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Developments in Overseas Credit Investment and Lending by Japanese Financial Institutions: An Overview Based on the Joint Survey by the Bank of Japan and the Financial Services Agency

Financial System and Bank Examination Department of the Bank of Japan
Supervision Bureau of the Financial Services Agency

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In recent years, the markets for leveraged loans and collateralized loan obligations (CLOs) -- securitized products backed by multiple leveraged loans -- have expanded in the United States and Europe, and Japanese financial institutions have increased their holdings of such products. Since 2019, the Bank of Japan and the Financial Services Agency have been conducting joint surveys to ascertain effectively the current situation of such overseas credit investment and lending by Japanese financial institutions, ensure appropriate risk management by these institutions, and share a proper assessment of the financial stability implications for such investment and lending. Based on the findings from the first round of the survey, this paper outlines the scale and characteristics of overseas credit investment and lending by major banks, whose exposure is dominant among Japanese financial institutions.

Introduction

In recent years, corporate debt outstanding has been increasing globally. In particular, the market for leveraged loans -- loans to firms with relatively high leverage and low creditworthiness -- and the market for collateralized loan obligations (CLOs) -- securitized products backed by multiple leveraged loans -- have expanded rapidly in the United States and Europe. Against this background, Japanese financial institutions have been active in overseas lending and investment in overseas credit products to secure profit margins, as they face the prolonged low interest rate environment in Japan. They have particularly increased holdings of leveraged loans and CLOs in recent years.

The effects of the expansion of leveraged loan and CLO markets on financial stability have gained increased attention internationally, especially among central banks and regulators, partly because nonbanks, such as open-ended investment funds, with relatively vulnerable funding bases play a significant role in these markets.[1]

Against this backdrop, the Bank of Japan and the Financial Services Agency conducted the Survey for Overseas Credit Investment and Lending through the end of 2019. The aim of the survey was to ascertain effectively the current situation of overseas credit investment and lending by Japanese financial institutions as their home authorities, ensure appropriate risk management by these institutions, and share a proper assessment of the financial implications for such investment and lending. In doing so, the two entities engaged in close dialogue with financial institutions with large exposure to overseas credit investment and lending, in an effort to assess the current situation of their exposure as well as their risk management practices and to share this assessment with these financial institutions.

With the impact of the spread of the coronavirus disease 2019 (COVID-19), overseas credit markets temporarily underwent significant adjustments mainly in March 2020. However, they have regained some stability recently, reflecting policy measures by governments and central banks.

This paper outlines the scale and characteristics of Japanese financial institutions' overseas credit investment and lending found through the first round of the survey, focusing on major banks, as they have large outstanding amounts. It then describes caveats regarding risk management for leveraged loans and CLO investment.

Outline of the Survey for Overseas Credit Investment and Lending

The joint survey was conducted widely across the financial sector by the Supervision Bureau of the Financial Services Agency and the Financial System and Bank Examination Department of the Bank of Japan. The survey covered about 400 financial institutions, including major banks, regional banks,

shinkin banks, securities companies, and insurance companies (Chart 1).

The scope of the survey was based on differences in practices across different types of financial institutions to understand their risk profiles in detail. For example, to examine loans by major banks, the items include their loans outstanding by leverage ratio[2] of borrowers and by usage (such as loans for M&As), as well as the total amount and undrawn amount of committed lines. The items for credit investment cover outstanding amounts by product type, such as corporate bonds, CLOs, and bank loan funds, and also cover the breakdowns by credit rating of products and by holding purpose defined in accounting standards.

[Chart 1] Survey outline

Reporting financial institutions	About 400 financial institutions, including major banks, regional banks, *shinkin* banks, securities companies, and insurance companies
Reporting period	4 years from fiscal 2015 to 2018, as of each Japanese fiscal year end
Survey scope	Foreign currency-denominated loans; and investments in products that are essentially exposed to overseas credit risk
Survey periods	Questionnaire survey from August to September 2019, with a follow-up interview from October to December 2019

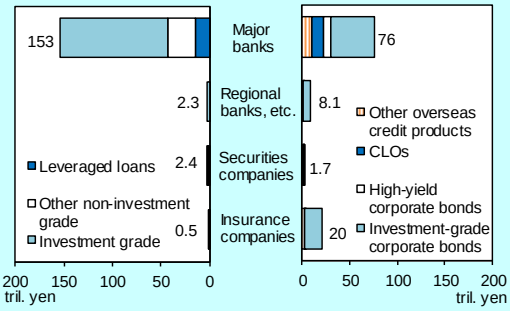
Note: Reporting period and survey period partially vary by type of financial institution.

Overview of Survey Results

This section first provides an overview of the survey results and then focuses on major banks' loans (especially leveraged loans) and investment (especially CLO investment).

As of end-March 2019, Japanese financial institutions' outstanding amount of overseas loans was about 160 trillion yen and that of overseas investment was about 100 trillion yen (Chart 2). By type of financial institution, major banks[3] accounted for a large share of both loans and investment, and the amounts outstanding held by other financial institutions were limited compared to those held by major banks.

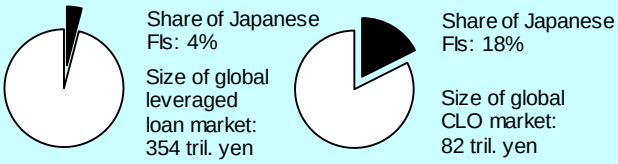
[Chart 2] Outstanding amount of Japanese financial institutions' overseas credit investment and lending by type of institution (left: lending; right: investment)



Note: Data as at end-March 2019. "Regional banks, etc." includes *shinkin* banks and online banks. The data for lending includes the undrawn amount of committed lines. Investment trusts held by "Regional banks, etc." are excluded from the data.

A breakdown by credit rating shows that exposure to investment-grade firms accounted for about 70 percent for both loans and investment, while about 30 percent comprised loans and investment such as (1) loans to non-investment-grade firms, including leveraged loans; (2) investment in CLOs -- securitized products backed by loans to non-investment-grade firms; and (3) investment in high-yield bonds, or corporate bonds issued by non-investment-grade firms. Japanese financial institutions' share of the global CLO market is estimated to have reached nearly 20 percent (Chart 3).[4]

[Chart 3] Share of Japanese financial institutions' exposure in global markets (left: leveraged loans; right: CLOs)



Note: The data for size of Japanese financial institutions' exposure are as at end-March 2019. The data for size of global leveraged loan and CLO markets are as at end-2018, estimated by the BOE and the FSB, respectively.

Sources: BOE; BOJ; FSB.

Major Banks' Leveraged Loan Holdings

Definition of leveraged loans

As mentioned earlier, leveraged loans are loans to firms with relatively high leverage and low creditworthiness, but there is no rigid and uniform definition. In the guidance regarding leveraged loans,[5] U.S. and European supervisory authorities have defined them as corporate loans with a leverage ratio above 4.0x, focusing on the aspect of leverage (Chart 4). Other

definitions focus on creditworthiness, as syndicated loans to non-investment-grade firms are called leveraged loans.[6] This survey has widely covered loans with a leverage ratio above 4.0x, in line with the definition provided by U.S. and European supervisory authorities. In this paper, leveraged loans are specifically defined as non-investment-grade loans with a leverage ratio above 4.0x.

[Chart 4] Definition of leveraged loans

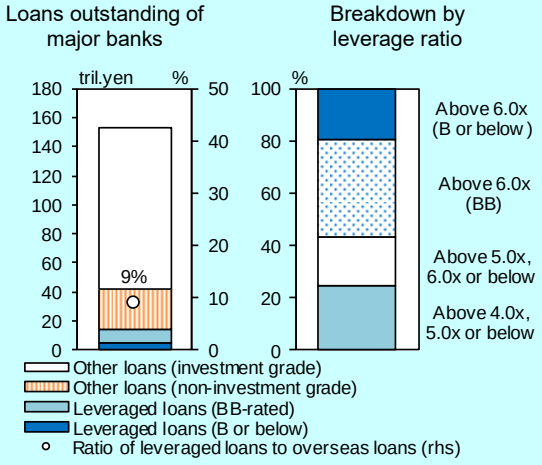
	FRB/FDIC/OCC	ECB	S&P	Survey for Overseas Credit Investment and Lending (this paper)
Credit rating	—	Non-investment grade (in principle)	Non-investment grade	Non-investment grade
Leverage ratio	Above 4.0x	Above 4.0x	—	Above 4.0x
Notes	Use of proceeds (acquisition, etc.) is also taken into consideration.	Firm's funding structure (e.g. equity held by PE fund, etc.) is also taken into consideration.	Covers syndicated loans. Also includes investment-grade loans with a spread of LIBOR +125 bps or higher.	—

Sources: ECB; FRB/FDIC/OCC; S&P.

Leveraged loans outstanding

As of end-March 2019, leveraged loans amounted to about 14 trillion yen, or 10 percent of major banks' overseas loans outstanding, with leveraged loans rated BB accounting for about 70 percent (Chart 5). A breakdown of borrowers by leverage ratio shows that borrowers with a leverage ratio above 6.0x, those in the range of 5.0x-6.0x, and those below 5.0x accounted for nearly 60 percent, nearly 20 percent, and a little more than 20 percent, respectively.

[Chart 5] Overseas loans outstanding of major banks

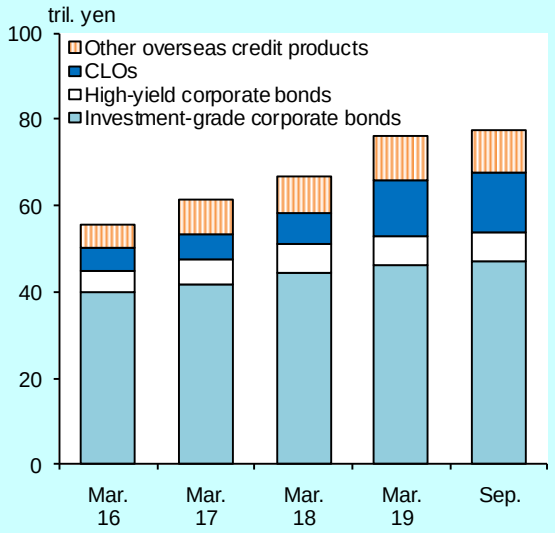


Note: Data as of end-March 2019. Includes both on-balance and off-balance exposure. Credit ratings are based on the internal ratings of each financial institution. The right-hand graph shows the percentage of outstanding leveraged loans by leverage ratio of the borrowers.

CLO Investment by Major Banks

Overseas credit investment by major banks mainly comprises investment-grade corporate bonds, but the shares of other investment products have increased gradually in recent years. In particular, the outstanding amount of CLO holdings increased significantly through the first half of 2019 (Chart 6).

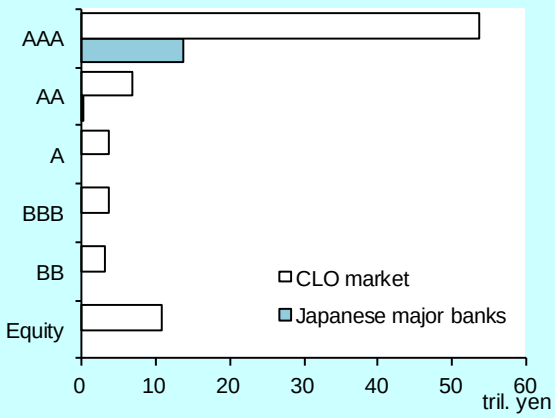
[Chart 6] Outstanding amount of overseas credit product investment among major banks



CLOs outstanding by credit rating

A breakdown by credit rating of CLOs held by major banks notably shows that more than 99 percent are concentrated on AAA-rated tranches. This is remarkably high compared to 77 percent at U.S. banks and just over 50 percent at U.K. banks (Chart 7).[7]

[Chart 7] Outstanding amount of CLO market by credit rating and the corresponding holdings by Japanese major banks



Note: The data for "Japanese major banks" and "CLO market" are as at end-September 2019 and end-December 2018, respectively.

Sources: BOJ; Creditflux, "CLO-i"; FSB.

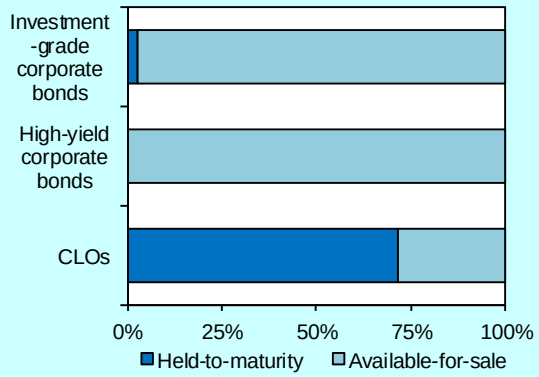
CLOs are often pointed out to have the similarity with securitized products backed by subprime loans, which became one of the factors that caused the escalation of the global financial crisis. It is because both of them are securitized products backed by loans with relatively low creditworthiness, and saw a sharp increase in market outstanding. However, it should be noted that most of the products that incurred large losses during the global financial crisis were complex resecuritized instruments that incorporated derivatives, such as collateralized debt obligations (CDOs) and CDO squared. There were no cases where the principal and interest payments of AAA-rated CLO tranches were impaired even at that time. It should also be noted that, at the time of the crisis, many investors financed their investments through repos of securitized products such as CDOs, and price declines of such products were prone to tighter funding conditions for those investors and trigger fire sales. However, there are only limited cases where the investment in CLOs is funded through repos of those CLOs.

In terms of the CLO structure, the share of tranches rated AA or below, which act as a loss absorption buffer, has increased since the global financial crisis. This change in the structure has lessened the risk that the principal and interest payments of AAA-rated tranches will be impaired when a part of the underlying assets suffers a decline in creditworthiness similar to that observed during the crisis. As discussed later, as part of the risk management of CLOs, major banks ensure that the possibility of principal impairment of the tranches they hold is contained by analyzing cash flows based on a stress scenario assuming that the probability of default (PD) and the loss given default (LGD) of underlying asset portfolios would worsen, at least, to the level observed during the global financial crisis. Thus, it can be judged that, even though market values fluctuate somewhat significantly during an investment period, loss rates are subdued if held to maturity.

CLOs outstanding by holding purpose

This survey also asks about the classification of financial products in accordance with the holding purpose defined in accounting standards. The findings show that about three quarters of the CLOs held by major banks were classified as "held-to-maturity" (Chart 8). This stands in contrast to investment-grade corporate bonds, which comprise a majority of overseas credit investment, in that most of such bonds were classified as "available-for-sale" in view of their possible sales before maturity.

[Chart 8] Outstanding investments by holding purpose defined in accounting standards



Note: Covers major banks' overseas credit product investment. Data as at end-September 2019.

Given that CLOs have lower market liquidity than stocks and investment-grade corporate bonds, their transaction prices are prone to market liquidity premiums. It is therefore recognized that, if CLO holders rush to sell under market stress, this could amplify declines in market prices. In this regard, most major banks have invested in CLOs with the aim of holding to maturity. It is thus unlikely that major banks themselves will trigger such spiral price declines as long as they secure stable foreign currency funding.

Assessment of Risk Management

Risk management of leveraged loans

In terms of the risk management of leveraged loans, some major banks have set specific lending standards to control credit risk associated with leveraged loans, such as credit limits depending on the firm size and industry, as well as criteria for leverage ratios (a firm's total debt / earnings) and equity ratios. In recent years, there have been some cases of the so-called "add back" by which leverage ratios are adjusted lower through incorporating an increase in future profits, typically in view of buyout effects. However, many major banks adopt a rule of making credit judgements based on a conservative calculation of leverage ratios such as setting a limit on the add-back in future profits, which is highly uncertain. With regard to leveraged buyout (LBO) loans, which contain higher risks compared to the other leveraged loans, and loans to certain jurisdictions, some major banks manage the risks of those loans by setting criteria for assessing lending discipline, such as the validity of financial covenants. They keep loans that fail to meet the criteria to within a limited proportion in their portfolios.

Moreover, some banks, with a view to appropriately controlling the risk of market value fluctuations associated with underwriting, calculate possible losses incurred in times of stress and then set a limit on the outstanding amount of loans to underwrite. Others have a contingency plan for credit management in accordance with price declines over a certain time period.

Risk management of CLOs

With regard to the risk management of CLOs, major banks confirm the high probability of tranches they hold to be redeemed at maturity by setting investment criteria in reference to external ratings (such as limiting CLOs eligible for their investment to those rated AAA) and by conducting their own stress testing.

Specifically, major banks ensure that the possibility of principal impairment of the tranches they hold is contained by analyzing cash flows based on a stress scenario assuming that the PD and the LGD of underlying asset portfolios would worsen, at least, to the level observed during the global financial crisis. Many of these banks employ an additional stress analysis assuming, for example, widespread downgrades of underlying assets, shocks related to certain industries, and stronger cross-industry correlation. This suggests that major banks make use of stress testing for quantitative risk assessment both in initial screening and in monitoring.

As of 2018, about 130 CLO managers were operating in the United States and Europe. [8] Considering this large number, the first step of risk management is to conduct due diligence in the initial screening for the selection of managers.

In this regard, when selecting CLOs for investment, major banks conduct due diligence on a manager's past performance, including that during the global financial crisis, operational processes and resources, and investment strategy, among others. To avoid risk concentration on particular managers, major banks, in addition to product-based management, make manager-based classification, thereby diversifying the portfolio of CLO managers. They also set an investment amount limit per manager based on the results of due diligence.

As the next step of risk management, it is important to monitor managers effectively so that the quality of underlying assets is managed appropriately until redemption. In this regard, major banks agree with CLO managers on the investment guidelines that restrict managers' investment activity. During an investment period, these banks work to ensure an appropriate framework to monitor any infringement of triggers stipulated in the guidelines and the subsequent portfolio rebalancing in case of such infringement.

It is generally the case that financial institutions restrain the investment amount per issue if they expect to sell it before maturity to avoid the risk that their sales might trigger market disruptions. However, when they intend to hold CLOs until maturity, what is widely preferred in risk management is to focus their investment on AAA-rated tranches of particular CLOs and hold a majority share of such tranches. Thereby, they aim to secure strong bargaining power with CLO managers in discussions on investment guidelines and in monitoring during an investment period.[9]

In mid-March 2020, when the credit market went through adjustments, the more conservative the investment guidelines for CLOs were, the smaller their price adjustments became.

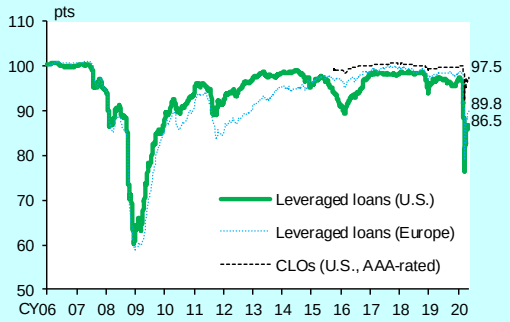
Caveats for the Future

From the beginning of 2020, overseas credit markets temporarily made large adjustments due to the spread of COVID-19. However, they have regained some stability recently, due mainly to policy measures by governments and central banks across countries (Chart 9). As of end-March, major banks had not incurred impairment losses from overseas credit investment. The increase in unrealized losses from such investment has so far been mostly offset by the increase in unrealized gains on bonds due to declines in overseas interest rates. Nonetheless, considerable uncertainty surrounds future developments in the spread of COVID-19, as well as the magnitude and duration of the resultant downward pressure on the real economy. Against this background, major banks are generally cautious about increasing overseas investment and lending. However, given the grim prospects for the domestic profit environment, it is reasonable to assume that major banks will renew their commitment to overseas investment and lending if they become certain that the situation improves. This deserves careful deliberation while fully taking the risk of the double dip into account.

With regard to the financial condition of leveraged loan borrowers, as noted earlier, there were increases in leverage as a trend. An increasing number of firms conducted the add back until recently. There were also deterioration in loan quality and increases in loans that require vigilance, as seen in, for example, a growing share of loans with eased financial covenants for borrowers, or "covenant-lite loans." Taking into account such trend, financial institutions should

continue to conduct appropriate credit risk management in preparation for possible prolongation of the impact of the spread of COVID-19.

[Chart 9] Leveraged loan and CLO prices

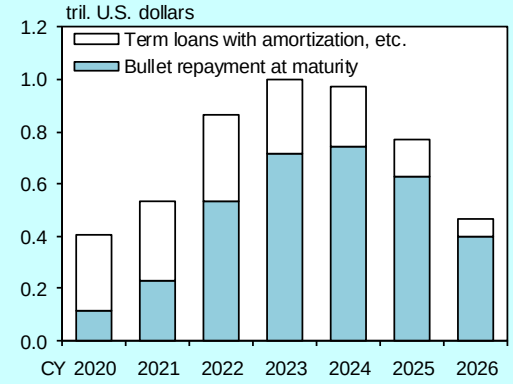


Note: The figures for "Leveraged loans (U.S.)," "Leveraged loans (Europe)," and "CLOs (U.S., AAA-rated)" refer to the S&P/LSTA Leveraged Loan Index, the S&P European Leveraged Loan Index, and the Palmer Square Price Index, respectively. Latest data as at May 15, 2020.

Source: Bloomberg.

In terms of leveraged loans with a bullet repayment at maturity, or the so-called Term Loan B, it is important for a large amount of the loans to be refinanced at redemption. In particular, attention should be paid to syndicated loans as a large share of the loans is held by institutional investors. Given that many of these investors are highly dependent on market funding and have a weak relationship with leveraged loan borrowers, they might become cautious about providing refinancing if market stress intensifies again in the future. The redemption schedule in the overall leveraged loan markets shows that refinancing will surge in 2022-2024 (Chart 10). Thus, it is also important for financial institutions to try to vary the redemption timing of leveraged loans they hold.

[Chart 10] Maturity schedule of leveraged loans

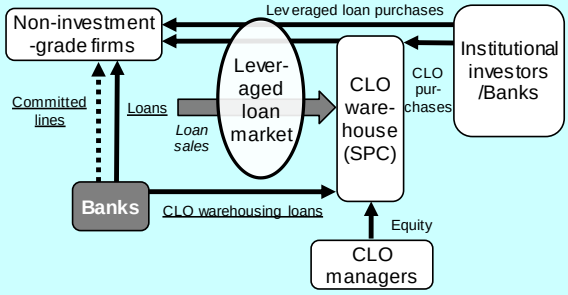


Note: Covers syndicated loans issued by non-investment-grade firms in the U.S. and Europe between January 2015 and March 2020. Revolving credit facilities are excluded.

Major banks should develop a management framework supported by an appropriate computer system, to ascertain portfolio conditions in a timely manner on a global group basis so that they can properly manage risks arising from their increased overseas exposure.

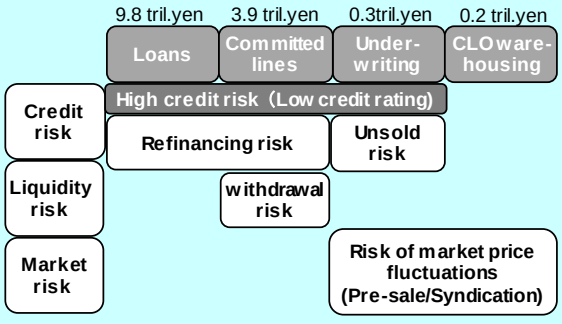
Major banks have been aiming to increase profitability not only through the direct holding of leveraged loans but also through various forms of businesses related to these loans. These include the provision of committed lines, loan underwriting with the prospect of selling them to other banks and investors, and arrangements for CLO warehousing loans that offer financing during the stage of structuring CLOs before selling them to investors (Chart 11).

[Chart 11] Banks' businesses related to leveraged loans



When financial institutions engage in these various businesses, they need to address a wide range of risks associated with leveraged loans, in addition to the credit risk of borrowers (Chart 12). For example, in the case of providing committed lines overseas, financial institutions are exposed to foreign currency liquidity risk because they need to provide loans promptly at the request of borrowers within the lines. In terms of the underwriting businesses, financial institutions are exposed to unsold risk if they cannot sell leveraged loans to other investors and have to hold them themselves, as well as the risk of market price fluctuations before these loans are sold. Although the outstanding amount of loans for these businesses related to leveraged loans has been limited so far, appropriate risk management is important.

[Chart 12] Risks related to leveraged loans

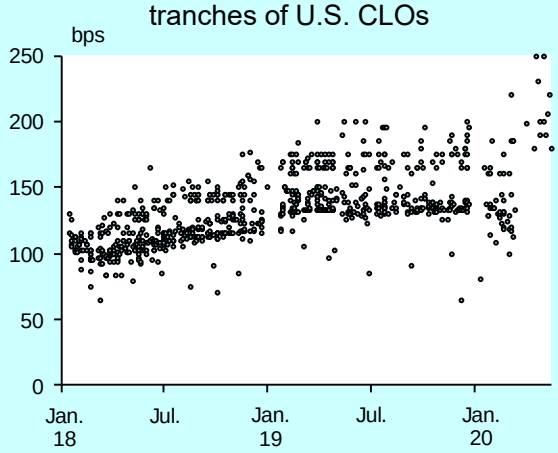


Note: Figures in the table are as of end-March 2019.

With regard to CLO investment, there is heterogeneity among CLOs with the same credit ratings due to the differences in CLO managers' skill of selecting and replacing the underlying assets and in appropriateness of the underlying assets. Given that the underlying portfolio is generally rebalanced until redemption, financial institutions need to be attentive not only to differences at the onset of investment but also to changes during an investment period. It should also be noted that the differences in the following product structures do not necessarily appear as the differences in credit ratings: credit enhancement levels, the period in which the underlying assets can be reinvested, and the ratio of covenant-lite loans.

In fact, in the CLO market, there is considerable heterogeneity in the spreads at issuance and in secondary market prices among products with the same credit ratings, reflecting various differences associated with products (Chart 13). Financial institutions should therefore develop a framework to appropriately monitor and manage risks based on the individuality of each CLO without excessively relying on external credit ratings.

[Chart 13] New issue spreads for AAA-rated tranches of U.S. CLOs



Note: Based on pricing date. Latest data as at May 14, 2020.
Source: Creditflux, "CLO-i."

Even if financial institutions do not assume sales before maturity, a downgrading of products they hold will pose a risk of incurring impairment losses due to substantial fluctuations in market prices. [10] Such downgrading could also lead to a considerable increase in their risk assets, or a decline in their capital adequacy ratio. It should be noted that nonbanks with relatively vulnerable funding bases have increased their roles, as evidenced by increases in the CLOs and leveraged loans held by open-ended investment funds, which need to meet investor requests for redemptions anytime. In this market structure, it is necessary to be highly vigilant about the possibility that, in times of large capital outflows from investment funds under market stress, as partly seen in March 2020, a sharp decline in market liquidity for CLOs and leveraged loans might trigger substantial price changes and refinancing difficulties, thereby leading to higher-than-expected default rates.

In the assessment of the underlying assets of CLOs, financial institutions need to not only conduct product-based monitoring but also take into account the overlapping of the underlying assets among products. Furthermore, they need to ascertain borrower-based exposure by combining other asset classes such as bank loan funds and high-yield corporate bonds and appropriately manage, across their portfolios, assets associated with borrowers to whom they have large exposure.

Given that market liquidity for leveraged loans and CLOs is relatively low, financial institutions need to be particularly attentive to the growing importance of ensuring stable foreign currency funding bases, especially when the outstanding amount of their held-to-maturity CLO investments is increasing. Financial institutions should continue working to strengthen their management of foreign currency liquidity risk by diversifying their foreign currency funding counterparts and instruments and extending funding periods.

Concluding Remarks

Based on the findings from the Survey for Overseas Credit Investment and Lending, which was jointly conducted by the Bank of Japan and Financial Services Agency, this paper outlined developments in overseas credit investment and lending with a focus on major banks' investment in leveraged loans and CLOs, which are securitized products backed by multiple leveraged loans.

The survey results have already been reflected in the assessment of financial system stability by financial authorities, such as the Bank of Japan's *Financial System Report* released in October 2019 and April 2020, as well as the report on the vulnerabilities of leveraged loans and CLOs released by the Financial Stability Board (FSB) in December 2019. In addition to these publicly-released documents, the Bank of Japan and the Financial Services Agency make use of the results in direct dialogue with financial institutions to encourage their further efforts to strengthen risk management and in discussions with foreign financial authorities at international forums and bilateral meetings to share a proper assessment of Japan's financial system stability.

As part of these efforts, the survey results are used for simultaneous stress testing based on common scenarios also jointly conducted by the two entities.

The Financial Services Agency and the Bank of Japan will make sustained efforts to ensure financial system stability in continued close cooperation.

[1] For details, see Financial Stability Board (FSB), *Vulnerabilities associated with leveraged loans and collateralised loan obligations* (December 2019): https://www.fsb.org/wp-content/uploads/P191219.pdf.

[2] The ratio of debt to earnings before interest, taxes, depreciation, and amortization (EBITDA) is generally used for a leverage ratio.

[3] Major banks comprise the following 13 financial institutions: Mizuho Bank, MUFG Bank, Sumitomo Mitsui Banking Corporation, Resona Bank, Saitama Resona Bank, Mitsubishi UFJ Trust and Banking Corporation, Mizuho Trust and Banking Company, Sumitomo Mitsui Trust Bank, SMBC Trust Bank, Shinsei Bank, Aozora Bank, Japan Post Bank, and Norinchukin Bank.

[4] According to the estimate by the FSB, CLOs held by banks of Japan, the United States, the euro area, and the United Kingdom totaled 207 billion U.S. dollars, or 28 percent of the market outstanding, as of end-2018. A breakdown shows that Japanese banks' holdings amounted to 107 billion U.S. dollars, exceeding the 85 billion, 13 billion, and 1.2 billion dollars of the U.S., the euro area, and U.K. banks, respectively. For details, see Financial Stability Board (2019).

[5] See Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, "Interagency Guidance on Leveraged Lending" (March 2013), and European Central Bank, *Guidance on leveraged transactions* (May 2017).

[6] For example, see the following URL for S&P's definition: https://www.spglobal.com/marketintelligence/en/pages/toc-primer/lcd-primer.

[7] See Financial Stability Board (2019).

[8] See Creditflux, *CLO Yearbook 2018* (2018).

[9] It is pointed out that other advantages of holding a majority share of tranches issued include a reduction in marketing costs and an increase in administrative efficiency due to large unit investment, as well as an increased capability to reflect investor demand in various documentations regarding the invested CLOs.

[10] For details, see Bank of Japan, *Financial System Report* (October 2019): 89-91 (Box2), https://www.boj.or.jp/en/research/brp/fsr/data/fsr191024a.pdf.

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