FSA Analytical Notes

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Analysis of Defaults in Housing Loans by Regional Banks

(**Summary**)

This paper attempts to analyze the defaults in housing loans extended by regional banks, based on borrower classifications, using granular loan data. The analysis shows default rate levels for attributes including region, loan-origination year, and lending period. It also demonstrates that default rates vary depending on loan characteristics, such as the length of the lending period. The FSA will keep on making multifaceted analyses, such as time-series analysis, in line with further accumulation of granular loan data, thereby enhancing monitoring that leverages the granular loan data.

Ⅰ. Introduction

In recent years, housing loan markets have undergone significant changes, including a surge in property prices—particularly for condominiums—and rising market interest rates following the Bank of Japan's monetary policy adjustments (Figures 1 and 2).

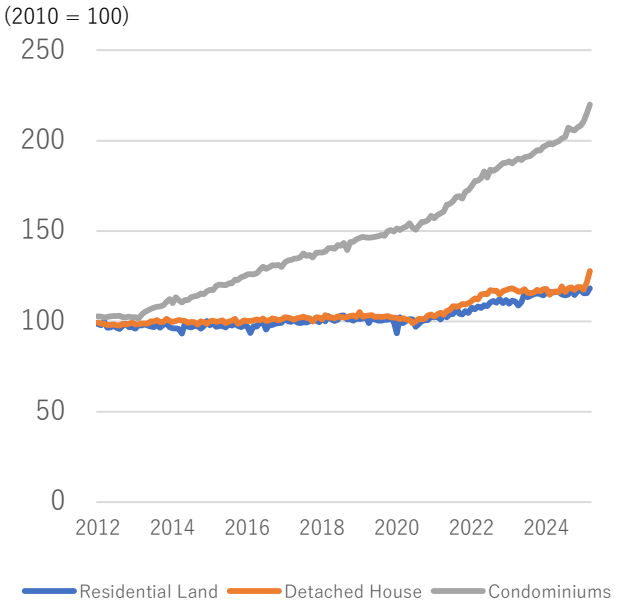
In addition to these market developments, changes in product characteristics[1]—such as the increasing share of variable-rate loans and the trend toward longer loan maturities—may also affect the credit risk held by financial institutions. These factors could influence the financial institutions' management conditions, making it increasingly important to understand the actual status of housing loan exposures.

To this end, the FSA utilizes loan-level data collected through the Common Data Platform, jointly operated with the Bank of Japan, to analyze housing loan exposures held by regional banks I and regional banks II. In January 2025, the FSA published an analysis of interest rate levels, loan maturities, and execution amounts in FSA Analytical Notes (FAN). Building on that analysis, this paper focuses on the default conditions of housing loans held by regional banks, aiming to deepen

[1] FSA, FSA Analytical Notes (2025.1) vol.2

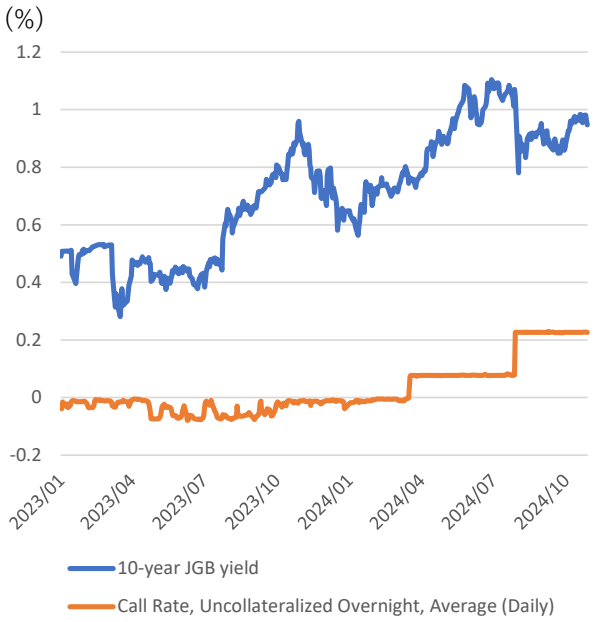
understanding of credit risk.[2]

Figure 1 Real Estate Price Index



(Source) Ministry of Land, Infrastructure, Transportation and Tourism

Figure 2 Market Interest Rate



(Source) Bank of Japan, Ministry of Finance

Ⅱ. Default identification method using granular loan data

This chapter explains our methodology to identify defaults in housing loans based on granular loan data.

1. Usefulness of granular loan data

Granular loan data submitted by major banks, regional banks I, and regional banks II contain detailed information on individual loan exposures. Among them, housing loans data from regional banks cover approximately 50% of domestic housing loan balances as of September 2023. The dataset includes key attributes such as interest rate type, loan maturity, and borrower

[2] The granular loan data used in this analysis were submitted by major banks, regional banks I, and regional banks II. In extracting records related to housing loans from this dataset, the analysis includes not only those explicitly designated as housing loans, but also those inferred to be housing loans based on attributes such as principal amount, interest rate level, and loan maturity. We confirmed that the estimated loan balances and the number of loans derived from this approach are broadly consistent with existing statistical tables.

classification that enables to make a close analysis on credit risk of those loans.

Due to limitations in the granular loan data at this moment of time, this analysis focuses on data from regional banks I where a sufficient volume of data is available to make a statistically-meaningful analysis. In this analysis, 54 to 59 banks are in the scope depending on the data items. As a result, the housing loan records covered in this analysis account for approximately 40% of the total domestic housing loan portfolio.

2. Definition of default

In this analysis, default is defined as a downgrade in borrower classification[3] from 'normal' or 'needs attention' to 'need special attention or lower' (i.e., need special attention, potentially bankrupt, effectively bankrupt, or bankrupt).[4]

While default for housing loans is commonly identified through delinquency status, guarantee execution, or legal bankruptcy, as well as borrower classification,[5] this analysis relies on borrower classification due to data constraints. It should be noted that time lags may exist between actual default events and their reflection in borrower classification in the banks, and default rates that are calculated in this paper may be less than actual rates.

3. Default identification procedure

Default is defined by the change in borrowers' classifications in this analysis. When a borrower's classification is downgraded to specific categories during an accounting year from the initial classification at the beginning of the year, that borrower is considered to be a defaulted borrower. Borrower classifications recorded in the loan data as of the initial date of an accounting year are used to define the population of housing loan borrowers considered in this analysis. Default status is then determined based on whether the borrower's classification was

[3] In the dataset used for this analysis, borrower classifications provided by regional banks I are categorized into six levels: "normal," "needs attention," "need special attention," "potentially bankrupt," "effectively bankrupt," and "bankrupt." The terminology used in this paper follows this classification scheme.

[4] The classification of default used in this analysis is based on the Basel regulatory framework. In practice, however, borrower classifications at the time of default are often determined in accordance with the former Financial Inspection Manual, which defines default as borrowers classified as "potentially bankrupt" or lower. A comparison of results using both definitions—"under need special attention or lower" and "potentially bankrupt or lower"—showed no significant differences in overall trends.

[5] Bank of Japan, BOJ Reports & Research Papers (2007.3), "住宅ローンのリスク管理"

downgraded over the subsequent one-year period.

Specifically, the analysis targets borrowers whose classification was “normal” or “needs attention” as of the end of March 2024 (the end of March is the end of an accounting year for most Japanese companies). If, by the end of March 2025, the borrower’s classification has been downgraded to “need special attention or lower,” the borrower is considered to have defaulted. Borrowers that are not included in the loan data as of March 2025 are excluded from the analysis.

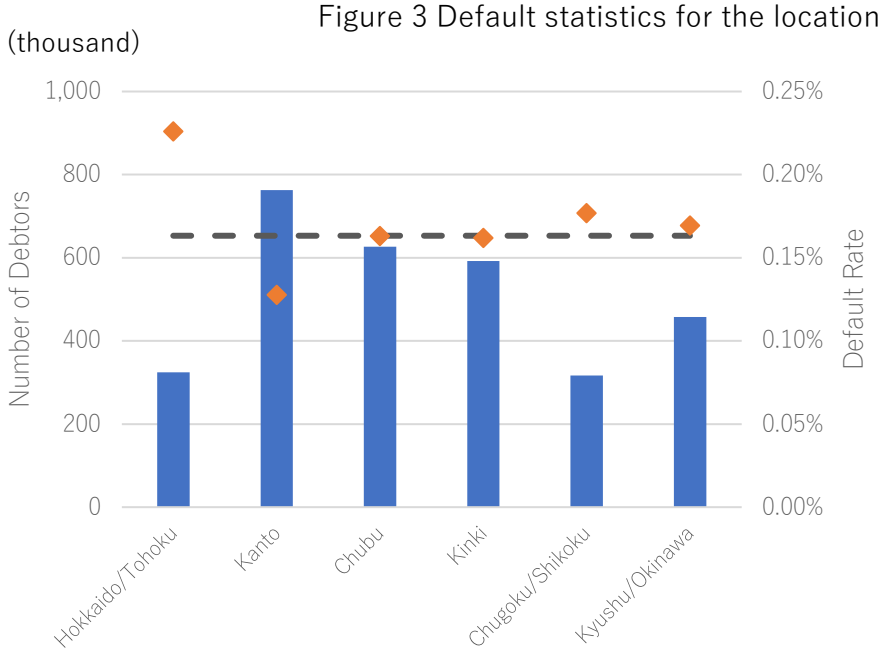
The default rate is calculated as the proportion of borrowers identified as having defaulted during the period relative to the total number of borrowers included in the analysis population.

Ⅲ. Analysis of default status

This chapter analyzes the default status of housing loans extended by regional banks I, based on the definitions and procedures outlined in the previous chapter.

Figure 3 presents default rates by the location of each bank’s head office. The results show that default rates are relatively high in the Hokkaido/Tohoku region, while rates are lower in the Kanto region. However, caution is warranted when comparing default rates across regions, as the share of housing loans held by regional banks I may vary by region. Therefore, the default rates shown here may not necessarily reflect the average default rate for each region.

Figure 3 Default statistics for the location of head office



Area	Default Rate (FY2024)
Hokkaido/Tohoku	0.226%
Kanto	0.128%
Chubu	0.163%
Kinki	0.162%
Chugoku/Shikoku	0.177%
Kyushu/Okinawa	0.169%
Nationwide	0.163%

Figure 4 presents default rates aggregated by loan origination year (i.e., the start year of the housing loan). Looking retrospectively from the present, the default rate peaks for loans originated in 2017, declines for earlier vintages, and reaches its lowest point in 2012. However, for loans originated prior to 2012, an upward trend in default rates is observed again.

It should be noted that, due to the nature of the granular loan data, loans that were fully repaid—such as through early repayment—prior to the end of March 2024 are not included in the dataset. As a result, if the number of borrowers whose loans were originated in a given year but are no longer present in the dataset as of March 2024 increases, the composition of borrowers for recent vintages may differ from that of earlier ones. Therefore, caution is warranted when making direct comparisons of default rates across origination years.

For this reason, it is difficult to show default status depending on years elapsed since loan origination (i.e., the term structure of defaults) within the scope of this analysis. However, as more records are accumulated, it is expected that such differences in borrower composition across origination years can be adjusted for, thereby enabling a more accurate assessment of the term structure of defaults.

Figure 4　Default statistics for origination years

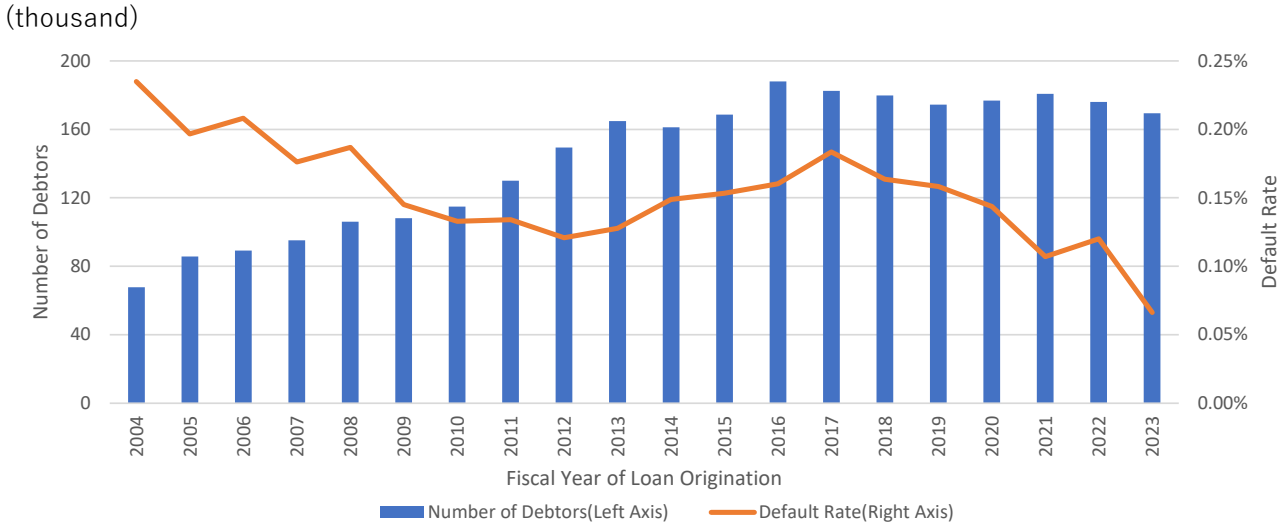


Figure 5 illustrates default status by loan amount. While slight fluctuations in default rates are observed for loans between 10 million and 20 million yen and those exceeding 50 million yen, clear trend in default rates based on origination amount was not found from the distribution.

Figure 6 shows default status by loan maturity set at the time of its origination. The distribution

is concentrated in the loans-maturity categories of “exceeding 30 years but not more than 35 years,” suggesting that a large portion of currently outstanding housing loans have a maturity of 35 years. Additionally, loans with maturities exceeding 35 years exhibit higher default rates. Given the recent upward trend in the share of loans with maturities over 35 years[6], continued monitoring is warranted, taking other factors such as origination year into account.

Figure 7 presents default status by interest rate type. The analysis confirms that default rates do not differ significantly between fixed-rate and variable-rate loans.

Figure 8 illustrates default status by interest rate level. The analysis shows that higher interest rate levels are associated with higher default rates. This trend likely reflects both the incorporation of borrower credit risk into the interest rates set by regional banks I and the possibility that rising interest rates contribute to increased credit risk for borrowers.

Figure 9 shows default rates by interest rate type and level. For both fixed-rate and variable-rate loans, higher interest rate levels are consistently associated with higher default rates. However, the sensitivity of default rates to changes in interest rate level appears greater for variable-rate loans than for fixed-rate loans. While product characteristics may vary, it is possible that, at the same nominal interest rate level, variable-rate loans carry a higher risk premium due to lower reference rates, thereby making differences in credit risk more pronounced, particularly at higher interest rate levels.

Figure 10 shows default statistics by borrower location. In this analysis, loans extended to borrowers residing in the same prefecture as the bank’s head office are defined as “within-the-home” lending, while loans to borrowers in other prefectures are defined as “cross-border” lending. Although further refinement of these classifications may be warranted, the analysis suggests that default rates tend to be slightly higher for cross-border lending compared to home-region lending.

[6] FSA、FSA Analytical Notes（2025.1）vol.2

Figure 5 Default statistics for loan amounts

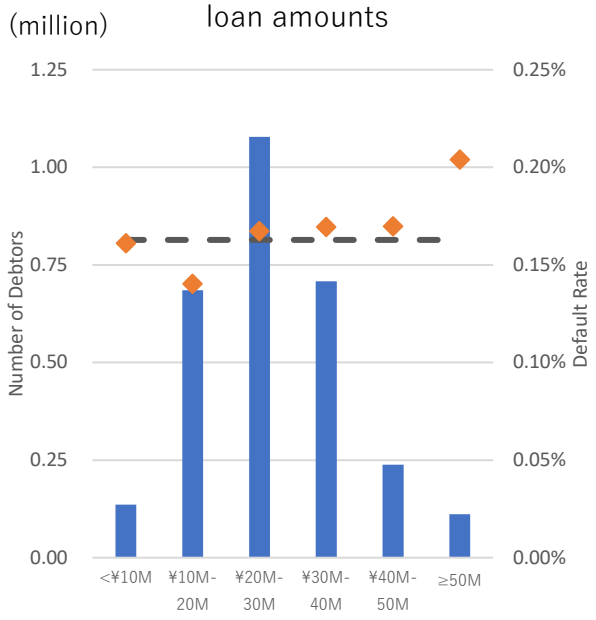


Figure 6 Default statistics for loan terms

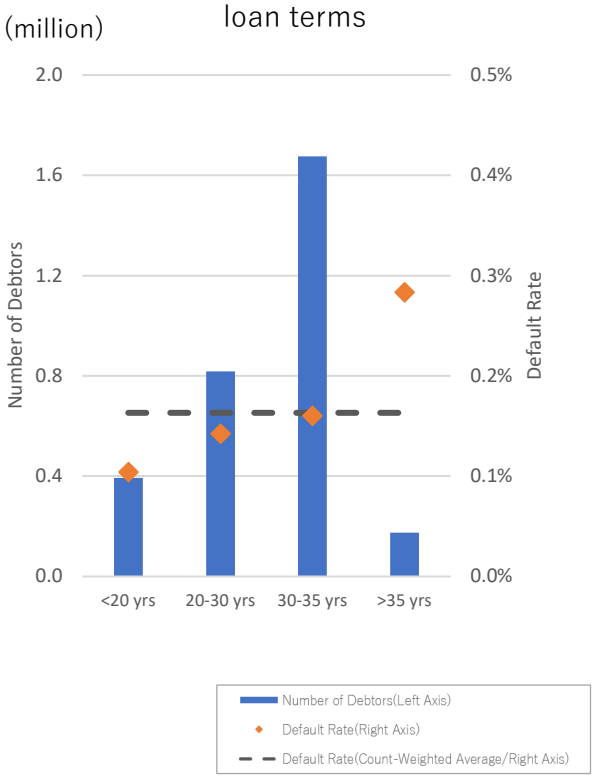


Figure 7 Default statistics for interest type

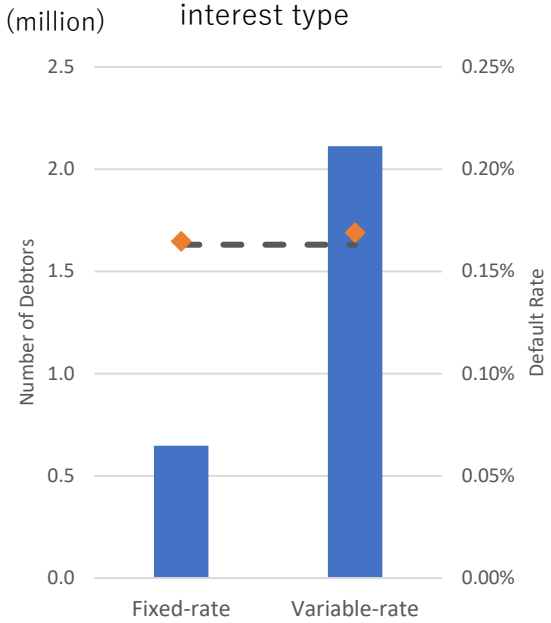


Figure 8 Default statistics for interest level

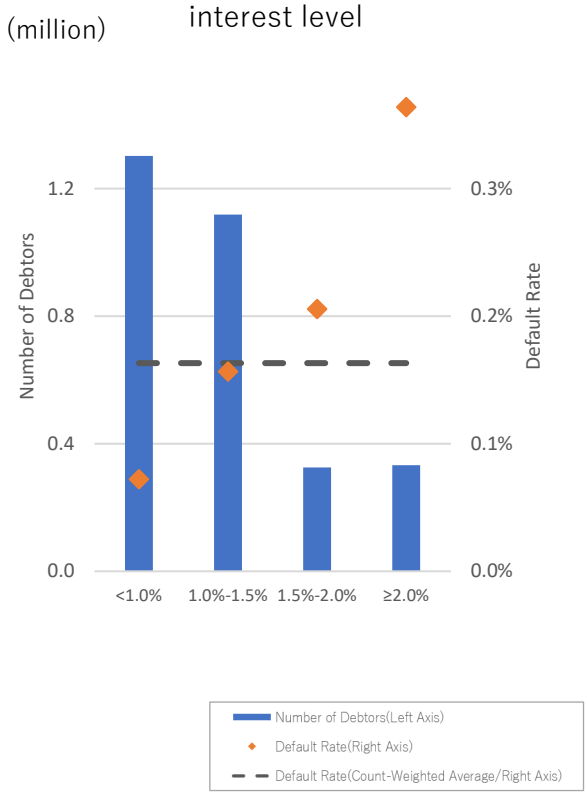


Figure 9 Default statistics for interest type and level

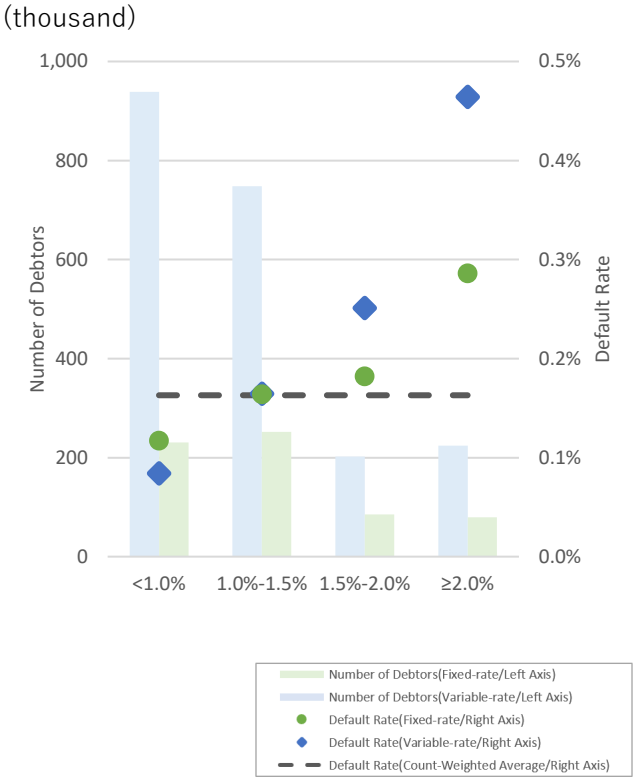
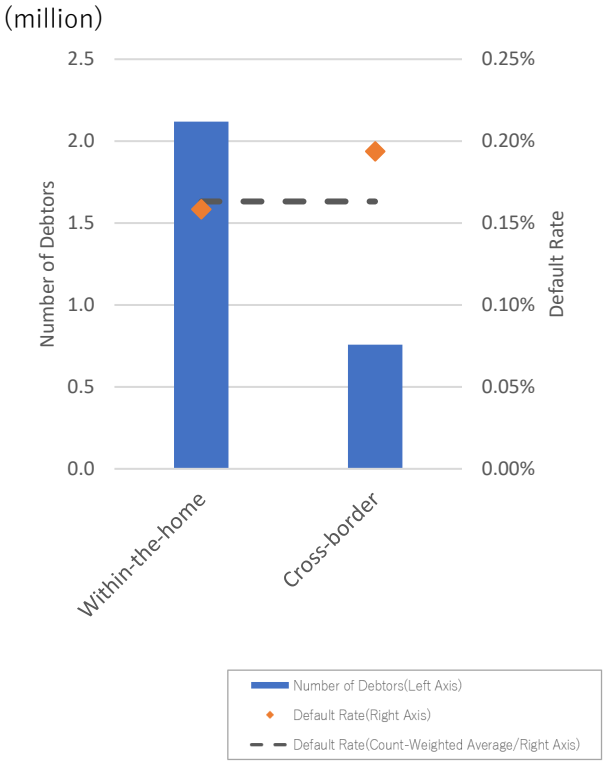


Figure 10 Default statistics for cross-border lending or not



Ⅳ. Conclusion

This paper analyzes the default status of housing loans extended by regional banks I, using granular loan data collected through the Common Data Platform, to better understand credit risk in housing finance.

The analysis reveals regional differences in default rates based on the locations of the banks' head offices. In addition, certain origination years exhibit notably higher default rates. Loans with longer maturities tend to show higher default rates, and similarly, loans with higher interest rate levels are associated with elevated default risk. Furthermore, the sensitivity of default rates varies depending on the interest rate type. While the limitations of the loan data used in this study must be taken into account, the findings suggest that loans with attributes linked to higher default rates warrant continuous monitoring.

Moreover, the analysis indicates that housing loans classified as cross-border lending appear to exhibit slightly higher default rates compared to within-the-home lending. This observation underscores the importance of further enhancing understanding of credit risk management frameworks within financial institutions.

To further expand this analysis, it is important to broaden the scope of housing loans under consideration. While this analysis focuses on regional banks I, future data accumulation will enable the inclusion of loans held by regional banks II, allowing for a more comprehensive assessment of defaults.

Another direction for future enhancement is the incorporation of time-series analysis. Although this analysis focuses on default rates within a single fiscal year, examining multi-year trends will allow for a more multifaceted understanding of credit risk.

The FSA will continue its efforts to deepen understanding of housing loans and associated risks, while exploring the potential of granular loan data to support more sophisticated risk management of financial institutions and improve its monitoring practices.

This analysis was mainly conducted by Kosuke Matsumoto, deputy director of the Macro-financial Stability and Data Strategy Office, Risk Analysis Division, Strategy Development and Management Bureau.