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What do we learn about current developments in the bank lending market in Japan from BOJ's *Senior Loan Officer Opinion Survey*?

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Market Review

The Senior Loan Officer Opinion Survey on bank lending practices at large Japanese banks (hereafter the 'loan survey') provides us with quantitative information on banks' views on the funding needs of firms and households as well as their own lending attitudes, which could not be grasped from traditional loan statistics. For instance, the loan survey confirms that the funding needs of firms have been stagnant reflecting sluggish fixed investment. Also, it shows that banks' efforts to widen spreads between loan rates and their own funding costs have gradually made progress to some extent. In particular, more and more banks find it less difficult to widen spreads on loans to firms with medium and low credit ratings. The Bank of Japan seeks room for enhancing the usefulness of the loan survey, particularly in terms of questionnaire content and the aggregation of responses from banks. The Bank of Japan continues to make every effort toward making the loan survey more important statistics to assess developments of commercial lending as well as overall economic activity.

Preface

The Bank of Japan (BOJ) conducts the *Senior Loan Officer Opinion Survey* (the 'loan survey') on a quarterly basis, making the results public[1] in the form of diffusion indexes (DIs). The objective of the survey is to quantitatively capture loan officers' views on the funding needs of borrowers and their own lending attitudes. The loan survey was initiated in April 2000 and is gradually gaining public attention as useful statistics to assess current developments in the commercial bank lending market in Japan.

First, this article introduces what the loan survey is all about and explains why BOJ initiated the survey. Second, it describes what questions BOJ asks in the survey. Third, it analyzes current developments in the bank lending market[2] using reported data from the last ten surveys and then identifies what BOJ can do to enhance the usefulness of the survey.

What is the 'loan survey'?

Why did BOJ initiate it?

In Japan, bank lending, accounting for the largest portion of funds handled by financial intermediaries, plays a pivotal role in the flow of funds. Closely monitoring developments in the bank lending market thus provides vital information for carrying out and assessing monetary policy. To this end, BOJ has for long compiled various statistics[3] on the bank lending market. For instance, the amount outstanding of bank loans and the average contracted interest rates on bank lending give information on the volume and pricing of bank lending. And, opinion surveys from the borrowers' side[4] on the lending attitudes of banks help us picture whether lending terms and conditions are tightened or eased. BOJ also gathers qualitative information by interviewing banks and borrower firms to supplement the above-mentioned quantitative information.

Despite these efforts, a large chunk of data remained missing: namely, the quantitative data on banks' views of the funding needs of borrowers and their own lending attitudes. BOJ had long needed such data since its ability to make a balanced assessment of developments in the bank lending market would be considerably strengthened by having the data. Thus, BOJ launched the loan survey in March 2000 and made the results public in the following month. A good leading example was the *Senior Loan Officer Opinion Survey on Bank Lending Practices* conducted by the US Federal Reserve (see BOX 1).

What are the framework and procedures of the loan survey?

BOJ invited the 50 largest Japanese commercial banks[5] in terms of loan amount outstanding comprising city banks, long-term credit banks, trust banks, regional banks, regional banks II, and *shinkin* banks. Participation of regional banks, regional banks II, and *shinkin* banks is particularly important in the sense that their views primarily reflect developments in the lending market for medium and small-sized firms, which are heavily dependent on bank lending. The total amount outstanding of loans extended by these 50 banks accounts for roughly 75% of the total amount outstanding of loans extended by all commercial banks in Japan.

BOJ distributes the multiple-choice questionnaire survey forms[6] (see BOX 2) to these banks in March, June, September, and December, and the reporting banks return them in respective following months. BOJ releases results (at the end of the month) in the form of diffusion indexes (DIs)[7]. The regular survey questionnaire has remained unchanged since the first survey in April 2000 in order to make the data series historically comparable. The regular questionnaire survey, however, is sometimes accompanied by special questionnaires on an *ad hoc* basis to grasp the views of the reporting banks on specific current issues of public focus. The first special questionnaire was included in the January 2001 survey (see BOX 3).

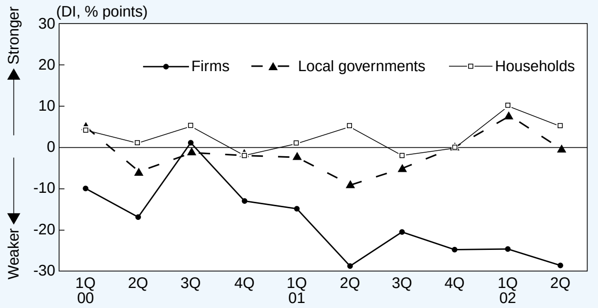
What does the loan survey tell us about current developments in the bank lending market in Japan?

What is the banks' opinion on the current funding needs of borrowers?

BOJ asks the reporting banks their views on changes over the past three months on the funding needs of borrowers[8] by borrower type[9], i.e., firms, local governments, and households, as well as by size of firm[10], i.e., large, medium, and small-sized. Figure 1 shows the DIs of banks' views on the funding needs by borrower type. The important point to note here is that the DI on the funding needs of firms has mostly been negative since the first survey. The constantly negative DI means that a larger proportion of the reporting banks has consistently responded that the funding needs of firms has decreased, or become "weaker." Recently, the degree of "weakness" has been widening further.

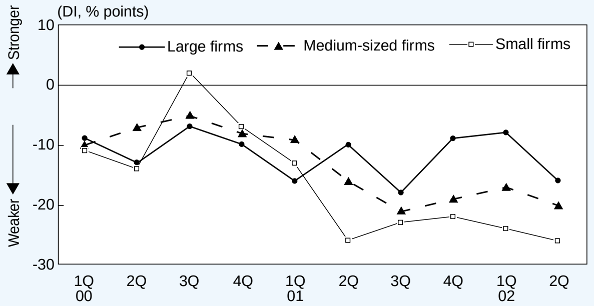
The DI on the funding needs of local governments fluctuated around zero since the first survey but jumped to a

Figure 1: DIs on the funding needs of borrowers: classified by borrower type



Source: The Loan Survey

Figure 2: DIs on the funding needs of borrower firms: classified by size of firm



Source: The Loan Survey

positive area in the first quarter of 2002. This jump means that a larger proportion of banks perceive the demand for bank loans by local governments increased in the first quarter of 2002. The most plausible explanation for this phenomenon is that local governments refinanced their long-term securities by bank loans that can be offset by their deposits. This behavior was probably motivated by the precautionary needs of local governments for liquidity in preparation for the possible default of local banks that might have been triggered by the planned removal of the guarantee on time deposits in April 2002.

In the meantime, the DI on the funding needs of households has stayed around zero, sometimes moving in a positive area, particularly since the first quarter of 2002. The positive DI in recent quarters suggests that many households have shifted the source of their mortgage loans from Housing Loan Corporation, the public mortgage loan institution, to commercial banks which offer much lower interest rates.

What does the loan survey tell us about the financial needs of firms in more detail?

BOJ asks the reporting banks their views on the funding needs of firms in more detail. To be specific, the questionnaire covers (i) differences in the funding needs by size of firm and (ii) the factors making firms decide to change their borrowing needs.

Figure 2 shows the reporting banks' views on the funding needs of firms by size. The DIs for medium and small-sized firms indicate that an increasing number of the reporting banks perceived the funding needs of firms in these categories to be on a decreasing trend. The DI for large firms shows a relatively stable decrease.

As for factors pushing down the funding needs of firms, many banks point to a decrease in borrower firms' sales and fixed investment (figure 3). This tendency is common in each category of firm size. On the other hand, some banks point out the shift from other fund-raising sources as a factor that increased the funding needs of firms in the fourth quarter of 2001, although this did little to help banks' loans outstanding from shrinking (figure 4). In this quarter, investors became quite sensitive to credit risks as a series of credit events took place including the case of MYCAL Corporation, one of the

Figure 3: Reporting banks' views on why the funding needs of borrower firms decreased

		Customers' sales decreased	Customers' fixed investment decreased	Customers' internally-generated funds increased	Customers' borrowing shifted from your bank to other sources
<Large firms>	2001/1Q	1.87	2.00	1.93	1.80
	2Q	1.57	2.07	1.71	1.93
	3Q	2.36	2.41	1.59	1.73
	4Q	2.18	2.41	1.76	1.94
	2002/1Q	1.87	2.13	1.60	1.53
	2Q	1.76	2.00	1.76	1.59
<Medium-sized firms>	2001/1Q	2.00	2.27	1.91	1.18
	2Q	1.72	2.11	1.72	1.33
	3Q	2.43	2.29	1.57	1.29
	4Q	2.33	2.67	1.61	1.17
	2002/1Q	2.00	2.13	1.56	1.25
	2Q	1.89	2.05	1.68	1.26
<Small firms>	2001/1Q	2.21	2.43	1.43	1.14
	2Q	2.17	2.29	1.42	1.08
	3Q	2.48	2.48	1.36	1.04
	4Q	2.52	2.62	1.57	1.10
	2002/1Q	2.22	2.35	1.43	1.13
	2Q	2.20	2.28	1.60	1.16

Note: The reporting banks are asked to grade the important factor(s) 3, somewhat important factor(s) 2, and not important factor(s) 1.

Source: The Loan Survey

BOX 1: Overview of the "Senior Loan Officer Opinion Survey" of the US Federal Reserve.

The Federal Reserve has conducted its *Senior Loan Officer Opinion Survey on Bank Lending Practices* since 1967, except for a hiatus in the 1980s. This section describes the basic features of the US loan survey, referring to the August 2002 survey. The description in this BOX is mostly quoted from the Federal Reserve's website*.

* http://www.federalreserve.gov/boarddocs/SnLoanSurvey/.

The paradigm of the US survey

The Federal Reserve conducts its survey on a quarterly basis, timing it so that the results are available at the January, May, August, and November meetings of the Federal Open Market Committee (FOMC). The reporting banks for the August 2002 survey were 56 domestically chartered and federally insured commercial banks and 20 foreign-related banking institutions in the US. The 30 largest US banks, whose total domestic assets amounted to $20 billion or more as of March 29, 2002, accounted for approximately 91% of the combined assets of the entire 56 surveyed banks and approximately 46% of federally-insured banks. The 20 surveyed foreign-related banking institutions accounted for approximately 31% of the assets of all foreign-related banking institutions in the US.

In the survey, loan officers are asked (i) whether their standards for approving commercial credit have tightened or eased and (ii) if demand for loans has changed since the preceding quarter. The survey sometimes includes *ad hoc* questions on special topics of public interest. The 25 survey results from the January 1997 survey are posted with comments on the Federal Reserve's website.

What role has the Federal Reserve's Loan Survey played in the monetary policy-making process?

According to Cara, Morgan, and Rohatgi (2000)*, the survey provides information useful in forecasting commercial loan growth and overall economic activity. To be specific, they point out a strong correlation between loan officers' reports of tighter credit standards and slowdown in commercial lending as well as economic activity including inventory investment and industrial production. They also say that the survey results played a significant role when the FOMC decided to ease monetary policy on October 15, 1998, quoting "growing caution by lenders and unsettled conditions in financial markets more generally…" from that meeting's press release.

*Cara S. Lown, Donald P. Morgan, and Sonali Rohatgi, "*Listening to Loan Officers: the Impact of Commercial Credit Standards on Lending and Output,*" FRBNY *Economic Policy Review*, July 2000.

Figure 4: Reporting banks' views on why the funding needs of borrower firms increased

		Customers' sales increased	Customers' fixed investment increased	Customers' internally-generated funds decreased	Customers' borrowing shifted from other sources to your bank
<Large firms>	2001/1Q	1.00	1.00	1.00	1.00
	2Q	1.00	1.40	1.20	1.60
	3Q	1.00	1.00	1.25	1.75
	4Q	1.00	1.13	1.25	2.00
	2002/1Q	1.00	1.00	1.25	2.38
	2Q	1.00	1.00	2.00	3.00

Note: See the note below the figure 3.
Source: The Loan Survey

largest retailers in Japan. It filed for bankruptcy protection under the Civil Rehabilitation Law on September 14. Subsequently, the funding environment in the CP and corporate bond markets, particularly for lower ratings, became tough as investors became more suspicious about credit-worthiness of CP and corporate bonds issuers. Such firms possibly refinanced their securities by bank loans[11].

What is the banks' outlook on the funding needs of borrowers?

BOJ asks the reporting banks borrowers' funding needs by type of borrower for the following three months. As figure 5 shows, the DI of the reporting banks' outlook on the funding needs of firms is highly correlated with major economic indicators. This result implies that the reporting banks refer to the current state of macroeconomic activity as they forecast the future funding needs of borrower firms.

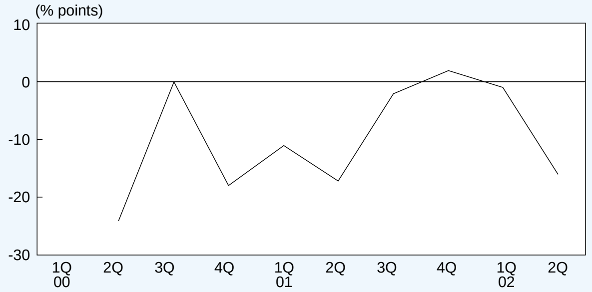
Figure 5: Correlation coefficients between changes in major economic indicators and DI on the funding needs of borrower firms

Percentage change from the previous year in the Industrial Production Index	0.90
Percentage change from the previous year in nominal GDP	0.83

Source: Financial and Economic Statistics Monthly, The Loan Survey

It should be noted, however, that the banks' outlook often turned out to be overly optimistic (figure 6). The DI of the banks' views on the funding needs in the past three months tends to end up falling below the DI of the outlook that was reported three months previously. Only the third and fourth quarters of 2001 and the first quarter of 2002 are exceptions. This tendency might be explained as follows. In these quarters, the reporting banks did not have an optimistic outlook as the Japanese economy was slowing down. In the second quarter of 2002, however, the banks had a rather optimistic outlook as the pace of the recovery of the Japanese economy seemed to be picking up. But, due to the higher-than-expected pace and scale of reduction in interest-bearing liabilities by firms, funding needs turned out to be short of their expectation.

Figure 6: Difference between DIs on the funding needs of borrower firms over the past three months and outlook DIs reported three months previously.



Note: Negative value means that DIs on the funding needs of borrower firms over the past three months was "weaker" than outlook DIs reported three months previously.
Source: The Loan Survey

BOX 2: What questions does BOJ ask in the loan survey?

I. Demand for Loans (Questions 1-6)

Q1. How has demand for loans from borrowers (firms, local governments, and households) changed over the past three months (apart from normal seasonal fluctuations)?
Q2. How has demand for loans from firms changed over the past three months? Please give a breakdown by industry and firm size.
Q3. How has demand from households for housing and consumer loans changed?
Q4.a. If demand for loans from firms has increased at your bank (that is, the answer to question 2, "all industries", is either "substantially stronger" or "moderately stronger"), to what factors do you attribute this increase?
Q4.b. If demand for loans from firms has decreased at your bank (that is, the answer to question 2, "all industries", is either "substantially weaker" or "moderately weaker"), to what factors do you attribute this decrease?
Q5.a. If demand for loans from households has increased at your bank (that is, the answer to question 3 is either "substantially stronger" or "moderately stronger"), to what factors do you attribute this increase?
Q5.b. If demand for loans from households has decreased at your bank (that is, the answer to question 3 is either "substantially weaker" or "moderately weaker"), to what factors do you attribute this decrease?
Q6. How are demand for loans from borrowers (firms, local governments, and households) likely to change over the next three months (apart from normal seasonal fluctuations)?

II. Lending Policies (Questions 7-13)

Q7. Over the past three months, how have your bank's credit standards for approving applications from firms and households changed?
Q8. Over the past three months, how have the terms and conditions of loans to firms changed?
Q9. Over the past three months, how has your bank changed the spreads of loan rates over your bank's cost of funds?
Q10.a. If your bank has eased its credit standards for loans to firms over the past three months (as described in question 7), what were the important factors that led to the change?
Q10.b. If your bank has tightened its credit standards for loans to firms over the past three months (as described in question 7), what were the important factors that led to the change?
Q11. Over the next three months, how are your bank's credit standards for firms and households likely to change?
Q12. Over the next three months, how are your bank's terms and conditions of loans to firms likely to change?
Q13. Over the next three months, how does your bank intend to change the spreads of loan rates?

Answering options:

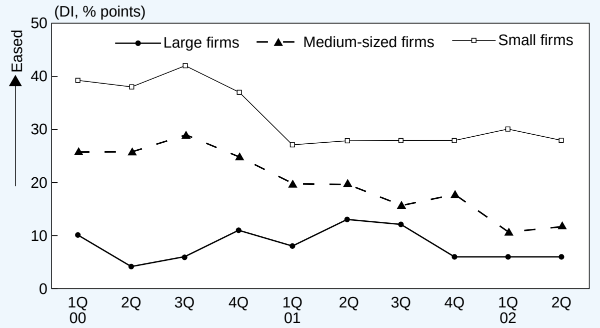
For Q1, 2, 3, and 6: 5=substantially stronger, 4=moderately stronger, 3=about the same, 2=moderately weaker, 1=substantially weaker.
For Q4a, 4b, 5a, 5b, 10a, and 10b: 3=important, 2=somewhat important, 1=not important.
For Q7, 8, 11 and 12: 5=eased considerably, 4=eased somewhat, 3=remained basically unchanged, 2=tightened somewhat, 1=tightened considerably.
For Q9 and 13: 3=increased, 2=remained basically unchanged, 1=decreased.

What is the banks' view on their own lending attitudes?

Are there any differences in credit standards by size of firm?

BOJ asks the reporting banks their views on their own lending attitudes over the past three months by size of firm, releasing the results in the form of DIs. This "DI on credit standards" represents changes in the attitudes of the reporting banks on their lending business as a whole. Figure 7 shows that all such DIs, have remained steady in a positive area. Below, we examine changes in the terms and conditions of loans by size of firm in detail.

Figure 7: DIs on the lending attitudes of the reporting banks: classified by size of borrower firm



Source: The Loan Survey

Have the reporting banks changed the terms and conditions of loans? If yes, how?

BOJ asks the reporting banks whether they have changed terms and conditions such as credit lines, spreads between loan rates and bank funding costs, premiums charged on riskier loans, and collateral requirements by size of borrower firm. Figure 8 shows the DIs for each category of firm size from the fourth quarter of 2001 and after. The figure tells us the following three facts: (i) the DIs on credit lines and collateral requirements have remained almost unchanged for each category, (ii) the DIs on premiums charged on riskier loans have tightened somewhat, particularly for medium and small-sized firms, and (iii) the DIs on spreads have rapidly tightened for each category. Taken these results together, we can say that the banks have started off toward widening the credit spreads reflecting the credit risks of borrower firms, although they do not intend to reduce the amount of loan supply.

Figure 8: Reporting banks' views on their own lending terms and conditions: classified by size of borrower firm

(DI, % points)

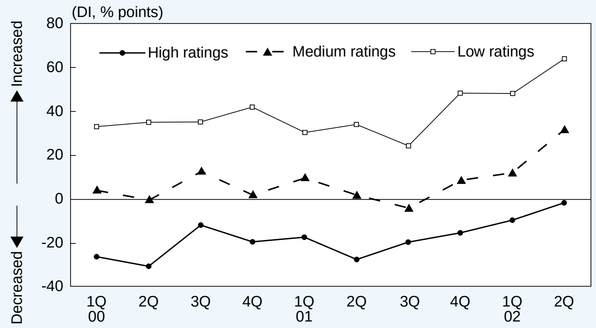
		01/4Q	02/1Q	2Q
<Large firms>	Maximum size of credit lines	2	1	1
	Spreads of loan rates over banks' cost of funds	-4	-10	-15
	Premiums charged on riskier loans	-10	-11	-12
	Collateralization requirements	-2	-3	-3
<Medium-sized firms>	Maximum size of credit lines	4	1	1
	Spreads of loan rates over banks' cost of funds	-3	-9	-16
	Premiums charged on riskier loans	-8	-14	-15
	Collateralization requirements	-3	-4	-3
<Small firms>	Maximum size of credit lines	5	3	2
	Spreads of loan rates over banks' cost of funds	-6	-13	-20
	Premiums charged on riskier loans	-9	-15	-15
	Collateralization requirements	-5	-7	-6

Note: Negative value means that banks believe their own lending terms and conditions became severe.
Source: The Loan Survey

What is the banks' stance in charging spreads by credit rating?

BOJ asks the banks whether they have changed their stance in charging spreads between loan rates and funding costs based on a firm's credit rating. For simplicity, we categorize credit ratings into three criteria: high, medium, and low[12]. Figure 9 shows that the DIs for firms with medium and low ratings have been in a positive area, which means that the banks have taken the stance of widening credit spreads as a whole. Also, the number of the banks trying to widen spreads for firms with these credit ratings has increased. For firms with high credit ratings, although the greater proportion of the banks has taken the stance of reducing credit spreads, the number of the banks itself has decreased. These results, taken together, show that the banks' efforts to widen credit spreads have made progress to some extent thus far.

Figure 9: DIs on spreads between loan rates and the reporting banks' funding cost: classified by credit rating of borrower firm



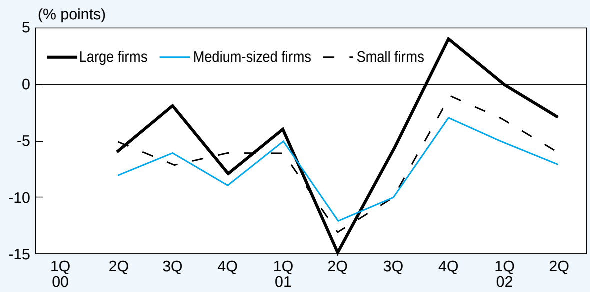
Source: The Loan Survey

What is the banks' opinion on the outlook of their own credit standards?

BOJ asks the reporting banks their outlook on their own credit standards for the following three months. It also inquires about their outlook on credit spreads by credit rating of borrower firms. These DIs contain various messages about development of the reporting banks' credit standards on borrower firms, although the DIs do not quantitatively indicate to what extent target on credit speads has been achieved.

First, on loan rate spread by size of borrower firm, figure 10 compares "result" and "outlook" DIs. The figure shows that in the second quarter of 2001, the result DI fell below the outlook DI, meaning that the greater proportion of the banks could not achieve their target spreads. Since then, however, the shortfall has shrunk as a whole, implying that the banks' efforts toward widening spreads have gradually made progress to some extent.

Figure 10: Difference between DIs on spreads between loan rates and reporting banks' funding cost over the past three months and outlook DIs reported three months previously

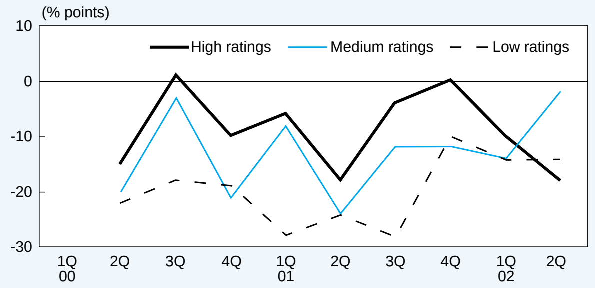


Note: Negative value means that spreads between loan rates and reporting banks' funding cost over the past three months did not go as wide as outlook reported three months previously.
Source: The Loan Survey

Second, as for the DIs on spreads for large firms, in the fourth quarter of 2001, the result DI exceeded the outlook DI. This quarter saw the issuing environment in the CP and corporate bond markets deteriorate, which might have enabled the banks to charge spreads favorably, particularly for large firms with lower credit ratings.

Third, figure 11 shows that the shortfall of the result DI to the outlook DI has shrunk rapidly for firms with medium

Figure 11: Difference between DIs on spreads between loan rates and reporting banks' funding costs over the past three months and outlook DIs on spreads reported three months previously: classified by the credit rating of borrower firms



Note: See the note below the figure 10.
Source: The Loan Survey

credit ratings since the first quarter of 2002. This result is quite a contrast to a widening shortfall for firms with high ratings and almost unchanged for firms with low credit rating since the first quarter of 2002.

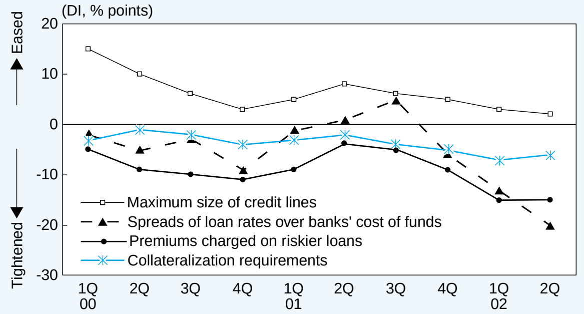
The result implies that securing appropriate credit spreads reflecting borrowers' credit risks, on which many banks place priority, has made relative progress vis-à-vis firms with medium credit rating. As for firms with high credit rating, on the other hand, the banks might have had difficulty widening spreads because of competition with other banks and financing sources.

How can we use the loan survey as a tool for further analysis?

Here, we would like to give an example of using the loan survey as a tool for further analysis by comparing with other DIs on lending attitudes from the side of borrower firms included in various business surveys such as the *TANKAN* survey. The comparison enables us to assess "what kind of changes in terms and conditions of loans borrower firms recognize as a change in the lending attitudes of banks".

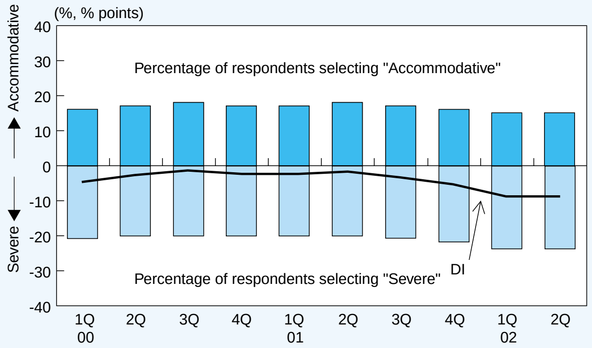
Figure 12 shows the DIs of the loan survey according to each credit category for medium and small-sized firms, while figure 13 shows the DIs of the *TANKAN* survey on the lending attitudes of banks from the side of borrower firms.

Figure 12: DIs on the reporting banks' own lending terms and conditions to small firms



Source: The Loan Survey

Figure 13: DIs on small borrower firms' views on banks' lending attitudes

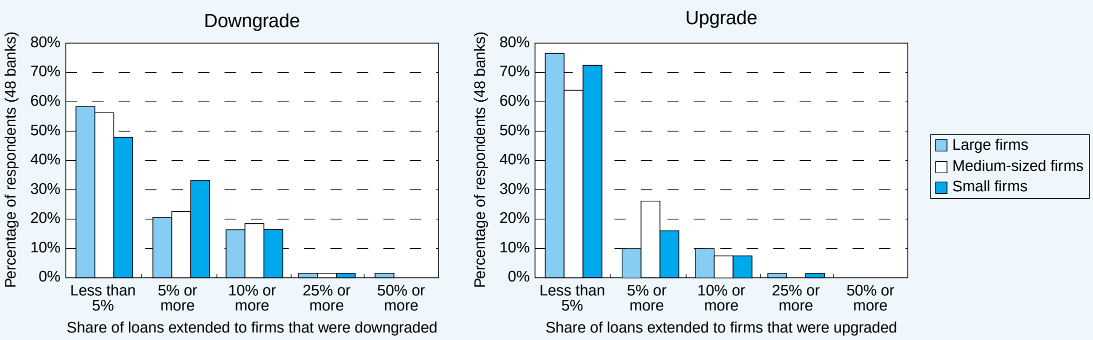


Source: TANKAN Survey

BOX 3: *Ad hoc* survey on the reporting banks' views on borrowers' creditworthiness

Investor sentiment on Japanese firms in the CP and corporate bond market significantly deteriorated in September 2001 and thereafter, which could have led Japanese banks to tighten their lending attitude as well. To verify this hypothesis, along with the regular December 2001 survey, BOJ distributed to the reporting banks an *ad hoc* multiple-choice questionnaire asking whether they had changed their views on borrower firms' creditworthiness during the fourth quarter of 2001 and, if so, to what extent.

To be specific, BOJ asked the reporting banks to identify the percentage share of loans extended to firms that were upgraded/downgraded (based on their internal rating systems)[1] to the total amount outstanding of loans to firms. The questionnaire took the form of choosing an appropriate answer from "less than 5%," "5% or more," "10% or more," "25% or more," and "50% or more." Some 48 out of 50 reporting banks responded. The result showed that reporting banks' views on the creditworthiness of borrower firms had deteriorated as was the case with the CP and corporate bond markets; the percentage share of loans extended to downgraded firms outweighed that of loans extended to upgraded firms[2].



Notes:

1. An internal rating system is an evaluation criterion by which each Japanese bank identifies the creditworthiness of borrower firms. Rating systems vary somewhat from bank to bank as each individually sets a scale for classifying the creditworthiness of borrower firms in line with guidelines from the Financial Services Agency (FSA). Each reporting bank "upgraded"/"downgraded" firms if they were in a higher/lower category at the end of the fourth quarter of 2001 than the preceding quarter. It should thus be noted that "downgraded" does not necessarily mean that a firm concerned has become deemed to be necessary of being closely monitored.
2. The following points should also be noted in interpreting the *ad hoc* survey results.

a) A change in the rating of a firm may not necessarily occur in parallel with a change in a firm's actual creditworthiness. This is because grading may be subject to the timing of (i) updating the rating by each reporting bank and (ii) on-site examination of each reporting bank by the FSA and BOJ.

b) The judgment of banks as to whether or not to extend loans to a firm may also be subject to various elements other than a firm's actual creditworthiness. Downgrading a firm, therefore, does not necessarily mean that the bank concerned has tightened its lending stance.

Figure 14 reports correlation coefficients between the DI of the loan survey for each credit standard and the DI of the Tankan survey on lending attitudes. It shows a high correlation between collateral requirements of the loan survey and lending attitudes in the *TANKAN* survey (0.79), and also between credit lines in the loan survey and lending attitudes in the *TANKAN* survey (0.70).

As for collateral requirements, we would like to make the following comment. In general, medium and small-sized firms are heavily dependent on borrowing from banks. In many cases, bank loans extended to these firms are secured by real estate collateral and/or credit guarantee by third parties including public institutions like credit guarantee corporations and blue chip companies[13]. The changes in lending attitudes from the perspective of medium and small-sized firms might result from a decline in the assessment rate of collateral due to a decline in real estate prices as well as a decline in credit guarantee capacity reflecting the sluggish recovery of large firms' business conditions.

Figure 14: Correlation coefficients between DIs on small borrower firms' views on banks' lending attitudes and DIs on reporting banks' own lending terms and conditions to small firms

Collateralization requirements	0.79
Maximum size of credit lines	0.70
Premiums charged on riskier loans	0.31
Spreads of loan rates over banks' cost of funds	0.21

Source: TANKAN Survey, The Loan Survey

Concluding Remarks

We conclude by pointing out some tasks with a view to enhancing the usefulness of the loan survey to assess the developments of commercial lending and overall economic activity.

Is the questionnaire appropriate?

We do not intend to change the regular survey questionnaire to make the data series historically comparable. It goes without saying, however, that we should continue to examine the appropriateness of each question.

How do we deal with seasonality?

BOJ asks the banks to report their responses on a seasonally-adjusted basis. We have noticed, however, that some DIs have strong seasonality. In the long run, we can remove seasonal factors using econometric programs. At least for the time being, however, we should make more efforts toward sharing the objectives of the survey with the reporting banks.

What are the advantages/disadvantages of DIs?

BOJ releases the survey results in the form of DIs due to their clarity. In computing each DI, we make it a rule to give equal weight to each response regardless of the size of the reporting bank. Accordingly, we cannot deny the possibility that the DI does not represent the average after taking the size of each bank's loans into consideration. We thus think it necessary to continue to examine the advantages and disadvantages of DIs.

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1 BOJ releases survey results on its website. For previous survey results, see http://www.boj.or.jp/en/siryo/siryo_f.htm.

2 For a more comprehensive analysis on the bank lending market in Japan using a wide range of loan statistics including the loan survey, see "Current Developments in Japan's Bank Lending Market," *Market Review* 2001-J-10, Financial Markets Department, the Bank of Japan.

3 BOJ releases the following statistics on the bank lending market in Japan: "Principal Figures of Financial Institutions (Preliminary Figures)," "Loans and Discounts Outstanding by Sector," "Loans and Discounts Outstanding by Type of Major Industries," "Loans and Discounts Outstanding by Scale of Enterprises," "Assets and Liabilities of Domestically Licensed Banks (Banking Accounts)," "Loans and Discounts Outstanding by Interest Rate," "Average Contracted Interest Rates on Loans and Discounts," etc.

4 For statistics on changes in bank lending attitudes from the side of borrowers, refer to "DI on lending attitudes of financial institutions" in the *Short-term Economic Survey of Enterprises* (*TANKAN* survey) conducted by BOJ, which is categorized by size of enterprise such as large, medium, and small-sized. Similar surveys of lending attitudes from the side of small and medium-sized enterprises include *Business Survey of Small and Medium-sized Enterprises* conducted by the Japan Finance Corporation for Small Business, *Nationwide Survey on Business Climate of Small Enterprises* by the National Life Finance Corporation, and *Survey on the Financial Condition of Guaranteed Small and Medium Enterprises* by the Japan Small and Medium Enterprise Corporation.

5 We make it a rule to update the list of surveyed banks every three year to ensure they are the 50 largest commercial banks in terms of loan amount outstanding. We plan to update the list in time for the April 2003 survey.

6 One possible caveat for the multiple-choice questionnaire survey form is the difficulty in grasping subtle changes in lenders' perception. To overcome this, the questionnaire is multifaceted to determine, for example, what factors are responsible for changes in the financial needs of borrowers and how the bank sets specific terms and conditions in extending loans.

7 For instance, the DI on loan demand is computed as follows: (percentage of respondents selecting "substantially stronger"+percentage of respondents selecting "moderately stronger"×0.5)-(percentage of respondents selecting "substantially weaker"+percentage of respondents selecting "moderately weaker"×0.5). For questionnaires that are not suitable for the DI format, we use our discretion in drafting. One example is a questionnaire on specific factors responsible for changes in the funding needs of borrowers (see figures 3 and 4).

8 Loan demand in the loan survey refers to funding needs when borrowers apply to lenders. In other words, loan demand here is *ex ante* in the sense that it is prior to the quote of terms and conditions by banks, including interest rates and collateral requirements.

9 Local governments include prefectural governments and their directly managed public enterprises providing such services as transportation, waterworks, electricity, gas, and hospitals. Households do not include individually-owned enterprises.

10 Categories by size of firm are as follows:
Large firms: corporations capitalized at 1 billion yen or more with more than 300 regular employees (wholesaling and services firms capitalized at 1 billion yen or more with more than 100 regular employees; retailing, food and beverage service firms capitalized at 1 billion yen and over with more than 50 regular employees).
Small firms: corporations capitalized at 300 million yen or less with 300 regular employees or fewer (wholesaling firms capitalized at 100 million yen or less with 100 regular employees or fewer; retailing, food, and beverage service firms capitalized at 50 million yen or less with 50 regular employees or fewer [100 or fewer for service firms]).
Medium-sized: corporations that fall between the above two categories.

11 During this period, banks seemed to accommodate the refinancing needs of firms in the form of syndicated loans. To be specific, the amount of term loans, which predetermines a repayment schedule, increased in the same period.

Amount of funds raised by domestic firms in the form of term loans (trillion yen)

2001				2002
1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter
0.2	0.8	0.5	1.1	0.2

Source: *International Financial Review* (various issues).

12 Rating refers to banks' internal ratings. The broad standard of ratings is as follows:
High: AAA-BBB for domestic ratings of long-term corporate bonds.
Medium: BB-B for the domestic ratings of long-term corporate bonds.
Low: CCC or lower for domestic ratings of long-term corporate bonds.

13 We do not have any statistics that capture the type of collateral against loans by size of borrowing firms. However, *Financial and Economic Statistics Monthly,* published by BOJ, reports "loans outstanding by kind of collateral", which is based on loan amount outstanding in domestically licensed banks' banking accounts.

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