracts (e.g., Watts, 2003; Penalva and Wagenhofer, 2019).

Fourth, we complement archival studies on financial covenants. Consistent with Kochiyama and Nakamura (2021), we report that lenders are more likely to include debt covenants in syndicated loan contracts, and that “maintenance of net assets” and “maintenance of earnings” are predominantly used in the Japanese setting. Moreover, we examine the linkage between theory and practice and find that bank lenders tend to use covenants to obtain bargaining power in renegotiation, supporting the incomplete contracting theory.

Finally, we extend Donelson et al.’s (2017) study, which surveyed 492 individuals registered

with the Risk Management Association in the US, to determine how bank lenders assess the quality of borrowers' financial statements and how they view changes in accounting standards. Specifically, we complement their study in three ways. First, while Donelson et al. focus on the role of financial statements in medium-sized loans to private firms, we use a sample of Japanese banks to investigate how accounting information is used in a bank-centered country. Second, while Donelson et al. examine how banks perceive the quality of financial statements, we focus on the process by which accounting information is used in lending decisions. For example, we identify how banks modify borrowers' financial statements for actual use. Third, we reveal lenders' perceptions of debt covenants' expected roles, which receives little attention in Donelson et al. (2017). We provide new evidence on the conformity between the theories and actual lending practices.

The remainder of this paper is structured as follows. Section 2 describes the survey design, its administration, and the characteristics of respondents. Section 3 provides the survey results on the main bank system and investigates the current status and evolution of the main bank's roles. Section 4 examines whether and how lenders use borrowers' financial statements/accounting information. Section 5 focuses on survey responses regarding debt covenants. Section 6 conducts additional tests comparing commercial and Shinkin banks. Section 7 discusses the implications of the obtained results, and Section 8 concludes.

2. Survey method and sample characteristics

2.1. Survey method

We developed the initial survey instrument based on a literature review on the Japanese main bank system, the use of accounting information in debt contracting, and debt covenants. We also reviewed prior survey studies in the accounting and finance fields to design the questionnaire (e.g., Brav et

al., 2005; Graham et al., 2005; Dichev et al., 2013; Graham et al., 2014; Donelson et al., 2017). Our goal is to better understand whether and how bank lenders utilize accounting information in the Japanese economic environment. Thus, we created a questionnaire with three sections: (1) the status of the main bank system, (2) the use of financial statements, and (3) debt covenants. The first section focuses on the characteristics and evolution of the main bank's role and includes time-series questions. To minimize biases and misunderstandings, we clearly described the definition of main bank on the first page of the survey instrument. Moreover, to ensure that respondents are knowledgeable about the history of their lending practices, we asked for the survey to be answered by managers/director-level people in the loan or credit assessment departments or those who have engaged in lending practices for many years. The second and third parts examine the use of accounting information and debt covenants in loan contracts. Since respondents have likely engaged in many loan contracts so far, we asked them to respond by considering current *typical* practices in their banks. Figure 1 illustrates the structure of our questionnaire.

[Insert Figure 1 about here]

The substantive questions consist of close- and open-ended questions. In close-ended questions, respondents score the responses on a five-point Likert scale, a method widely adopted in previous studies (Graham et al., 2005; Dichev et al., 2013; Donelson et al., 2017). Open-ended questions requested respondents to specify amounts (e.g., share of loans as main banks) and items (e.g., accounting items on which lenders focus). A free-form response space and a choice of "other" followed, to compensate for any incompleteness in both types of questions. We did not randomize the question order across participants because there are three sections in the survey instrument, and the questions are sequential in nature. We solicited feedback on the survey content and design from several academic researchers with expertise in survey methodologies, and from MBA practitioner students in the banking industry. They suggested that some survey questions could be unclear to

practitioners but agreed that the contents were generally clear enough for them to respond in a reasonable amount of time. We revised the wordings and inserted notices to make the survey instrument clearer and more concise based on the feedback. As a result, the final survey contained 24 questions; the paper instrument was 12 pages long, including identical demographic questions on the final page.

We sent the questionnaire and a cover letter via postal mail to Japanese banks in April 2019. We identified Japanese banks and prepared a list of recipients based on the Nikkei NEEDS Industry Classification, using a commercial database called *Nikkei Value Search*.² We excluded the Bank of Japan, the country's central bank, and foreign banks operating in Japan. This resulted in a sample of 427 domestic banks. We obtained 80 responses by the end of June. To enhance the collection rate, we sent a reminder and a reprinted questionnaire in July 2019 to banks that had not responded yet. By August 26, 2019, we obtained an additional 24 responses from the second postal mail.

In total, we obtained 104 responses to the survey. However, we excluded five banks' responses from the sample because they indicated they would refrain from answering the questions. Therefore, the final sample consists of 99 banks. The valid response rate is 23.2% (i.e., 99 out of 427 banks), which is relatively higher compared to previous survey studies in the accounting and finance fields.

2.2. Sample description

In Japan, banks are conventionally categorized by their operating areas, entity origins, and applicable financial laws. The Nikkei Industry Classification we used consistently yields six categories of bank firms: city bank, regional bank, trust bank, Shinkin bank, Internet bank, and government bank. City banks are nationwide banks with many branches across the country,

² Since the database provides only industrial classification, we could not determine whether these banks lend to business firms in advance, which may understate the response rate.

including *Megabanks* such as MUFJ Bank and Sumitomo Mitsui Banking Corporation. By contrast, regional banks tend to operate in certain prefectures or regions. Shinkin banks are similar to regional banks, but are non-profit organizations governed by the Shinkin Bank Act, intensively serving the local economies.

It may be possible that Shinkin banks are a heterogeneous group, as they are not organizations pursuing shareholder profit. However, Shinkin banks are not very different from commercial banks in the Japanese context as they are also required to allocate their limited credit efficiently, just like commercial banks are. Similarly, commercial banks are also viewed as having a social responsibility and civic duty to serve the local economy (Peek and Rosengren, 2005; Peek, 2011). Additionally, prior studies have included Shinkin banks when analyzing the Japanese main bank system (Uchida et al., 2008; Kano et al., 2011).³ We return to this issue later and examine whether the differences between commercial and Shinkin banks yield different results. We confirm that all sample banks lend to private business firms.

Panel A of Table 1 presents the sample configuration and response rates for each bank category. Approximately 60% of Japanese banks are Shinkin banks, followed by regional banks at 28.6%. This suggests that Shinkin banks are the dominant type among bank firms. In our survey, Shinkin banks exhibit the highest response rate of 28.1%, while other bank categories show similar response rates ranging from 10.0% to 18.8%. As a result, our respondent sample primarily consists of Shinkin banks, but does not deviate from the industrial structure.

Panels B and C of Table 1 show the department/division and title/position of respondents, respectively. One possible challenge in a firm-level survey study is that it may fail to reach the relevant respondents within a firm to collect reliable responses. As noted earlier, we address this

³ Moreover, Shinkin banks are also treated as main banks by The Small and Medium Enterprise Agency in Japan as well as by Teikoku Databank, one of the largest data and research companies in Japan.

concern by requesting that the survey be answered by manager/director-level employees in the loan or credit assessment departments or equivalent persons who have engaged in loan lending practices for many years. These persons are the most likely to be knowledgeable about the bank's loan practices and have expertise in the use of accounting information for lending purposes. Panel B indicates that half of the respondents work for the loan department, and the remaining half are from the credit assessment department, consistent with our request. Panel C confirms that approximately 46.5% of the respondents are general managers and vice managers of their departments, and 36.4% are the section chiefs and acting section chiefs. As a result, more than 80% of our sample consists of respondents at responsible posts. Thus, we consider that it is less likely that they are unknowledgeable and inexperienced regarding the content of the survey.

[Insert Table 1 about here]

Table 2 presents the descriptive statistics of our sample firms. We collect financial data from the *Nikkei NEEDS FinancialQUEST* and *Nikkei Value Search* databases, the most comprehensive commercial databases on Japanese firms.⁴ Then, we merge the financial data with information obtained from the survey based on banks' names and financial institution codes. The financial data are annual and based on the fiscal year ending in March 2019, immediately prior to sending out the questionnaires.⁵ The survey responses indicate that 9.1% of our sample firms are publicly listed. Regarding firm size, the sample firms exhibit large dispersion—from 85 to 179,083 billion Yen in total assets (*Assets*) and from 1 to 3,149 billion Yen in operating revenues (*Revenues*). This large dispersion is mainly because our sample contains both local unlisted Shinkin banks and large listed commercial banks.

⁴ While Shinkin banks are non-profit organizations and, thus, not subject to public disclosure regulations, they conventionally disclose financial statements in their voluntary annual reports. The *Nikkei FinancialQUEST* collects financial data from these reports.

⁵ We confirm that all fiscal years of our sample banks end in March.

[Insert Table 2 about here]

Table 3 compares the descriptive statistics of survey respondents, non-respondents, and all banks with available data. Survey research is likely to be subject to sample bias: firms that decided to answer the survey may be systematically different from those that did not (Graham et al., 2014). Hence, we conduct *t*-tests and Wilcoxon rank-sum tests to assess the non-response bias and representativeness of our sample. First, our sample contains fewer listed firms compared to the sample of non-respondent firms and all banks in the banking sector. Moreover, comparing respondents to non-respondents, we find weak statistical differences in firm size (*Assets* and *Revenues*), profitability (*Earnings*), and loan-to-assets ratio (*LoanRatio*). However, we find no such differences between respondents and all available banks. These results can be due to the high proportion of Shinkin banks in our sample (see Table 1), as these banks generally tend to be small and less profitable. While we consider our sample to be broadly representative of the Japanese banking sector, we acknowledge that our results may not be generalizable to all bank firms in Japan.

[Insert Table 3 about here]

3. The main bank system

The main bank system has received significant attention in descriptions of the Japanese economy and played a crucial role in explaining Japanese economic performance (Peek, 2011). Aoki et al. (1994) define the system as representing close, multidimensional bank–firm relationships, and characterize it based on five facets: concentrated lending, provision of bond-related services, shareholding of client firms, control of client’s settlement account, and dispatch of board members. During clients’ financial distress, the main bank has been expected to play a significant role by providing managerial guidance and financial support, leading to effective restructuring and board turnover (i.e., contingent monitoring mechanism).

Early studies based on data before the 1990s find positive benefits of such close bank–firm relationships (Hoshi et al., 1990; Kaplan and Minton, 1994; Kang and Shivdasani, 1995; Kang et al., 2000). However, studies based on post-1990s data are more likely to report the dark side of the main bank system (Peek and Rosengren, 2005; Caballero et al., 2008). These recent studies suggest that the economic crisis in the 1990s deteriorated the health of the Japanese banking sector and created an incentive for evergreening and for increasing loans to nonperforming firms, rather than behaving in a disciplined manner. As a result, while many Japanese firms still rely heavily on bank loans (Arikawa and Miyajima, 2015), there is a view that the traditional main bank system may have broken down and diminished in its importance (Peek, 2011; Arikawa et al., 2017; Hoshi et al., 2018).

3.1. The current status of the main bank system

The first section of our survey focuses on the main bank system and establishes a fundamental understanding of current Japanese bank–firm relationships. Specifically, we reveal whether and how the main bank system remains in place today. To do this, we started with a simple question: “Does the main bank system still exist in some form?” As noted earlier, we clearly defined the main bank system as “close bank–firm relationships characterized by factors such as concentrated lending, control of settlement account, equity ownership, and bond-issuance related services” in the survey instrument. As a result, 84.8% (84 out of 99 firms) of the respondents answered “yes” to this question, and the remaining 15.2% answered “no” (untabulated). The result suggests that most Japanese banks are aware of themselves operating as main banks. In this section, we use the responses of firm respondents who answered “yes” to the question (i.e., 84 bank respondents) to draw more meaningful inferences about the main bank system.⁶

⁶ Some respondents answered “no” but responded to subsequent questions because the subsequent questions include time-series questions on their “past” status. We confirm that the reported results in this section do not

3.2. The roles of the main bank

We assess whether the roles of main banks have changed over the last few decades in two ways. First, as an open-ended question, we asked the respondents to indicate the ratio of loans made as main banks to the total loans made over the previous four decades. Table 4 shows the result—the ratio of main bank loans has been decreasing, falling from 47.0% to 39.8% over the last four decades. We find a significant difference between the 1980s and 2010s. This result is in line with prior studies reporting that firms have moved away from bank loans after 2000, and that main banks' role as a capital supplier has declined (Arikawa and Miyajima, 2015; Arikawa et al., 2017).

[Insert Table 4 about here]

Second, we sought bank lenders' views on the roles of main banks in a time-series manner. Specifically, following Aoki et al. (1994), we specified six factors and asked how important these factors are in considering bank–firm relationships as main banks: (1) concentrated lending, (2) bond-related services, (3) shareholding of client firms, (4) control and management of settlement account, (5) provision of management advice and information, and (6) dispatch of board and auditor members. The questions are close-ended, and respondents scored the responses on a five-point scale to indicate the importance of each factor.

Table 5 presents the results. We note that the available responses differ by question and row, as the questions include time-series data and various bank services. First, we find that concentrated lending, settlement account control, and management advice are essential factors in the main bank system. By contrast, bank lenders place lesser value on bond-related services, the shareholding of client firms, and the dispatch of board members. In terms of time-series changes, while most factors stay constant over the past decades, there are two distinct trends. First, consistent with Table 4, the

change when we use all available answers.

importance of “concentrated lending” has declined. Second, “providing management advice and information” has become increasingly important. This could be due to the “Program for Further Financial Reform” established in 2004. The FSA has advocated the acceleration of relationship banking and intimate managerial support by local banks. Consistently, we obtained 13 free-form responses about the role of the main bank, all of which emphasized management consultations and non-monetary management support.

[Insert Table 5 about here]

3.3. Main bank monitoring through lending process

We next investigate the monitoring role of the main bank through the lending process. As proposed in Aoki (1994), the monitoring provided by main banks can be differentiated into three stages based on the timing of an action. First is “*ex ante* monitoring,” which involves the assessment of the creditworthiness of investment projects proposed by firms, and their screening. The second stage is “interim monitoring,” denoting the checking of the ongoing behavior of management and the use of committed funds. The third stage is “*ex post* monitoring,” which indicates the verification of performance outcomes and judgement on the long-run viability of projects and possible corrective or punitive action. Historically, main banks integrated these monitoring roles and played a prominent role as a delegated monitoring authority in the 1970s, but lost their monitoring abilities due to the deregulation of interest rates and bond issue requirements during the 1980s (Aoki, 1994).

To obtain lenders’ views on these monitoring roles and how they have changed, we asked about the importance attached to each monitoring stage. Table 6 presents the results. For clear communication, we clearly shared the definitions of each monitoring stage in the questionnaire, following Aoki (1994). First, we find that bank lenders consider *ex ante* and interim monitoring to

be necessary, and their importance has increased over the last few decades. More than 90% of the respondents answered “important” or “very important” for the current period for these two stages. While bank lenders did not emphasize *ex post* monitoring before the 1990s, they have started to do so since the 2000s. These changes may be attributable to banks’ reflections on the banking crises of the 1990s, including the nonperforming loans problem and the FSA’s action program to strengthen relationship banking, as mentioned earlier.

[Insert Table 6 about here]

3.4. *Implicit insurance of main banks*

As another role, main banks provide services akin to insurance for borrowers facing financial distress (i.e., implicit insurance contract, Nakatani, 1984; Weinstein and Yafeh, 1998; Hirota, 2009). Contrary to the common notion of the risk–return relationship, this suggests that main banks receive higher interest rates when borrowers’ performance is good (through stable and large lending transactions, restrictive deposits, and other financial services). In comparison, they supply capital at lower interest rates when firms’ performance deteriorates. In this case, main banks share the default risk of borrowers and play a proactive role in increasing borrowers’ viability.

We asked whether bank lenders agree with the role of insurers: receiving higher interest rates than the prevailing market rates when the company is performing well and lower interest rates when the company is performing poorly. Untabulated results show that approximately 80% of the respondents disagreed with this notion (the mean value is 1.60 on a five-point scale) throughout the last four decades. Therefore, in contrast to the arguments of previous studies, we find no evidence to support the insurance role of main banks.

3.5. Detection of and response to borrowers' financial distress

Regarding the contingent monitoring mechanism of main banks, we examine lenders' responses to borrowers' financial distress. Specifically, we asked how frequently bank lenders rescue distressed borrowers and how they detect and support the failing borrowers. First, we sought to know the frequency of management and financial support provided to financially distressed borrowers (i.e., the ratio of cases in which bank lenders provided management and financial support to each bank's financially distressed cases). Untabulated answers show that bank lenders provide managerial and financial support, rather than opting for liquidation, in about half of the cases. While some prior studies have argued that main banks have become less proactive in rescuing failing borrowers than they did before the 1990s (Xu, 2007; Hirota, 2009; Hoshi et al., 2018), we find that the percentages stay constant over the past four decades.^{7,8}

Table 7 shows how bank lenders detect clients' financial distress. We established five items for private and public information channels. In close bank–firm relationships, banks obtain private information through periodical meetings, voluntary contacts from clients, or continuous monitoring of clients' settlement accounts. By contrast, banks may also discover borrowers' failure through public financial statements or violations of covenants based on financial statements. From Table 7, we find that bank lenders tend to rely on “periodical meetings,” “voluntary notification from clients,” “continuous monitoring of clients' settlement accounts,” and “public financial information.” More than 80% of the respondents consider they are likely to detect financial distress through periodical meetings and public information. This indicates that even in the bank-centered economy of Japan, bank lenders use both private and public information channels to detect clients' distress. Meanwhile,

⁷ Specifically, the percentages are 44.7%, 45.6%, 50.1%, and 52.6% for the 1980s, 1990s, 2000s, and 2010s, respectively. We conduct *t*-tests for differences between the 20th and 21st centuries and find no significant difference.

⁸ We conduct *t*-tests to examine whether there is a difference between commercial and Shinkin banks. We find no significant difference.

debt covenants are less likely to be useful in detection, partly due to their infrequent use in loan contracts (Kochiyama and Nakamura, 2021).

[Insert Table 7 about here]

Table 8 presents the results regarding the ways in which bank lenders support clients' financial distress. We listed six items and asked respondents whether these are likely to be used for failing borrowers. We find that while bank lenders tend to "develop restructuring plans," "lend additional funds," and "defer repayments," they are less likely to "dispatch bank employees," "reduce or exempt repayments," or "provide funds through a share subscription." These results are consistent with the view that main banks still support distressed borrowers by providing a grace period for repayments and a restructuring plan (Aoki et al., 1994), but no longer provide human resources to borrowers (Arikawa and Miyajima, 2007; 2015).

[Insert Table 8 about here]

Overall, our survey confirms that the main bank system remains prevalent in the 21st century, while main banks' significance as loan providers has declined over the last four decades. The system in Japan is particularly characterized by concentrated lending, control of settlement accounts, and provision of management advice and information. Moreover, Japanese bank lenders continue to play a contingent monitoring role and provide management and financial support during borrowers' financial distress, rather than forcing liquidation.

4. The use of accounting information in the lending process

Accounting information plays a significant role before and after debt contracting. In their *ex ante* role, financial statements mitigate information asymmetries between borrowers and lenders and alleviate the adverse selection problem. They provide useful parameters for determining loan

availability and assessing borrowers' credit risk (Shivakumar, 2013). Meanwhile, in its *ex post* role, accounting information provides a contractible basis for monitoring, as well as parameters to evaluate the safety of existing credit lines, and prevents opportunistic managerial wealth transfers (Watts and Zimmerman, 1986; Christensen et al., 2016). Performance measurements and financial positions shown in the financial statements keep lenders abreast of changes in credit risks. Accounting-based covenants can restrict managers' *ex post* opportunistic actions and serve as tripwires that give lenders control rights contingent on future status. This section examines how bank lenders use borrowers' accounting information in their lending process (the second part of our survey).

4.1. Purpose of the use of financial statements

We questioned the purpose of bank lenders' use of borrowers' reported financial statements. As argued previously, lenders can use borrowers' accounting information for lending decisions and *ex post* monitoring purposes (Leftwich, 1983; Watts, 2003; Berger and Udell, 2006). Moreover, to the extent that accounting numbers are a reliable signal of borrowers' financial health, bank lenders may use the information for interventions, particularly under the Japanese main bank system.

Table 9 shows the results. More than 80% of the respondents answered that the most likely use of accounting information is for lending decision making and continuous monitoring purposes. By contrast, the average respondent was neutral on the use of financial statements as a trigger for management intervention. These results are consistent with prior studies and confirm that financial statement-based lending is prevalent among Japanese banks.

[Insert Table 9 about here]

4.2. Earnings benchmarks

Literature has proposed that several earnings benchmarks are important for managers and investors. For instance, through a survey, Graham et al. (2005) reveal that the same quarterly earnings as in the previous year and analyst consensus estimates are significant as earnings benchmarks for managers to meet or beat. Moreover, studies on price reactions show that investors price firms that meet/beat specific earnings benchmarks, indicating the importance of earnings benchmarks for capital markets (e.g., Skinner and Sloan, 2002). However, there is sparse evidence for whether bank lenders have earnings benchmarks for borrowers on which they focus.

We established five earnings benchmarks commonly used in prior studies and asked bank lenders for their views on the importance of these items. Table 10 reports the results and shows that four metrics are essential: “management earnings forecasts,” “earnings in previous year,” “reporting a profit,” and “earnings of industry peers.” Meanwhile, “analyst consensus” tends to be less important for lenders.

The results provide several implications. First, bank lenders tend to focus on whether clients report profits and increase or decrease their earnings, as benchmarks. This result supports the notion that bank lenders rely on accounting earnings to assess borrowers’ performance (Christensen and Nikolaev, 2012). Moreover, while previous studies report that management earnings forecast is the most important earnings benchmark in the Japanese capital market (e.g., Suda and Hanaeda, 2008; Ota, 2010),⁹ its importance is relatively lower compared to reported accounting earnings for bank lenders. The results in Table 10 confirm the importance of management forecasts in loan markets, but they are subordinate to “reporting a profit” and “earnings in previous year.” This can be because

⁹ Suda and Hanaeda (2008) replicate the survey of Graham et al. (2005) in a sample of Japanese listed firms and report that management earnings forecasts represent the most important earnings benchmark. Ota (2010) examines the value relevance of management earnings forecasts and finds that they have a higher correlation with and incremental explanatory power for stock prices.

lenders' profit claims are largely fixed and, thus, less relevant to future-oriented estimates than those of market participants.

[Insert Table 10 about here]

4.3. Earnings attributes

Lenders should be interested in the attributes of reported earnings. Watts (2003) and Kothari et al. (2010) argue that creditors generally prefer conservative earnings because their profit claims are primarily fixed and less relevant with increased earnings. Conservative earnings can also inhibit managers' *ex post* moral hazards by reducing the earnings available for paying dividends and enhancing financial covenants' value. Moreover, high-quality financial reporting reduces adverse selection costs by better mitigating information asymmetries between lenders and borrowers. Based on these theoretical backgrounds, previous studies have examined lenders' demands and preferences for accounting information by analyzing the impact of financial statements and earnings quality. For example, Ahmed et al. (2002) and Zhang (2008) report that accounting conservatism is associated with lower costs of debt. Francis et al. (2005) and Bharath et al. (2008) focus on accrual quality and find that higher accounting quality results in lower costs of debts and less strict contracting terms. Moreover, in the context of financial covenants, Leftwich (1983) and Beatty et al. (2008) show that creditors tend to modify reported accounting information more conservatively.

We complement these archival studies by asking about lenders' preferences regarding reported earnings attributes. Based on Francis et al. (2006), we focused on five earnings attributes and described the definition of each earnings quality in the questionnaire. Table 11 presents the results. We find that "earnings supported by cash flows," "persistent earnings," "less volatile earnings," and "earnings measured conservatively" are desirable for bank lenders. More than 80% of the

respondents answered that “earnings supported by cash flows,” “persistent earnings,” and “less volatile earnings” are desirable and very desirable. This is consistent with the evidence on the importance of accrual quality (Francis et al., 2005; Bharath et al., 2008) and creditors’ opposition to volatility-increasing investment by borrowers (Smith and Warner, 1979).

However, in contrast to our predictions, we find that lenders’ preference for conservative earnings was not relatively pronounced. Specifically, the mean value of responses for “earnings that measured conservatively” was 3.28, and only 34% of the respondents consider it desirable or very desirable. This result implies that lenders place much more weight on earnings closely tied to cash flows than ones measured conservatively. In this regard, Li (2010) and Dyreng et al. (2017) report that earnings measures used in financial covenants are not likely to be conservative, but they are more likely to be associated with cash flows. The authors interpret the findings to imply that conservative accounting, such as impairment losses, may deteriorate the ability of earnings to predict future performance and induce “false alarms” that generate additional negotiation costs.

Furthermore, we find that the value relevance of earnings is not of interest to lenders. This may not be surprising because lenders’ profit claims are mainly fixed and less relevant to the market values of shareholder equity. Overall, while the results in Table 11 are largely consistent with theoretical predictions, they suggest that bank lenders are more likely to prefer persistent earnings tied to cash flows than those measured conservatively.

[Insert Table 11 about here]

4.4. Key accounting items and financial indicators

In loan contracting, bank lenders seek useful information to assess borrowers’ credit risk. At the inception of a contract, financial statements provide key information to determine the contract

parameters. However, we have little evidence on lenders' focus areas in relation to borrowers' financial statements, partly because the use of accounting numbers in deciding the contract parameters is informal and involves elements of subjectivity (Shivakumar, 2013).

We asked bank lenders what accounting items and financial indicators they focus on in assessing the rating and adequacy of loans. To do this, we included 31 accounting items shown in financial statements and 22 financial indicators that are commonly used in standard fundamental analysis, and asked responders to choose up to five items in each list (see Appendix for the lists). We also included "others" and free blank spaces to compensate for any incompleteness of the lists.

Table 12 shows the results and lists the items and indicators with a response frequency greater than 15% in columns (1) and (2), respectively. First, for financial statements, the item most focused on is "cash flows from operations" (71.7%), which is relatively more important than accounting incomes such as ordinary income (53.5%) and operating income (43.4%).¹⁰ Consistent with the results in Table 11, the responses suggest that bank lenders are more likely to weigh cash flows more than accounting income. Moreover, in line with the debt agency theory (Smith and Warner, 1979), lenders focus on borrowers' loan debts because they indicate firms' ability to repay debts and the probability of default. By contrast, current assets such as cash (41.4%), accounts/notes receivables (22.2%), and inventory (21.2%) seem relatively less important in assessing loan adequacy. These results imply that bank lenders focus on firms' ability to generate cash relative to loan balances.

Column (2) of Table 12 confirms this view, as the financial indicators most focused on are capital equity ratio (73.7%) and free cash flows (58.6%). However, it is interesting that lenders are less likely to combine performance measurements and loan-related items as financial indicators directly. Specifically, the debt-to-EBITDA ratio (26.3%) and interest coverage ratio (11.1%) are not

¹⁰ Ordinary income is Japanese unique GAAP earnings and indicates earnings before taxes and special items.

particularly focused on, which is in stark difference to U.S. financial covenants (Demerjian and Owens, 2016; Li, 2016).

[Insert Table 12 about here]

4.5. Modification to GAAP financial statements

As a final exploration of lenders' use of accounting information, we examine how they modify borrowers' reported financial statements. In the context of financial covenants, the literature finds that creditors tend to adjust GAAP accounting items to enhance contract efficiency. For example, Leftwich (1983) and Beatty et al. (2008) report that debt contracts are modified conservatively. As such, it is possible that lenders uniquely adjust borrowers' financial statements for lending purposes.

To investigate whether and how bank lenders adjust reported financial statements, we asked responders to indicate the financial statement items that they frequently modify in the lending process and choose either "downward" or "upward." Here, we defined downward and upward as decreases and increases in the filled-in items, respectively. For instance, if responders write "cash" and choose "downward," it indicates that they undervalue the borrowers' cash balances shown in the balance sheet. This question enabled us to trace lenders' actual use of accounting information directly and unlock the black box of their information process.

Table 13 shows the results. In Panel A, we summarize the frequency of modifications by type of financial statement: balance sheet (B/S), income statement (I/S), and cash flow statement. As shown, bank lenders are more likely to modify balance sheet items than accounting items in income and cash flow statements. Moreover, consistent with lenders' demands for conservative accounting, most adjustments are downward.

In Panel B, we list the items with a response frequency greater than 10%. First, we find that

more than 40% of bank responders affirmed to adjusting accounts/notes receivables and inventory downward, suggesting that they evaluate the value of these assets conservatively. This result is consistent with Donelson et al. (2017) and indicates that lenders focus on accounting conservatism via working capital accruals. By contrast, responders' answers regarding depreciations were split between downward and upward adjustments. We conjecture that some respondents decrease depreciations in calculating EBITDA, while others increase them to evaluate borrowers' performance conservatively. Moreover, although the number of responses was relatively low, some lenders admitted to conservatively assessing borrowers' property, plant, and equipment and discounting extraordinary income shown in the income statement.

The results in Table 13 confirm lenders' modification practices relating to reported financial statements and suggest that lenders tend to adjust balance sheet items (particularly working capital) conservatively. Along with the results in Table 11 (earnings attributes), our findings imply that lenders may be less likely to demand conservatism in *reported earnings* directly but implement unique adjustments to reported financial statements to accommodate their demand for conservative accounting at their own cost.

[Insert Table 13 about here]

5. Financial Covenants

For our final set of questions, we asked bank lenders about the use of financial covenants in loan contracts. The importance of accounting-based financial covenants is well established, and a large body of literature has developed based on the agency and incomplete contracting theories (e.g., Smith and Warner, 1979; Christensen et al., 2016). In the Japanese setting, Kochiyama and Nakamura (2021) examine debt covenants and find that debt covenants are less likely to be used for

firms with closer relationships with main banks, providing evidence of substitution between debt covenants and the main bank system. However, their finding is based on firms' voluntary disclosure and, thus, may be subject to sample bias. This section extends the literature by examining whether, how, and why Japanese bank lenders use financial covenants in loan contracts.

5.1. Frequency of financial covenants

We began with a question about the frequency of financial covenants. We asked lenders to note the approximate percentages of loan agreements (on a deal-by-deal basis) with debt covenants using an open-ended question. Untabulated results show that, on average, 5.33% of loan contracts include financial covenants, and bilateral loan agreements (1.99%) are much less likely to contain financial covenants compared to syndicated loan contracts (45.36%). These results are in line with the view that financial covenants are less prevalent in bank-centered countries (Leuz et al., 1998; Hong et al., 2016) and more likely to be used in syndicated loans (Bradley and Roberts, 2015; Kochiyama and Nakamura, 2021).

5.2. Types of financial covenants

We also investigate the frequency of financial covenants by type. Prior studies using a U.S. sample report that debt contracts include various kinds of financial covenants, such as interest coverage ratio, debt-to-EBITDA ratio, and net worth (Demerjian and Owens, 2016; Li, 2016). By contrast, Kochiyama and Nakamura (2021) document that Japanese financial covenants tend to be uniform and untailored. They find that most covenants in Japanese loan market are a combination of “maintenance of net assets” and “maintenance of earnings.”¹¹

¹¹ “Maintenance of net assets” is similar to net worth covenants in the U.S. context and requires borrowers

Table 14 presents the frequency of covenants by type. Following Kochiyama and Nakamura (2021), we identified eight financial covenants that can be frequently used in Japan and asked for the approximate percentages of the use of each covenant as a ratio of all loan contracts *with* covenants. We note that the number of available responses hereafter significantly decreases to approximately 50–60 banks. This may be because a specific portion of Japanese banks has not yet established the practice of using financial covenants in loans and the questions regarding debt covenants might have required too much effort to answer. We received 19 responses stating that they refrained from answering the questions on debt covenants because they only handle covenants in line with the arranger’s intentions in syndicated loans.

Table 14 shows the types and frequencies of financial covenants using the full sample of available answers. As shown, “maintenance of net assets” and “maintenance of earnings” are the most frequently used, and, on average, more than 70% of covenant contracts include these two items. “Negative pledge covenant” is the third most frequent type with a frequency of 47.3%, whereas other types of covenants are less prevalent. Overall, the results are consistent with the findings of Kochiyama and Nakamura (2021) and confirm that maintenance of net assets and earnings are the typical financial covenants in Japanese loans.

[Insert Table 14 about here]

5.3. Determinants of the use of financial covenants

We next investigate the determinants of financial covenants. Many prior studies have devoted effort to identifying the determinants and shown that the use of financial covenants is associated with

to maintain a specific percentage of net assets at the end of the fiscal year compared to the reference year. “Maintenance of earnings” requires borrowers to maintain certain levels of accounting earnings in the fiscal year. Consistent with Kochiyama and Nakamura (2021), we find that the typical earnings covenant requires not reporting losses of net income before taxes and special items (ordinary income) for two consecutive years.

borrower characteristics (e.g., firm size, leverage, growth, profitability) and loan characteristics (e.g., maturity, materiality, and types of debts) (e.g., El-Gazzar and Pastena, 1991; Begley and Feltham, 1999; Bradley and Roberts, 2015).

We assess whether the findings in the archival studies are in line with lenders' practical views. To do this, we established 10 items and asked lenders to indicate how important each item was in determining the inclusion of financial covenants. Table 15 presents the results. For borrowers' characteristics, financial health, profitability, growth, disclosure level, and earnings quality are considered important. For loan characteristics, the maturity, size, and whether the loan is syndicated tend to be important factors. These results are consistent with prior studies.

However, in contrast to the findings of Kochiyama and Nakamura (2021), responders were neutral about the importance of the main bank system in deciding financial covenants. One possible reason is that since Kochiyama and Nakamura (2021) use the ratio of loans from the main bank as a proxy for bank-firm relationships, this metric may capture the influence of syndicated loans. Thus, their findings can be attributable to the increased syndicated loans, while the increase in syndicated loans may also indicate a decline in traditional Japanese bank-firm relationships.¹²

[Insert Table 15 about here]

5.4. Expected roles of financial covenants

The economic role of financial covenants has been discussed based on two theories. First, the traditional agency theory argues that the use of financial covenants can mitigate conflict between shareholders/managers and creditors by restricting borrowers' specific opportunistic actions, such

¹² We also asked the determinants of the number of debt covenants used and violation thresholds using the same ten items. Untabulated results show a similar tenor as those reported in Table 15. Thus, bank lenders tend to focus on the same factors in deciding the numbers and strictness of debt covenants.

as dividend payments, claim dilution, and asset substitution (Smith and Warner, 1979). On the other hand, the incomplete contracting theory predicts that financial covenants will enhance the contract efficiency by allocating control rights contingent on borrowers' future status (Aghion and Bolton, 1992; Christensen et al., 2016). Under this view, financial covenants serve as a trigger or an early warning signal that gives lenders options to renegotiate and protect their interests. While these two perspectives are not mutually exclusive and should be viewed as complementary (Christensen et al., 2016), the extent to which these theoretical explanations are in line with bank lenders' practical perceptions is questionable.

We sought to know what role bank lenders expect financial covenants to play. Specifically, we included two descriptions corresponding to the agency and incomplete contracting theories and examined how likely each explanation is consistent with lenders' views. Moreover, we asked this question separately for "maintenance of net assets," "maintenance of earnings," and debt-related covenants,¹³ the most frequently used covenants reported by Kochiyama and Nakamura (2021). Financial covenants based on balance sheet information and performance measures can play different roles in improving contract efficiency. Christensen and Nikolaev (2012) discuss that capital covenants (i.e., those based on the balance sheet) control agency problems by imposing restrictions on the capital structure (consistent with the agency theory view), while performance covenants serve as tripwires that transfer control to lenders (consistent with the incomplete contracting view).

Table 16 reports the results. For "maintenance of net assets" and "maintenance of earnings," more than 60% of respondents answered that it is likely or very likely that these two covenants would help to detect borrowers' performance deterioration and obtain bargaining power. Meanwhile, bank responders tend to consider that debt-related financial covenants can restrict borrowers' action

¹³ We define debt-related covenants as covenants using the debt balance, including the upper limit of debt balances and debt service coverage ratio.

ex ante, as well as detect deterioration and obtain bargaining power.

These results suggest that Japanese lenders tend to support the view under the incomplete contracting theory. Specifically, given that Japanese covenants are uniform and untailed (see Table 14), they are merely a trigger to obtain control and an option to protect their interests rather than a tool to restrict specific managerial actions. On the other hand, debt-related financial covenants can more directly affect borrowers' capital structure and debt issuance than the other two covenants. Thus, lenders may also expect this to play the role based on the agency theory, as discussed in Christensen and Nikolaev (2012).

[Insert Table 16 about here]

5.5. Responses to covenant violation

Finally, we examine lenders' responses to covenant violations. Previous studies have shown that covenant violations generate material costs (e.g., renegotiation, amendment, and refinancing costs) and negative stock price reactions (e.g., Beneish and Press, 1993; 1995; Sweeney, 1994). Dichev and Skinner (2002) document that technical violations occur frequently and thus argue that lenders use covenants as tripwires that provide them with an option to negotiate the contracting terms. Recent studies find that, following the violations, lenders tighten the contracting terms, impose amendment fees, increase interest rates, and limit borrowers' financial activities (Chava and Roberts, 2008; Nini et al., 2009; 2012). Similarly, in the Japanese context, covenant violations generally give lenders the right to require immediate total loan repayments, but they are more likely to grant waivers for borrowers' technical defaults (Kochiyama and Nakamura, 2021).

We complement the literature by directly asking bank lenders' reactions to covenant violations. Based on prior studies above, we included nine possible lenders' responses and asked how likely

they are in the event of covenant violation. Table 17 shows the results. While lenders are more likely to modify contract terms, they are less likely to require amendment fees and immediate full repayment. Moreover, renewal of loans and dispatch of bank employees are also less likely in covenant violations. While we know of no apparent reasons for the modification of the contracting terms, we conjecture that lenders might relax them to solve the status of technical default as they rarely punish clients in any way. In this regard, the results in Table 17 can indicate that financial covenants are an early warning signal to ascertain the status of borrowers and may not aim to impose strict penalties or restrictions.¹⁴

[Insert Table 17 about here]

6. Additional analysis using subsamples of commercial and Shinkin banks

In the above analyses, we use all available responses from banks. However, as argued in Section 2.2, our sample includes a diverse set of banks, and the heterogeneity among banks may affect our results. Among others, our sample consists of many Shinkin banks, non-commercial banks that tend to be smaller and more local-oriented than commercial banks. This section examines whether the differences between commercial and Shinkin banks produce different results by comparing their responses. In doing so, we aggregate responses from commercial and Shinkin banks separately for all questions we asked in the questionnaire, and conduct *t*-tests to detect significant differences. Although we did not identify significant differences for many of our questions, we found noteworthy differences in the following five points.

First, for the percentage of loans as main banks (Section 3.2, Table 4), we find that declines

¹⁴ We also asked lenders the triggers for renegotiation other than covenant violation. From untabulated results, we found no factors that prompt lenders to renegotiate. Still, they are less likely to consider that “changes in accounting policy in borrowers,” “changes in GAAP,” and “over-strictness of debt covenants” are important triggers for renegotiation.

in the ratio are more pronounced for commercial banks, which is not the case for Shinkin banks. The ratio declined from 38.0% to 27.4% for commercial banks, while it only slightly decreased from 49.9% to 44.8% for Shinkin banks over the past four decades. As a result, we find statistically significant differences between commercial and Shinkin banks since the 1990s.

Second, for lenders' views on bank–firm relationships (Section 3.2, Table 5), we find that Shinkin banks are less likely to put weight on “bond-related services,” “shareholding of clients,” and “dispatch of board members” than commercial banks. During the last four decades, while commercial banks have tended to be neutral on the importance of these three items (i.e., the mean values are not different from the value of three), Shinkin banks are likely to consider these factors unimportant.

Third, for the detection of and response to borrowers' financial distress (Section 3.5, Tables 7 and 8), commercial banks are more likely to rely on “continuous monitoring of settlement accounts” and “violation of debt covenant” than Shinkin banks. Moreover, commercial banks are more likely to “dispatch employees to clients” and “provide funds through share subscription” than Shinkin banks.

Fourth, for the use of accounting information (Section 4), we find that Shinkin banks are less likely to weigh “analyst consensus” as borrowers' earnings benchmarks (Table 10) and less likely to focus on “earnings that are relevant to stock prices” for desirable earnings attributes (Table 11) as compared to commercial banks.

Finally, on the questions regarding the frequency of financial covenants (Section 5.1), we find that commercial banks are more likely to include financial covenants in both bilateral loans (5.72% of total loans) and syndicated loans (62.22%) than Shinkin banks (0.58% and 38.91%, respectively). Similarly, commercial banks are more likely to use “negative pledge covenant,” “restriction on dividends,” and “credit rating covenant” than Shinkin banks (Table 14). Moreover, we find that, for

lenders' responses to covenant violations (Table 17), Shinkin banks are less likely to “request amendment fees” and “request collateral.”

These comparative results provide additional insights. First, the main bank system is more likely to remain among Shinkin banks and therefore loans for SMEs. The results align with prior studies reporting that large and listed borrowers have gradually shifted away from bank loans since the 2000s (Arikawa and Miyajima, 2015), especially with the FSA's “Program for Further Financial Reform” encouraging intimate relationship banking for local banks.

Moreover, the differences identified above may be attributable to the underlying differences in bank size, resources, and clients between commercial and Shinkin banks. Commercial banks tend to be larger and have more resources and bigger clients than Shinkin banks, by their nature. Thus, the services that commercial banks provide can be systematically different from those of Shinkin banks. For instance, bond-related services and dispatch of human resources may be unfeasible for Shinkin banks with relatively fewer resources. Similarly, the active use of financial covenants may be challenging, particularly for Shinkin banks, due to the lack of established knowledge and practice for such contracting techniques. In addition, since many clients of Shinkin banks are expected to be unlisted, these lenders are less likely to focus on capital market-related information, such as analyst forecasts and value relevance of earnings.

7. Discussion

So far, we have discussed a wide range of response results regarding the Japanese bank-firm relationship and the use of accounting information and financial covenants in loan markets. In this section, we attempt to tackle four unresolved questions by integrating these obtained individual responses. First, prior studies have not investigated bank lenders' views of the main bank system,

with sparse evidence on the current popularity of the main bank system. We find that many lenders perceived themselves as main banks in some form, yet the portion of loans as main banks has significantly decreased, particularly among commercial banks. Moreover, bank–firm relationships can be more limited than Aoki et al. (1994) argue and characterized largely by concentrated lending, settlement account control, and management advice. Therefore, our evidence suggests that the main bank system still exists but not to the extent that previous literature has discussed.

Second, it has been in question whether bank lenders use public accounting information in the bank-centered economy of Japan (Biddle and Hilary, 2006; Enomoto et al., 2020). Our survey confirms that Japanese banks use accounting information for lending decision-making, continuous monitoring, and detecting borrowers' financial distress. Hence, together with the results for the main bank system, our evidence implies that as the main bank-firm relationship has weakened compared to before, the use of accounting information is now more universal in the Japanese loan markets. However, this does not necessarily indicate that publicly reported accounting information is *more* important than lenders' private information channels. Instead, it suggests that lenders utilize both private and public information for current lending practices.

Third, our survey shows that bank lenders are less likely to put weight on accounting conservativeness for reported earnings, but modify borrowers' financial statements conservatively. This implies that bank lenders do not universally demand conservatism as a characteristic of borrowers' reported earnings but rather incorporate accounting conservatism at lenders' private cost. Although further scrutiny is needed on the cost and benefit comparison between market coordination and accounting regulation, our evidence provides limited support to include conservativeness in accounting standards (Kothari et al., 2010).

Fourth, our findings suggest that Japanese bank lenders tend to use financial covenants to obtain control rights rather than restrict borrowers' opportunistic actions due to agency problems.

As shown in Sections 3 and 4 (see Tables 7 and 9, for example), Japanese lenders can utilize private and public information channels for better access to borrowers' financial status and managerial actions. In such cases, opportunistic actions stemming from information asymmetry are unlikely to occur and may not need to be deterred by financial covenants. Instead, bank lenders may demand tripwires to bring discipline and retain bargaining power in their relationship with borrowers. Thus, the use of financial covenants might be more consistent with the implications of the incomplete contracting theory than the agency theory in the Japanese context.

8. Conclusion

In this study, we ask bank lenders in Japan about their views on (1) the main bank system, (2) the use of accounting information, and (3) financial covenants. Our sample consists of many city, local, and Shinkin banks in Japan, with a relatively high response rate.

We report that although lending as main banks has declined over the decades, many Japanese bank lenders agreed that the main bank system still exists. Moreover, they characterized the main bank–firm relationship by concentrated lending, settlement account control, and management advice. In detecting borrowers' financial distress, lender banks tend to focus on both private and public accounting information.

Regarding the use of accounting information, we document that bank lenders use borrowers' accounting information for lending decisions and continuous monitoring purposes. They tend to prefer persistent earnings tied to cash flows for reported earnings attributes. Moreover, we show that lenders are more likely to focus on operating cash flows in credit assessment and modify borrowers' working capital conservatively.

We also find that financial covenants are largely used in syndicated loans in Japan. Bank

lenders frequently use “maintenance of net assets” and “maintenance of earnings” as financial covenants. As for the linkage between theory and practice, bank lenders expect these covenants to promptly detect deteriorations in borrowers’ performance and obtain bargaining power, supporting the view under the incomplete contracting theory.

Our study significantly complements archival studies by providing fundamental lenders’ perception about bank–firm relationships and accounting information. For instance, the evidence reported in this study will be helpful to researchers to illustrate Japanese bank–firm relationships and analyze the relative importance of public accounting information. Further, we unlock the black box of bank lenders’ focus and the process of borrowers’ reported financial statements. These findings may lead to better hypothesis development and proxy construction in archival studies on accounting quality and debt contracting.

Appendix: Lists of accounting items and financial indicators (Section 4.4, and Table 12).

Panel A: Accounting items shown in financial statements			
Balance sheet items		Income and cash flow statements	
1	Cash and equivalents	17	Total revenues
2	Loan receivables	18	Costs of goods sold
3	Inventory	19	Gross profit
4	Account receivables	20	Selling, general and administrative expenses
5	Other current assets	21	Operating income
6	Property, plant, and equipment	22	Non-operating income
7	Intangible assets	23	Non-operating expenses
8	Investment securities	24	Ordinary income
9	Short-term borrowings	25	Special income
10	Account payables	26	Special losses
11	Other current liabilities	27	Net income before taxes
12	Long-term borrowings and bonds	28	Net income
13	Common and preferred stock	29	Cash flows from operating activities
14	Capital reserves	30	Cash flows from investment activities
15	Retained earnings	31	Cash flows from financing activities
16	Accumulated other comprehensive income		

Panel B: Financial indicators and metrics			
1	Return on assets (ROA)	12	Equity ratio
2	Return on equity (ROE)	13	Fixed ratio
3	Return on sales (ROS)	14	Interest coverage ratio
4	Asset turnover	15	Ordinary revenues-expenses ratio
5	Receivable turnover	16	Free cash flow
6	Inventory turnover	17	Added values
7	Tangible fixed assets turnover	18	Labor productivity
8	Short-term liquidity	19	Sales growth
9	Current ratio	20	Earnings growth
10	Quick ratio	21	Payout ratio
11	Leverage ratio	22	Debt-to-EBITDA ratio

References

- Aghion, P., and P. Bolton. 1992. An incomplete contracts approach to financial contracting. *The Review of Economic Studies* 59 (3): 473–494.
- Ahmed, A. S., B. K. Billings, R. M. Morton, and M. Stanford-Harris. 2002. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review* 77 (4): 867–890.
- Aoki, M. 1994. Monitoring characteristics of the main bank system: An analytical and developmental view. In: M. Aoki, H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economics* (Oxford University Press, Oxford): 109–141.
- Aoki, M., H. Patrick, and P. Sheard. 1994. The Japanese main bank system: An introductory overview. In: M. Aoki, H. Patrick, eds., *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economics* (Oxford University Press, Oxford): 1–51.
- Arikawa, Y., and H. Miyajima. 2007. Relationship banking in post-bubble Japan: Coexistence of soft- and hard-budget constraints. In : M. Aoki, G. Jackson, H. Miyajima, eds., *Corporate Governance in Japan* (Oxford University Press, Oxford): 51–78.
- Arikawa, Y., and H. Miyajima. 2015. The bank-firm relationships in Japan: From a historical perspective. *Organizational Science* 49 (1): 19–31 (in Japanese).
- Arikawa, Y., H. Miyajima, and R. Ogawa. 2017. Megabank seiritsugo no kigyou-ginkoukan kankei (in Japanese). In: H. Miyajima ed., *Kigyou touchi to seichou senryaku* (Toyo Keizai Shinpou Sha, Tokyo): 63–96.
- Armstrong, C. S., W. R. Guay, and J. P. Weber. 2010. The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics* 50 (2–3): 179–234.
- Beatty, A., J. Weber, and J. J. Yu. 2008. Conservatism and debt. *Journal of Accounting and Economics* 45 (2–3): 154–174.
- Begley, J., and G. A. Feltham. 1999. An empirical examination of the relation between debt contracts and management incentives. *Journal of Accounting and Economics* 27 (2): 229–259.
- Beneish, M. D., and E. Press. 1993. Costs of technical violation of accounting-based debt covenants. *The Accounting Review* 68 (2): 233–257.
- Beneish, M. D., and E. Press. 1995. The resolution of technical default. *The Accounting Review* 70 (2): 337–353.

- Berger, A. N., and G. F. Udell. 2006. A more complete conceptual framework for SME finance. *Journal of Banking & Finance* 30 (11): 2945–2966.
- Bharath, S. T., J. Sunder, and S. V. Sunder. 2008. Accounting quality and debt contracting. *The Accounting Review* 83 (1): 1–28.
- Biddle, G. C., and G. Hilary. 2006. Accounting quality and firm-level capital investment. *The Accounting Review* 81 (5): 963–982.
- Bradley, M., and M. R. Roberts. 2015. The structure and pricing of corporate debt covenants. *The Quarterly Journal of Finance* 05 (02): 1550001.
- Brav, A., J. R. Graham, C. R. Harvey, and R. Michaely. 2005. Payout policy in the 21st century. *Journal of Financial Economics* 77 (3): 483–527.
- Caballero, R. J., T. Hoshi, and A. K. Kashyap. 2008. Zombie lending and depressed structuring in Japan. *American Economic Review* 98 (5): 1943–1977.
- Cassar, G., C. D. Ittner, and K. S. Cavalluzzo. 2015. Alternative information sources and information asymmetry reduction: Evidence from small business debt. *Journal of Accounting and Economics* 59 (2–3): 242–263.
- Chava, S., and M. R. Roberts. 2008. How does financing impact investment? The role of debt covenants. *The Journal of Finance* 63 (5): 2085–2121.
- Christensen, H. B., and V. V. Nikolaev. 2012. Capital versus performance covenants in debt contracts. *Journal of Accounting Research* 50 (1): 75–116.
- Christensen, H. B., V. V. Nikolaev, and R. Wittenberg-Moerman. 2016. Accounting information in financial contracting: The incomplete contract theory perspectives. *Journal of Accounting Research* 54 (2): 397–435.
- Demerjian, P. D., and E. L. Owens. 2016. Measuring the probability of financial covenant violation in private debt contracts. *Journal of Accounting and Economics* 61 (2–3): 433–447.
- Dichev, I. D., and D. J. Skinner. 2002. Large-sample evidence on the debt covenant hypothesis. *Journal of Accounting Research* 40 (4): 1091–1123.
- Dichev, I. D., J. R. Graham, C. R. Harvey, and S. Rajgopal. 2013. Earnings quality: Evidence from the field. *Journal of Accounting and Economics* 56 (2–3, supplement 1): 1–33.
- Donelson, D. C., R. Jennings, and H. Mcinnis. 2017. Financial statement quality and debt contracting: Evidence from a survey of commercial lenders. *Contemporary Accounting Research* 34 (4): 2051–2093.
- Dyreng, S. D., R. Vashishtha, and J. Weber. 2017. Direct evidence on the informational properties

- of earnings in loan contracts. *Journal of Accounting Research* 55 (2): 371–406.
- El-Gazzar, S., and V. Pastena. 1991. Factors affecting the scope and initial tightness of covenant restrictions in private lending agreements. *Contemporary Accounting Research* 8 (1): 132–151.
- Enomoto, M., B. Jung, S. G. Rhee, and A. Shuto. 2020. Accounting quality and investment efficiency in a bank-centered economy: Evidence from the 2001 bank shareholding limitation act of Japan. Working paper, SSRN.
- Francis, J., O. Olsson, and K. Schipper. 2006. Earnings quality. *Foundations and Trends in Accounting* 1 (4): 259–340.
- Francis, J., R. LaFond, P. Olsson, and K. Schipper. 2005. The market pricing of accruals quality. *Journal of Accounting and Economics* 39 (2): 295–327.
- Graham, J. R., C. R. Harvey, and S. Rajgopal. 2005. The economic implications of corporate financial reporting. *Journal of Accounting and Economics* 40 (1–3): 3–73.
- Graham, J. R., M. Hanalon, T. Shevlin, and N. Shroff. 2014. Incentives for tax planning and avoidance: Evidence from the field. *The Accounting Review* 89 (3): 991–1023.
- Hirota, S. 2009. Nihon no Main bank kankei (in Japanese). RIETI Discussion Paper Series 09-J-023.
- Hong, H. A., M. Hung, and J. Zhang. 2016. The use of debt covenants worldwide: Institutional determinants and implications of financial reporting. *Contemporary Accounting Research* 33 (2): 644–681.
- Hoshi, T., A. Kashyap, and D. Scharfstein. 1990. The role of banks in reducing the costs of financial distress in Japan. *Journal of Financial Economics* 27 (1): 67–88.
- Hoshi, T., S. Koibuchi, and U. Schaede. 2018. The decline in bank-led corporate restructuring in Japan: 1981–2010. *Journal of the Japanese and International Economies* 47: 81–90.
- Jacobson, R., and D. Aaker. 1993. Myopic management behavior with efficient, but imperfect, financial markets: A comparison of information asymmetries in the U.S. and Japan. *Journal of Accounting and Economics* 16 (4): 383–405.
- Jayaraman, S., and L. Shivakumar. 2013. Agency-based demand for timely loss recognition: Evidence from state adoption of antitakeover laws. *Review of Accounting Studies* 18 (1): 95–134.
- Kang, J., and A. Shivdasani. 1995. Firm performance, corporate governance, and top executive turnover in Japan. *Journal of Financial Economics* 38 (1): 29–58.
- Kang, J., A. Shivdasani, and T. Yamada. 2000. The effect of bank relations on investment decisions:

- An investigation of Japanese takeover bids. *The Journal of Finance* 55 (5): 2197–2218.
- Kano, M., H. Uchida, G. F. Udell, and W. Watanabe. 2011. Information verifiability, bank organization, bank competition, and bank-borrower relationship. *Journal of Banking and Finance* 35 (4): 935–954.
- Kaplan, S. N., and B. A. Minton. 1994. Appointments of outsiders to Japanese boards: Determinants and implications for managers. *Journal of Financial Economics* 36 (2): 225–258.
- Kochiyama, T., and R. Nakamura. 2021. Debt covenants in Japanese loan markets: In comparison with the traditional relationship banking. *Accounting and Finance* 61 (1): 305–334.
- Kothari, S. P., K. Ramanna, and D. J. Skinner. 2010. Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics* 50 (2–3): 246–286.
- Leftwich, R. 1983. Accounting information in private markets: Evidence from private lending agreements. *The Accounting Review* 58 (1): 23–42.
- Leuz, C., D. Deller, and M. Stubenrath. 1998. An international comparison of accounting-based payout restrictions in the United States, United Kingdom, and Germany. *Accounting and Business Research* 28 (2): 111–129.
- Li, N. 2010. Negotiated measurement rules in debt contracts. *Journal of Accounting Research* 48 (5): 1103–1144.
- Li, N. 2016. Performance measures in earnings-based financial covenants in debt contracts. *Journal of Accounting Research* 54 (4): 1149–1186.
- Nakatani, I. 1984. The economic role of financial corporate grouping. In: M. Aoki, ed., *The Economic Analysis of the Japanese Firms*. (Amsterdam; New York: North-Holland): 227–258.
- Nini, G., D. C. Smith, and A. Sufi. 2009. Creditor control rights and firm investment policy. *Journal of Financial Economics* 92 (3): 400–420.
- Nini, G., D. C. Smith, and A. Sufi. 2012. Creditor control rights, corporate governance, and firm value. *The Review of Financial Studies* 25 (6): 1713–1761.
- Ota, K. 2010. The value relevance of management forecasts and their impact on analysts' forecasts: Empirical evidence from Japan. *Abacus* 46 (1): 28–59.
- Peek, J. 2011. The changing role of main banks in aiding distressed firms in Japan. In: K. Hamada, A. K. Kashyap, D. E. Weinstein, eds., *Japan's Bubble, Deflation, and Long-term Stagnation* (The MIT Press, Cambridge): 309–342.
- Peek, J., and E. S. Rosengren. 2005. Unnatural selection: Perverse incentives and the misallocation of credit in Japan. *American Economic Review* 95 (4): 1144–1166.

- Penalva, F., and A. Wagenhofer. 2019. Conservatism in debt contracting: Theory and empirical evidence. *Accounting and Business Research* 49 (6): 619–647.
- Shivakumar, L. 2013. The role of financial reporting in debt contracting and in stewardship. *Accounting and Business Research* 43 (4): 362–383.
- Skinner, D. J., and R. G. Sloan. 2002. Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. *Review of Accounting Studies* 7 (2–3): 289–312.
- Smith, C. W. Jr., and J. B. Warner. 1979. On financial contracting: An analysis of bond covenants. *Journal of Financial Economics* 7 (2): 117–161.
- Suda, K., and H. Hanaeda. 2008. Corporate financial reporting strategy: Survey evidence from Japanese firms (in Japanese). *Securities Analysts Journal* 46 (5): 51–69.
- Sweeney, A. P. 1994. Debt-covenant violations and managers' accounting responses. *Journal of Accounting and Economics* 17 (3): 281–308.
- Uchida, H., G. F. Udell, and W. Watanabe. 2008. Bank size and lending relationships in Japan. *Journal of the Japanese and International Economies* 22 (2): 242–267.
- Xu, P., 2007. Corporate governance in financial distress: The new role of bankruptcy. In: M. Aoki, G. Jackson, and H. Miyajima, eds., *Corporate Governance in Japan: Institutional Change and Organizational Diversity* (Oxford University Press, Oxford): 179–204.
- Watts, R. L. 2003. Conservatism in accounting Part I: Explanations and implications. *Accounting Horizons* 17 (3): 207–221.
- Watts, R. L., and J. L. Zimmerman. 1986. *Positive Accounting Theory* (Prentice-Hall, Upper Saddle River, NJ).
- Weinstein, D. E., and Y. Yafeh. 1998. On the costs of a bank-centered financial system: Evidence from the changing main bank relations in Japan. *The Journal of Finance* 53 (2): 635–672.
- Zhang, J. 2008. The contracting benefits of accounting conservatism to lenders and borrowers. *Journal of Accounting and Economics* 45 (1): 27–54.

FIGURE 1.

Organization of the study and questionnaire

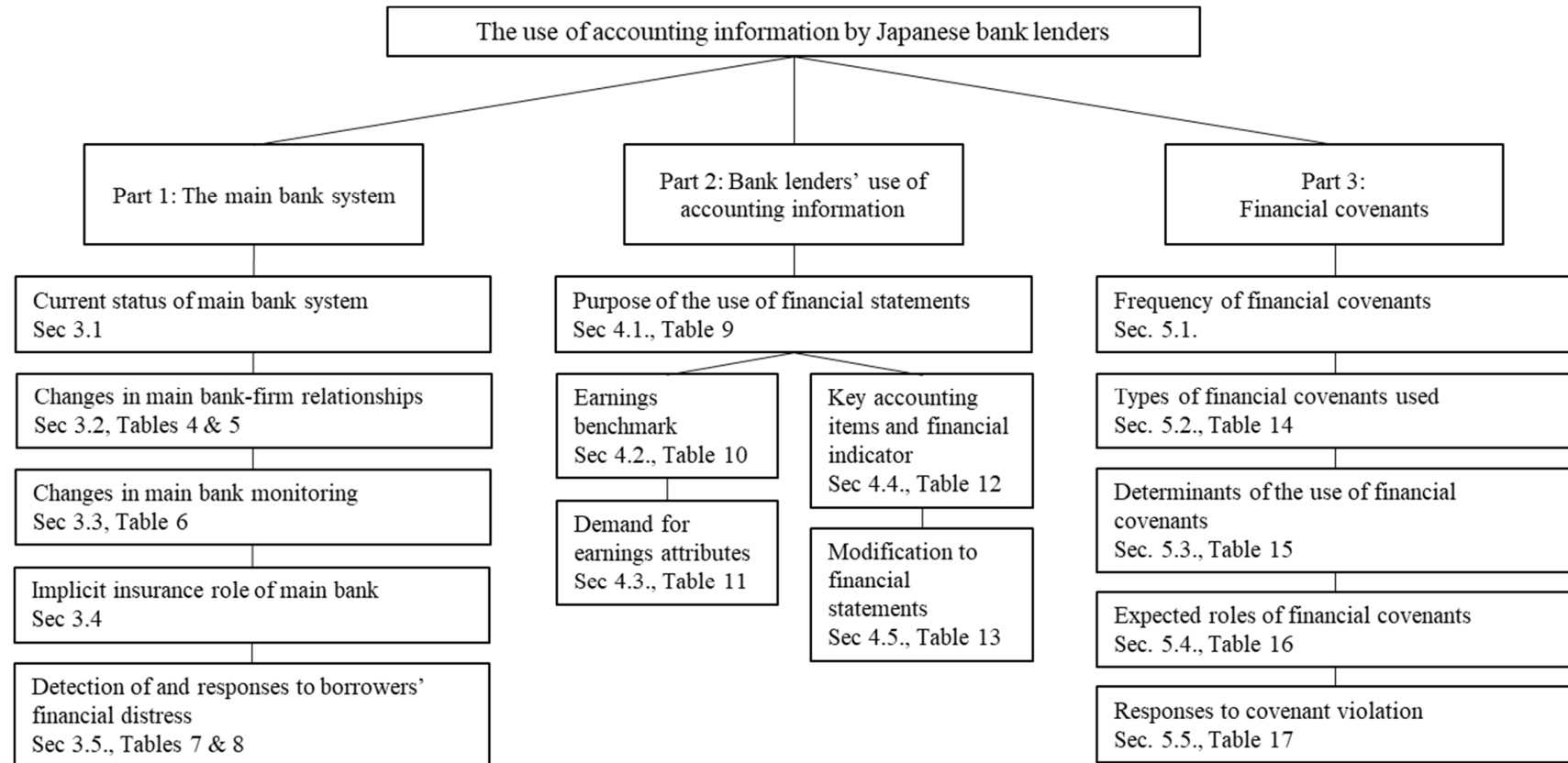


TABLE 1

Respondent characteristics

Panel A: Sample configuration and response rate by bank category

	Population		Sample		Response rate
Shinkin bank	260	60.89%	73	73.74%	28.08%
Regional bank	122	28.57%	19	19.19%	15.57%
Trust bank	16	3.75%	3	3.03%	18.75%
City bank	11	2.58%	2	2.02%	18.18%
Internet bank	10	2.34%	1	1.01%	10.00%
Government bank	8	1.87%	1	1.01%	12.50%
Total	427	100%	99	100%	

Panel B: Department/division of bank respondents

	N	%
Loan department	50	50.51%
Credit assessment department	44	44.44%
Other	5	5.05%
Total	99	100%

Panel C: Title/position of respondents

	N	%
General manager	21	21.21%
Vice general manager	25	25.25%
Section chief	25	25.25%
Acting section chief	11	11.11%
Other	5	5.05%
Unanswered	12	12.12%
Total	99	100%

Notes: This table shows descriptive information about survey respondents and their employer banks.

Panel A provides the sample configuration and response rate for each bank category. We sent our survey materials via postal mail to 427 Japanese banks and obtained 99 valid responses. Panels B and C show the department/division and title/position of respondents, respectively. We obtained respondents' personal information from demographic questions in the survey instrument.

TABLE 2

Descriptive statistics

	N	Mean	Std	Min	Q1	Median	Q3	Max
<i>List</i>	99	0.091	0.289	0	0	0	0	1
<i>Assets</i>	91	3,763	19,321	85	226	487	1,185	179,083
<i>Revenues</i>	92	64	342	1	3	6	16	3,149
<i>Earnings</i>	92	10	48	-1	0	1	2	427
<i>Emp</i>	89	1,246	4,265	59	188	322	784	37,786
<i>LoanRatio</i>	91	0.479	0.126	0.137	0.397	0.455	0.562	0.860
<i>DebtRatio</i>	91	0.943	0.019	0.876	0.933	0.947	0.956	0.976

Notes: This table shows descriptive statistics for the sample of responding banks. We collected financial data from *Nikkei NEEDS FinancialQUEST* and merged the data with information obtained from the survey, based on banks' names and financial institution codes. The financial data are annual and based on the fiscal year ending in March 2019, immediately before sending the survey instruments. *List* is an indicator variable that takes the value one if the bank is listed on Japanese stock markets and zero otherwise. *Assets* is total assets (billion yen). *Revenues* is operating revenues (billion yen). *Earnings* is earnings before taxes and extraordinary items (*Keijyou Rieki*, billion yen). *Emp* is the number of employees. *LoanRatio* is the percentage of commercial loans to total assets. *DebtRatio* is the percentage of total debts to total assets. The data availability differs by variables because Shinkin banks in the sample are non-profit organizations and thus, not subject to public disclosure regulations. All data are unwinsorized.

TABLE 3

Tests for non-response bias and sample representativeness

Panel A: Means and medians by response status									
	(1) Responder			(2) Non-responder			(3) All banks		
	N	Mean	Median	N	Mean	Median	N	Mean	Median
<i>List</i>	99	0.091	0.000	328	0.244	0.000	427	0.208	0.000
<i>Assets</i>	91	3,763	487	291	7,312	705	382	6,467	615
<i>Revenues</i>	92	64	6	295	129	10	387	114	9
<i>Earnings</i>	92	10	1	295	23	1	387	20	1
<i>Emp</i>	89	1,246	322	280	2,073	450	369	1,874	408
<i>LoanRatio</i>	91	0.479	0.455	291	0.506	0.487	382	0.499	0.477
<i>DebtRatio</i>	91	0.943	0.947	291	0.939	0.944	382	0.940	0.945

Panel B: Comparative tests				
	(1) vs. (2)		(1) vs. (3)	
	<i>t</i> -value	<i>z</i> -value	<i>t</i> -value	<i>z</i> -value
<i>List</i>	-3.319 ***	-3.281 ***	-2.720 ***	-2.703 ***
<i>Assets</i>	-0.973	-1.694 *	-0.811	-1.329
<i>Revenues</i>	-0.960	-1.669 *	-0.804	-1.310
<i>Earnings</i>	-1.032	-1.761 *	-0.878	-1.382
<i>Emp</i>	-0.892	-1.266	-0.749	-0.990
<i>LoanRatio</i>	-1.675 *	-1.823 *	-1.330	-1.430
<i>DebtRatio</i>	1.327	1.466	1.067	1.150

Notes: This table provides descriptive statistics of survey respondents, non-respondents, and all banks with available data.

Panel A shows the means and medians. Panel B compares descriptive statistics of respondents to those of non-respondents and all banks with available data using *t*-tests and Wilcoxon rank-sum tests. *** and * indicate statistical significance at the 1% and 10% levels, respectively (two-tailed).

TABLE 4

Responses for loans as main banks

Question: What is the percentage of loans as main banks to total loans in terms of amount?			
	N	Mean	1980s vs. 2010s
1980s	53	46.96	<i>t</i> -value -1.81*
1990s	55	43.93	
2000s	57	40.12	
2010s	66	39.77	

Notes: This table provides responses to an open-ended question about the percentage of loans as main banks. Respondents were asked to fill in the approximate values for the percentage of their loan balances as main banks to total loan balances historically. We compared the difference between the 1980s and 2010s using a *t*-test. * indicates statistical significance at the 10% level (two-tailed).

TABLE 5

Bank lenders' views on bank–firm relationship in main bank system

Question: In considering bank–firm relationships as main banks, how important are the following?										
		Not Important 1	2	3	4	Very Important 5	N	Mean	H0: Mean = 3	1980s vs. 2010s
(1) Concentrated lending	1980s	1.41%	4.23%	21.13%	39.44%	33.80%	71	4.00	***	1.71*
	1990s	1.39%	6.94%	20.83%	41.67%	29.17%	72	3.90	***	
	2000s	1.25%	5.00%	31.25%	38.75%	23.75%	80	3.79	***	
	2010s	1.22%	7.32%	29.27%	40.24%	21.95%	82	3.74	***	
(2) Bond-related services	1980s	54.39%	26.32%	10.53%	1.75%	7.02%	57	1.81	***	-0.83
	1990s	57.63%	23.73%	8.47%	3.39%	6.78%	59	1.78	***	
	2000s	53.85%	21.54%	13.85%	4.62%	6.15%	65	1.88	***	
	2010s	50.00%	22.06%	13.24%	8.82%	5.88%	68	1.99	***	
(3) Shareholding of clients	1980s	64.41%	16.95%	3.39%	6.78%	8.47%	59	1.78	***	1.16
	1990s	65.00%	16.67%	5.00%	8.33%	5.00%	60	1.72	***	
	2000s	66.67%	18.18%	9.09%	3.03%	3.03%	66	1.58	***	
	2010s	65.22%	21.74%	8.70%	1.45%	2.90%	69	1.55	***	
(4) Control and management of settlement account	1980s	2.99%	1.49%	13.43%	37.31%	44.78%	67	4.19	***	0.01
	1990s	2.90%	2.90%	11.59%	39.13%	43.48%	69	4.17	***	
	2000s	2.63%	1.32%	14.47%	42.11%	39.47%	76	4.14	***	
	2010s	2.56%	1.28%	14.10%	38.46%	43.59%	78	4.19	***	
(5) Providing management advice and information	1980s	1.45%	5.80%	39.13%	43.48%	10.14%	69	3.55	***	-6.17***
	1990s	1.41%	4.23%	38.03%	45.07%	11.27%	71	3.61	***	
	2000s	2.53%	1.27%	18.99%	48.10%	29.11%	79	4.00	***	
	2010s	1.23%	2.47%	7.41%	34.57%	54.32%	81	4.38	***	
(6) Dispatch of board and auditor members	1980s	43.55%	17.74%	20.97%	11.29%	6.45%	62	2.19	***	0.14
	1990s	45.31%	15.63%	26.56%	6.25%	6.25%	64	2.13	***	
	2000s	40.85%	22.54%	23.94%	8.45%	4.23%	71	2.13	***	
	2010s	39.73%	23.29%	21.92%	10.96%	4.11%	73	2.16	***	

Notes: This table provides responses to questions about the factors considered important in the main bank–firm relationships. Respondents were asked to indicate the importance of each factor by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** denoting rejection at the 1% level. Column 11 compares the mean values between the 1980s and 2010s using *t*-tests, with *** and * denoting significant differences at the 1% and 10% levels, respectively (two-tailed).

TABLE 6

Main bank monitoring through the lending process

Question: In considering monitoring roles as main banks, how important are the following?										
		Not Important 1	2	3	4	Very Important 5	N	Mean	H0: Mean = 3	1980s vs. 2010s
(1) <i>Ex ante</i> monitoring	1980s	1.45%	10.14%	30.43%	34.78%	23.19%	69	3.68	***	-5.35***
	1990s	1.41%	4.23%	33.80%	38.03%	22.54%	71	3.76	***	
	2000s	1.27%	0.00%	16.46%	51.90%	30.38%	79	3.23	***	
	2010s	0.00%	1.22%	7.32%	40.24%	51.22%	82	4.41	***	
(2) Interim monitoring	1980s	0.00%	5.80%	42.03%	36.23%	15.94%	69	3.62	***	-6.30***
	1990s	0.00%	4.23%	35.21%	43.66%	16.90%	71	3.73	***	
	2000s	0.00%	1.27%	13.92%	59.49%	25.32%	79	4.09	***	
	2010s	1.22%	0.00%	6.10%	41.46%	51.22%	82	4.41	***	
(3) <i>Ex post</i> monitoring	1980s	5.88%	20.59%	50.00%	14.71%	8.82%	68	3.00		-2.56**
	1990s	5.71%	20.00%	47.14%	17.14%	10.00%	70	3.06		
	2000s	3.85%	15.38%	42.31%	26.92%	11.54%	78	3.27	**	
	2010s	6.17%	9.88%	38.27%	24.69%	20.99%	81	3.44	***	

Notes: This table shows responses to questions about the importance of monitoring through the lending process. We presented definitions for each monitoring stage in the survey materials. Respondents were asked to indicate how important each monitoring stage is for main banks by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** and ** denoting rejection at the 1% and 5% levels, respectively. Column 11 compares the mean values between the 1980s and 2010s using *t*-tests, with *** and ** denoting significant differences at the 1% and 5% levels, respectively (two-tailed).

TABLE 7

Detection of clients' financial distress

Question: In detecting clients' financial distress as main banks, how likely are the following items to be used?										
		Not likely at all 1	2	3	4	Very likely 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1)	Periodical meeting/contact with clients	0.00%	3.61%	7.23%	36.14%	53.01%	83	4.39	***	2-3, 5
(2)	Voluntary notification from clients	0.00%	10.84%	36.14%	28.92%	24.10%	83	3.66	***	1-3, 4-5
(3)	Continuous monitoring of clients' settlement account	3.61%	10.84%	48.19%	27.71%	9.64%	83	3.29	***	1-2, 4-5
(4)	Public financial information such as financial statements	0.00%	2.41%	8.43%	26.51%	62.65%	83	4.49	***	2-3, 5
(5)	Violation of debt covenants	32.10%	33.33%	18.52%	8.64%	7.41%	81	2.26	***	1-4

Notes: This table provides responses to questions about how bank lenders detect borrowers' financial distress. Respondents were asked to indicate how likely it is for these information channels to be used, by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** denoting rejection at the 1% level. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013). For instance, for row (1), the recorded "2-3, 5" indicates that the average rating for the question in row (1) is significantly different from the average ratings for rows (2), (3), and (5).

TABLE 8

Support to clients facing financial distress

Question: In supporting clients' financial distress as main banks, how likely are the following items to be used?										
		Not likely at all 1	2	3	4	Very likely 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1)	Develop restructuring plans	1.20%	0.00%	3.61%	32.53%	62.65%	83	4.55 ***		2-3, 5-6
(2)	Lend additional funds	1.20%	3.61%	45.78%	31.33%	18.07%	83	3.61 ***		1, 3-6
(3)	Dispatch employees to clients	44.58%	34.94%	10.84%	4.82%	4.82%	83	1.90 ***		1-2, 4-6
(4)	Defer repayment of existing loans	1.20%	1.20%	3.61%	19.28%	74.70%	83	4.65 ***		2-3, 5-6
(5)	Reduce/exempt repayment of existing loans	15.66%	42.17%	26.51%	9.64%	6.02%	83	2.48 ***		1-4, 6
(6)	Provide funds through share subscription	74.70%	16.87%	6.02%	1.20%	1.20%	83	1.37 ***		1-5

Notes: This table provides responses to questions about how bank lenders support borrowers' financial distress. Respondents were asked to indicate how likely it is for the measures in the rows to be used, by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** denoting rejection at the 1% level. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013).

TABLE 9

Lenders' purpose of using financial statements

Question: Regarding the purpose of using financial statements, how likely are the following items to be applied to your bank?									
	Not likely at all 1	2	3	4	Very likely 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1) For lending decision making	1.02%	0.00%	2.04%	6.12%	90.82%	98	4.86 ***		3
(2) For continuous monitoring after lending	1.03%	0.00%	4.12%	10.31%	84.54%	97	4.77 ***		3
(3) As a trigger for management intervention	16.33%	20.41%	30.61%	13.27%	19.39%	98	2.99		1-2

Notes: This table provides responses to questions about bank lenders' views on the purpose of using borrowers' financial statements. Respondents were asked to indicate how likely it is for the statements in each row to be applicable to them, by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** denoting rejection at the 1% level. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013).

TABLE 10

Earnings benchmarks

Question: For borrowers' reported earnings benchmarks, how important are the following items?										
		Not important at all 1	2	3	4	Very Important 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1)	Management earnings forecasts	1.05%	0.00%	23.16%	52.63%	23.16%	95	3.97 ***		2, 4-5
(2)	Earnings in previous year	0.00%	0.00%	18.75%	46.88%	34.38%	96	4.16 ***		1, 4-5
(3)	Reporting a profit	0.00%	2.06%	20.62%	42.27%	35.05%	97	4.10 ***		4-5
(4)	Earnings of industry peers	1.05%	13.68%	49.47%	30.53%	5.26%	95	3.25 ***		1-3, 5
(5)	Analyst consensus	32.63%	21.05%	37.89%	7.37%	1.05%	95	2.23 ***		1-4

Notes: This table provides responses to questions about the importance of earnings benchmarks. Respondents were asked to indicate how important the earnings benchmarks in each row are by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** denoting rejection at the 1% level. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013).

TABLE 11

Preferences regarding earnings attributes

Question: For borrowers' reported earnings attributes, how desirable are the following items?										
		Not desirable at all 1	2	3	4	Very desirable 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1)	Earnings supported by cash flows	1.02%	1.02%	1.02%	28.57%	68.37%	98	4.62 ***		3-5
(2)	Persistent earnings	1.02%	0.00%	4.08%	34.69%	60.20%	98	4.53 ***		3-5
(3)	Less volatile earnings	1.02%	0.00%	19.39%	46.94%	32.65%	98	4.10 ***		1-2, 4-5
(4)	Earnings that are relevant to stock prices	21.05%	22.11%	53.68%	1.05%	2.11%	95	2.41 ***		1-3, 5
(5)	Earnings measured conservatively	4.12%	9.28%	52.58%	22.68%	11.34%	97	3.28 ***		1-4

Notes: This table provides responses to questions about bank lenders' preferences regarding borrowers' reported earnings attributes. Respondents were asked to indicate how desirable the statements in each row are by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** denoting rejection at the 1% level. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013).

TABLE 12

Lenders' focus on financial statement items and indicators

(1)			(2)		
F/S items	Answer	Frequency	Financial Indicator	Answer	Frequency
Cash flows from operating activities	71	71.72%	Shareholder equity ratio	73	73.74%
Debt balances	68	68.69%	Free cash flow	58	58.59%
Ordinary income	53	53.54%	Return on sales	47	47.47%
Sales	52	52.53%	Cash income and expense ratio	44	44.44%
Operating income	43	43.43%	Current ratio	33	33.33%
Cash and equivalent	41	41.41%	Inventory turnover	32	32.32%
Retained earnings	23	23.23%	Return on assets	27	27.27%
Accounts/notes receivables	22	22.22%	Debt-to-EBITDA ratio	26	26.26%
Inventory	21	21.21%	Receivables turnover	19	19.19%
Net income	19	19.19%	Sales growth	18	18.18%

Notes: This table shows responses to open-ended questions regarding the accounting items and indicators that lenders focus on in assessing the rating and adequacy of loans. We listed 31 accounting items shown in financial statements and 22 financial indicators and asked responders to choose up to five items in each (see Appendix for the lists). The table lists accounting items and financial indicators with a response frequency greater than 15% in Columns (1) and (2), respectively.

TABLE 13

Lenders' modification of reported financial statements

Panel A: Frequency of modification by financial statements			
	Downward	Upward	Total
Balance sheet items	193	23	216
Income statement items	54	28	82
Cash flow statement items	18	11	29

Panel B: Frequency of modification by accounting items			
	Downward	Upward	Frequency
Accounts/notes receivables (B/S)	49		49.49%
Inventory (B/S)	43		43.43%
Loan receivables (B/S)	26		26.26%
Depreciation (I/S)	9	11	20.20%
Property, plant, and equipment (B/S)	16		16.16%
Extraordinary income (I/S)	11		11.11%

Notes: This table provides responses to open-ended questions about lenders' modification of borrowers' GAAP financial statements. Respondents were asked to write down accounting items that they frequently modify and tick "downward" or "upward" for the items. We clearly define and communicate the meanings of "downward" and "upward" as decreases and increases in the filled-in items. B/S and I/S in the table denote balance sheet and income statement, respectively. Panel A provides the frequency of modifications by types of financial statements. Panel B shows accounting items with a response frequency greater than 10%.

TABLE 14

Types and frequency of financial covenants

Question: How frequently do you include the following covenants in loans with covenants? Please fill in the percentages (frequency) of each covenant in total covenant loan contracts.		
	Mean	N
(1) Maintenance of net assets	73.74%	47
(2) Maintenance of earnings	70.16%	47
(3) Negative pledge covenant	47.29%	44
(4) Equity ratio	33.19%	46
(5) Debt balance-related covenant	28.29%	40
(6) Restrictions on lending and investment	22.29%	40
(7) Restrictions on dividends	16.18%	39
(8) Maintenance of bond/credit rating	12.56%	41

Notes: This table provides responses to open-ended questions about the frequency of financial covenants in loan contracts. Respondents were asked to fill in the approximate numbers for the frequency of each covenant shown in the rows.

TABLE 15

Determinants of financial covenants

Question: To determine the inclusion of financial covenants, how important are the following items?										
		Not important at all 1	2	3	4	Very Important 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1)	Borrowers' financial health	6.56%	1.64%	19.67%	34.43%	37.70%	61	3.95 ***		3-8, 10
(2)	Borrowers' profitability	6.78%	5.08%	15.25%	44.07%	28.81%	59	3.83 ***		3, 5-8, 10
(3)	Borrowers' growth/prospects	10.17%	5.08%	35.59%	32.20%	16.95%	59	3.41 ***		1-2, 6, 10
(4)	The degree of borrowers' information disclosure	8.47%	1.69%	38.98%	32.20%	18.64%	59	3.51 ***		1, 6, 10
(5)	Borrowers' earnings quality	8.47%	3.39%	42.37%	35.59%	10.17%	59	3.36 ***		1-2, 6, 10
(6)	The quality of borrowers' corporate governance	11.86%	10.17%	49.15%	23.73%	5.08%	59	3.00		1-5, 8-9
(7)	Loan maturity	8.47%	8.47%	44.07%	27.12%	11.86%	59	3.25 *		1-2, 9-10
(8)	Loan size/materiality	8.47%	6.78%	32.20%	37.29%	15.25%	59	3.44 ***		1-2, 6, 10
(9)	Whether the loan is syndicated	4.84%	6.45%	35.48%	22.58%	30.65%	62	3.68 ***		6-7, 10
(10)	Whether the loan is granted as a main bank	18.64%	11.86%	49.15%	13.56%	6.78%	59	2.78		1-5, 7-9

Notes: This table shows responses to questions about the determinants of financial covenants. Respondents were asked to indicate the importance of the factors in each row by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** and * denoting rejection at the 1% and 10% levels, respectively. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013).

TABLE 16

Lenders' perceptions of the role of financial covenants

Question: Regarding the role of financial covenants, how likely are the following descriptions to be consistent with lenders' views?		Not likely at all 1	2	3	4	Very likely 5	N	Mean	H0: Mean = 3
Maintenance of net assets	Restrict borrowers' dividend payments, investments, and debt issuance in advance	7.84%	13.37%	39.22%	25.49%	13.73%	51	3.24	
	Detect deterioration in borrowers' performance in a timely manner and obtain bargaining power	3.92%	3.92%	27.45%	33.33%	31.37%	51	3.84	***
Maintenance of earnings	Restrict borrowers' dividend payments, investments, and debt issuance in advance	10.42%	14.58%	43.75%	22.92%	8.33%	48	3.04	
	Detect deterioration in borrowers' performance in a timely manner and obtain bargaining power	4.08%	2.04%	20.41%	38.78%	34.69%	49	3.98	***
Debt-related covenants	Restrict borrowers' dividend payments, investments, and debt issuance in advance	6.38%	10.64%	40.43%	27.66%	14.89%	47	3.34	**
	Detect deterioration in borrowers' performance in a timely manner and obtain bargaining power	4.26%	6.38%	31.91%	31.91%	25.53%	47	3.68	***

Notes: This table shows responses to questions about bank lenders' views on the expected roles of financial covenants. We focus on three financial covenants that are most frequently used in the Japanese markets: maintenance of net assets, maintenance of earnings, and debt-related covenants (Kochiyama and Nakamura, 2021). Respondents were asked how likely it is for two theoretical explanations (i.e., agency and incomplete contracting theories) to be consistent with their views by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** and ** denoting rejection at the 1% and 5% levels, respectively.

TABLE 17

Lenders' responses to covenant violation

Question: As responses to borrowers' covenant violation, how likely are the following items to be used?									
	Not likely at all 1	2	3	4	Very likely 5	N	Mean	H0: Mean = 3	Significant difference vs. rows
(1) Defer repayment of loans (grant waivers)	7.41%	7.41%	53.70%	24.07%	7.41%	54	3.17		3-5, 7, 9
(2) Modify the contracting terms	7.55%	1.89%	50.94%	32.08%	7.55%	53	3.30 **		3-9
(3) Request amendment fees	39.62%	18.87%	35.85%	5.66%	0.00%	53	2.08 ***		1-2, 4-9
(4) Renewal of loans/Loan additional funds	16.98%	20.75%	54.72%	7.55%	0.00%	53	2.53 ***		1-3, 5-6, 8-9
(5) Request collateral	9.43%	18.87%	50.94%	18.87%	1.89%	53	2.85		1-4, 7, 9
(6) Increase interest rates	12.96%	20.37%	37.04%	27.78%	1.85%	54	2.85		2-4, 7, 9
(7) Require immediate full repayment	22.64%	26.42%	39.62%	11.32%	0.00%	53	2.40 ***		1-3, 5-6, 8-9
(8) Increase the frequency of financial statements submission	11.11%	14.81%	48.15%	18.52%	7.41%	54	2.96		2-4, 7, 9
(9) Dispatch employees to clients	52.83%	20.75%	26.42%	0.00%	0.00%	53	1.74 ***		1-8

Notes: This table provides responses to questions about bank lenders' reactions to borrowers' covenant violations. Respondents were asked to indicate how likely it is for actions in each row to be used by selecting a number from one to five. In Column 10, we conduct *t*-tests of the null hypothesis that the average rating equals three, with *** and ** denoting rejection at the 1% and 5% levels, respectively. Column 11 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5% level are reported in the table (Dichev et al., 2013).