

International Comparison of the BIS International Banking Statistics: Estimates of the Positions Excluding Trustee BusinessFinancial Markets Department
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The BIS international banking statistics (IBS) are statistics that the Bank for International Settlements (BIS) and central banks worldwide compile in order to capture capital flows and credit exposures through internationally active banks. It is worth noting that the IBS reported by the Bank of Japan (BOJ) include trust accounts in which a bank holds and manages funds or securities on behalf of third parties. Attention should therefore be paid for international comparative analysis of the Japan's statistics and those of other major reporting countries which exclude trustee business. This paper attempts to provide an estimate of the IBS in Japan which exclude trust-account-based positions, and compare the results with the IBS of banks of other major nationalities. The results show that, while Japanese banks have been increasing their foreign claims in recent years, the ratio of foreign claims to the outstanding amount of total assets is not significantly high compared to banks of other major nationalities. Moreover, claims vis-à-vis the United States are demonstrated to account for a relatively high share of foreign claims, which lead to a high share of U.S. dollar-denominated claims held by Japanese banks.

Introduction¹

The BIS International banking statistics (IBS) are global statistics that the Bank for International Settlements (BIS) compiles and publishes² in cooperation with the central banks worldwide in order to capture capital flows and credit exposures, comprehensively, through internationally active banks. While the Bank of Japan (BOJ) has been cooperating in compiling the statistics by providing the figures of the reporting banks located in Japan with the BIS quarterly, the BOJ has also been independently aggregating the figures and publishing the results (the IBS in Japan) in both Japanese and English.³ The IBS are comprised of the following two datasets: (1) the Locational Banking Statistics (LBS), which measure flows of external claims and liabilities held by banks located in each reporting country, and (2) the Consolidated Banking Statistics (CBS), which capture international credit exposures of banks headquartered in each reporting country. The LBS and CBS enable one to identify capital flows in detail by merging these sets of statistics, such as positional breakdowns by reporting region and country, currency, and counterparty sector. Reflecting this point, they are used widely for analysis on topics related to

international finance.

Capital and credit transactions through banks are accounted as either of the following bases: (1) banking accounts in which a bank's own funds are involved in transactions for purposes such as funding or fund management, or (2) trust accounts in which a bank holds and manages funds on behalf of third parties. In the IBS, reporting practices of trustee business vary across reporting countries. While many countries including major ones report figures of positions based solely on banking accounts, there are several countries whose reporting figures include positions based on trust accounts in addition to those based on banking accounts (banking-and-trust-account basis), such as Japan.⁴ Differences in their coverage should therefore be taken into account when carrying out international comparative analysis using the IBS in Japan, notwithstanding their feasibility of capturing international capital flows and credit exposures through the banking sector in a broader sense, reflecting their wide coverage of funds and credit transactions.

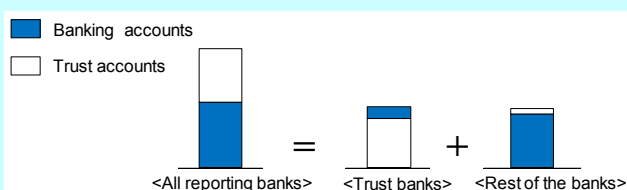
In this regard, it is not currently possible to exclude trust-account-based positions from the IBS in Japan and compile positions based exclusively on banking accounts in order to conduct international comparative

analysis. This limitation arises due to reasons related to the non-availability of breakdowns of reported positions. With the objective of carrying out an international comparison of the IBS based on banking accounts, this paper attempts to estimate the IBS in Japan wherein the positions are separated into those pertaining to banking or trust accounts under certain assumptions. We then provide comparative analysis of the estimated banking-account-based IBS in Japan with the IBS of banks of other major nationalities. Further, this paper outlines the characteristics of international capital flows and credit exposures held by Japanese banks through transactions undertaken on a banking-account basis.

Estimates of the positions on banking-account and trust-account bases

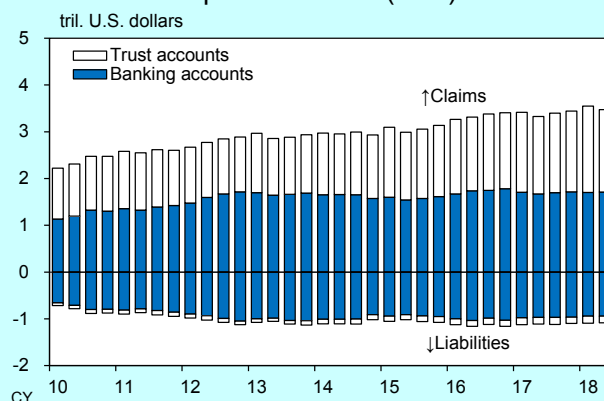
In the LBS, debt securities account for 74 percent of the external claims held by Japanese banks as of end-June 2018. While a country breakdown or a sectoral breakdown of debt securities held by individual reporting banks is not available for reasons regarding how the statistics are compiled, their aggregated amount is distinguishable into banking-account- and trust-account-based figures. Aggregating the figures of the reporting banks⁵ separately by trust banks and the rest of the banks, trust-account-based debt securities account for more than 90 percent of the external claims of the trust banks, while the share is almost 0 percent for the rest of the banks as of end-June 2018. These results suggest that almost all of the positions of the trust banks are held on a trust-account basis, whereas the positions of the rest of the banks are almost entirely on a banking-account basis (Chart 1). In what follows, the figures reported by trust banks are used as estimates of the positions held on a trust-account basis. Likewise, the figures reported by the rest of the reporting banks are treated as estimates of the banking-account-based positions in this paper.⁶

[Chart 1] Illustration of the figures of the reporting banks



Examining external claims and liabilities in the LBS with a breakdown of trust-account- and banking-account-based figures defined above (Chart 2), the trust-account basis accounts for more or less half of all external claims. Meanwhile, the banking-account-based figures have large shares in external liabilities. This can be explained by the following characteristics of the reporting banks' activities over trust-account-based positions. First, many of them receive funds from domestic investors such as pension funds and trust funds in Japanese yen, where such positions are not included in the LBS since they are liabilities vis-à-vis residents denominated in Japanese yen. Second, such banks invest those funds in foreign assets, which are to be reported in the LBS since they are claims vis-à-vis non-residents. On a trust-account basis, the outstanding amount of external liabilities is therefore considered to be statistically small relative to those of external claims.⁷

[Chart 2] External claims and liabilities of Japanese banks (LBS)

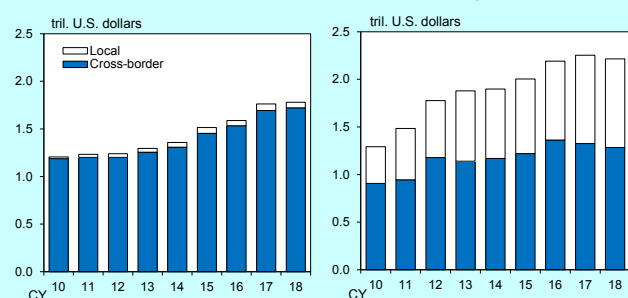


Note: The figures are adjusted for exchange rate fluctuations (to remove the impacts of foreign exchange rate changes, outstanding amounts denominated in major currencies other than U.S. dollar <Japanese yen, euro, British pound, and Swiss franc> are converted into U.S. dollar based on the exchange rates as of end-2017). Latest data as at end-June 2018.

Source: BOJ.

Breaking down the foreign claims in the CBS into (1) cross-border claims and (2) local claims of overseas affiliates, the cross-border claims from entities located in Japan -- mainly debt securities -- account for almost all of the foreign claims held in a trust-account basis. On the other hand, on a banking-account basis, cross-border claims account for just less than 60 percent of foreign claims, reflecting increased credit activity by overseas affiliates.

[Chart 3] Foreign claims of Japanese banks (CBS)
[Trust accounts] [Banking accounts]



Notes: 1. The figures are end-of-year values, except for 2018 where end-June values are used.
2. Ultimate risk basis.

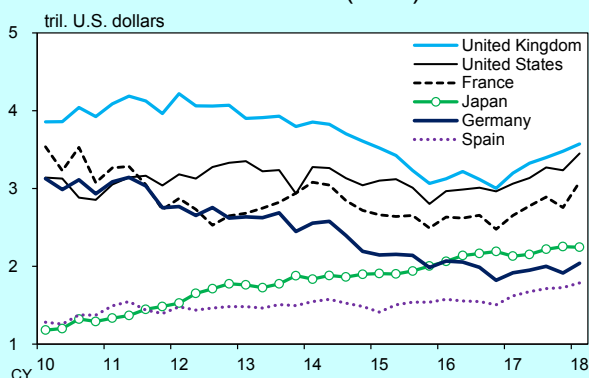
Source: BOJ.

International comparison using banking-account-based figures in Japan

This section provides an overview of international credit exposures held by Japanese banks. We use the estimated banking-account-based figures in Japan with the aforementioned procedure, and compare them with those of other major nationalities whose reporting figures are based on banking accounts.

First, examining foreign claims in the CBS, the outstanding amount has recently been either more or less unchanged, or decreasing in many of the banks of other major nationalities. By contrast, that of Japanese banks has been rising substantially in recent years, standing at about 2.2 trillion U.S. dollars as of end-March 2018, marking the fourth largest share (9 percent) in the global market, following the United Kingdom, the United States, and France (Charts 4 and 5). Evaluating the ratio of foreign claims to the total assets across countries (Chart 6), however, the ratio for Japanese banks is 17 percent as of end-March 2018, which is the lowest level among the banks of major nationalities in the banking sector. These results reveal that the ratio of external assets relative to the size of the banking sector is not significantly high on a global scale.

[Chart 4] Foreign claims held by banks of major nationalities (CBS)

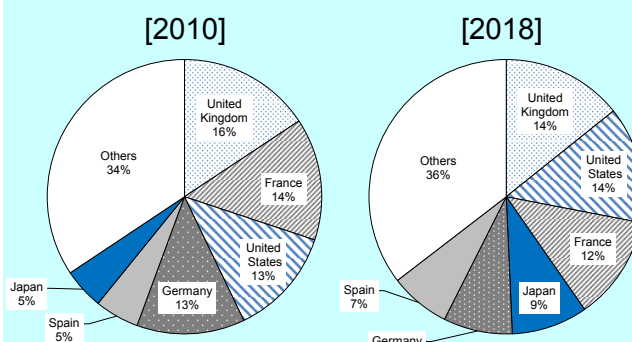


Notes: 1. Latest data as at end-March 2018.

2. Ultimate risk basis.

Sources: BIS; BOJ.

[Chart 5] Share of foreign claims by country of reporting banks (CBS)



Notes: 1. The figures are end-March values.

2. Ultimate risk basis.

Sources: BIS; BOJ.

[Chart 6] Ratio of foreign claims held by banks of major nationalities (CBS)

| | Foreign claims (bil. U.S. dollars) (A) | Total assets (bil. U.S. dollars) (B) | Ratio of foreign claims (A/B) |
|----------------|--|--------------------------------------|-------------------------------|
| Japan | 2,246.1 | 13,484.8 | 17% |
| United Kingdom | 3,572.9 | 7,477.9 | 48% |
| Spain | 1,787.2 | 4,182.6 | 43% |
| France | 3,082.6 | 8,185.9 | 38% |
| Germany | 2,039.9 | 8,651.8 | 24% |
| United States | 3,450.7 | 15,057.2 | 23% |

Notes: 1. The figures are as of end-March 2018.

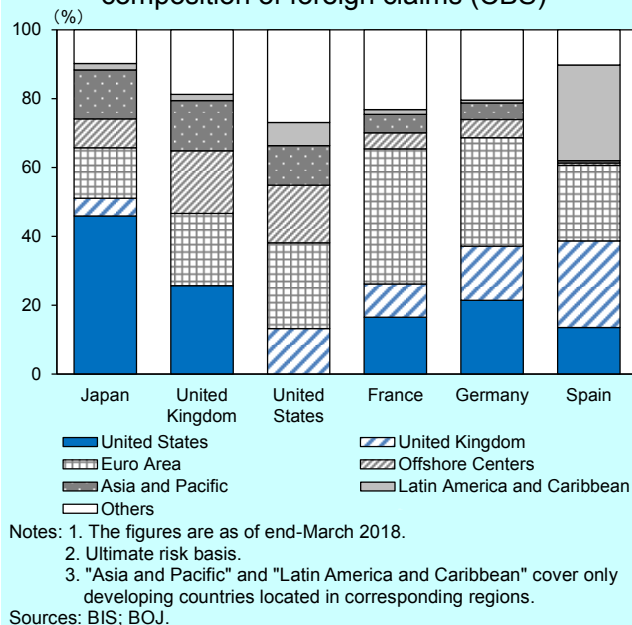
2. Ultimate risk basis.

Sources: BIS; BOJ.

Second, breaking down foreign claims by counterparty country (Chart 7), the Japanese banks' claims vis-à-vis the United States -- such as positions in U.S. Treasuries and lending to local firms -- account for more or less half of their overall foreign claims. For banks of other major nationalities, on the other hand, the shares of foreign claims are high on the following countries or regions: (1) the United

States, major European countries, Hong Kong, and China held by U.K. banks; (2) the United Kingdom, Japan, and the Cayman Islands held by U.S. banks; (3) the United States and the euro area held by French and German banks; and (4) "Latin America and Caribbean" held by Spanish banks. Next, in view of examining banks' claims on countries with which they do not share the same domestic currency, we exclude claims vis-à-vis the euro area from the overall foreign claims held by French, German, and Spanish banks. The results show that, while the shares of claims vis-à-vis the United States held by French and German banks are 27 percent and 31 percent, respectively, the claims vis-à-vis the United Kingdom held by Spanish banks account for 32 percent of their foreign claims.

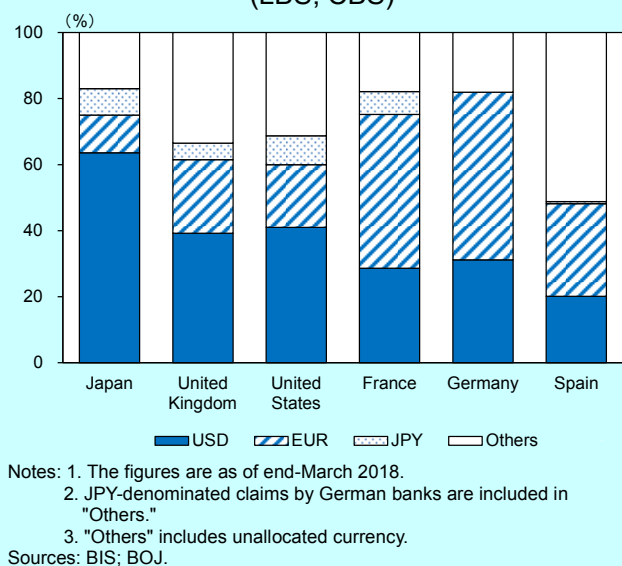
[Chart 7] Counterparty country and region composition of foreign claims (CBS)



Third, determining an estimate of currency composition of consolidated-based foreign claims with the use of the LBS and the CBS⁸ (Chart 8), U.S. dollar-denominated claims account for a large share -- making up about 60 percent -- of the foreign claims held by Japanese banks, reflecting the high share of claims vis-à-vis the United States. Turning to banks of other major nationalities, it reveals that euro-denominated claims are the main foreign claims held by French and German banks. Meanwhile, it shows that the share of the residual currencies -- referred to as "Others" -- is relatively high in the currency composition of Spanish banks. These currencies are considered to be the local currencies of

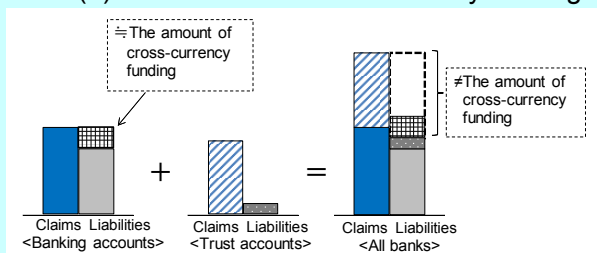
"Latin America and Caribbean," which are the main counterparty countries of foreign claims held by Spanish banks. In this regard, from the point of view of examining claims denominated in non-local currencies, euro-denominated claims are now excluded from the total claims held by French, German and Spanish banks. Our findings are that the shares of U.S. dollar-denominated claims in their foreign claims are 54 percent, 63 percent, and 28 percent, respectively.

[Chart 8] Currency composition of foreign claims (LBS, CBS)



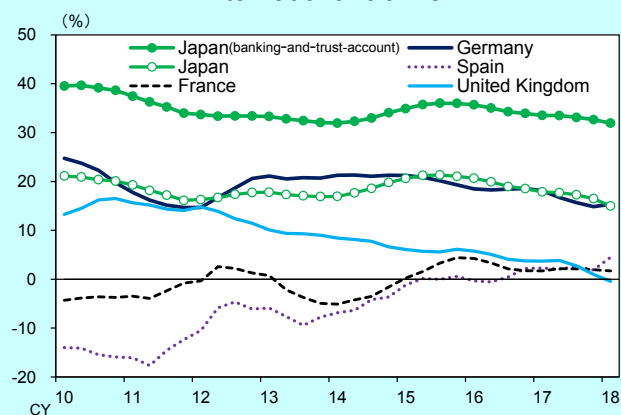
Fourth, we examine aspects of U.S. dollar funding. As an application of the IBS, the differential between U.S. dollar-denominated claims and liabilities is sometimes used as a proxy variable for the amount of cross-currency funding -- funding by foreign exchange (FX) swaps and foreign currency swaps -- in the context of U.S. dollar funding. With regard to their positions on a trust-account basis, however, banks themselves do not use FX swaps or foreign currency swaps for foreign currency funding in many of such positions. The examples include positions in which institutional investors, such as pension funds, sell Japanese yen to buy foreign currencies, thereby investing them in foreign debt securities. Thus, there is a possibility that (1) taking the differential between the banking-and-trust-account-based international claims and liabilities held by Japanese banks, which include the aforementioned positions on a trust-account basis, and (2) using it as a proxy variable for the amount of cross-currency funding by Japanese banks, results in figures appearing to be greater than they actually are (Chart 9).⁹

[Chart 9] Relationship between (a) a differential between international claims and liabilities and (b) the amount of cross-currency funding



In this context, with the objective of examining cross-currency funding, we determine the ratios of (1) the differential between the U.S. dollar-denominated international claims and liabilities, relative to (2) the U.S. dollar-denominated international claims, for banks of major nationalities (Chart 10).¹⁰ To derive the ratio for Japanese banks, banking-account-based figures that we have estimated in this paper are used instead of banking-and-trust-account-based figures. The chart reveals that the banking-based ratio is significantly smaller than the banking-and-trust-account-based one for Japanese banks, indicating that the former is not extremely high on an international scale. Moreover, from a time-series perspective, their share has been more or less unchanged.¹¹

[Chart 10] Ratio of the differential between the U.S. dollar-denominated international claims and liabilities relative to the U.S. dollar-denominated international claims



Note: 4-quarter backward moving averages. Latest data as at end-March 2018.
Sources: BIS; BOJ.

Concluding Remarks

The IBS are fundamental statistics for capturing capital flows and credit exposures through

internationally active banks. In the IBS, reporting practices of trustee business vary across reporting countries. While the BOJ reports figures that include positions both on trust-account and bank-account bases, banks of other major nationalities do not include trust-account-based positions in their figures but they report figures based solely on banking accounts. Differences in the coverage of the positions should therefore be taken into account when carrying out international comparative analysis using the IBS. This paper has broken down the IBS in Japan into (1) positions held by trust banks, and (2) those of residual banks, and attempted to carry out an international comparison by treating the latter as an estimate of banking-account-based positions of Japanese banks as a whole.

Examining Japanese banks' international credit exposures with the use of the aforementioned estimates, while Japanese banks have been increasing their foreign claims in recent years, the ratio of their foreign claims relative to their total assets in the banking sector is not as high as those of banks of other major nationalities. It has also illustrated that Japanese banks' claims vis-à-vis the United States account for more or less half of their overall foreign claims. Likewise, in terms of currency, U.S. dollar-denominated claims account for a large share of the foreign claims held by Japanese banks. In the context of aspects of U.S. dollar funding, with the objective of examining cross-currency funding, we have determined the ratio of (1) the differential between the U.S. dollar-denominated international claims and liabilities, relative to (2) the U.S. dollar-denominated international claims, for banks of each major nationality using the IBS. The results have demonstrated that the banking-based ratio is significantly smaller than the banking-and-trust-account-based one for Japanese banks, indicating that the former is not extremely high on an international scale. Moreover, from a time-series perspective, their share has remained more or less unchanged.

The BIS and the central banks worldwide have enhanced the IBS in the wake of the experience such as various global financial crises. The IBS enable one to provide a quantitative evaluation of past international capital flows and credit exposures through the banking sector with the breakdowns of their positions. The IBS are therefore considered to be growing in importance for analysis of Japanese banks,

which have expanded the size of external claims, particularly in recent years. The BOJ will continue to contribute to further developments and enhancements of the statistics in cooperation with the BIS while paying concurrent attention to reporting burdens placed on reporting banks. Moreover, the BOJ will work on further enhancements to the usability and convenience of the IBS in Japan.

* Currently at the Research and Statistics Department.

¹ For prior revisions of the IBS, please see the research papers and reviews below.

Bank of Japan Financial Markets Department [1999] "International Financial Markets as Viewed from BIS Statistics: Changes in the International Flow of Funds in the 1990s"

Nakahata, Kouda and Hishikawa [2002] "BIS Kokusai Yoshin Toukei no Tokuchouten to Minaoshi ni Muketa Torikumi" (Highlights of the BIS international banking statistics and Efforts for Enhancements) <Available only in Japanese>, *Bank of Japan Market Review Series*, 02-J-2

Hirano, Hayakawa, Saitou and Shigemi [2003] "Arata na BIS Kokusai Yoshin Toukei no Gaiyou--Yori Takakuteki na Country Risk no Haaku ni Muketa Kokusaiteki na Torikumi--" (Highlights of the New BIS international banking statistics -worldwide efforts for capturing country risks from various aspects-) <Available only in Japanese> *Bank of Japan Market Review Series*, 03-J-8

Inoue, Yoshizaki, Sasamoto and Shiotani [2017] "Enhancements to the BIS International Banking Statistics and Highlights of the Results of the Statistics in Japan," *Bank of Japan Review Series*, 17-E-1

² Please see here for the global results of the IBS with associated details.

(https://www.bis.org/statistics/about_banking_stats.htm)

³ Please see here for the IBS in Japan with associated details.

(<http://www.boj.or.jp/en/statistics/bis/ibs/index.htm/>)

⁴ With regard to the LBS and the CBS, reporting standards for the statistics are indicated in the reporting guidelines for BIS international banking statistics. While reporting of banking-and-trust-account-based figures is encouraged for the LBS, reporting practices vary across reporting countries.

⁵ In principle, the reporting banks of the IBS in Japan are holders of Japan Offshore Market (JOM) accounts among the banks located in Japan.

⁶ Since the trust-account-based figures estimated in this paper include banking-account-based positions of trust banks, there is an upward bias in the estimates of trust-account-based positions. In other words, there is a downward bias in those of the banking-account-based positions. These points should be considered for the analysis presented in this paper.

⁷ Attention should therefore be given when carrying out international comparative analysis on the level of external claims or the differential between the external claims and liabilities. On the other hand, the impacts of their difference on the results are thought to be small in the case of a comparison among the levels of their external liabilities.

⁸ It is possible to estimate the currency composition of consolidated-based foreign claims by merging the LBS and the CBS. For estimation procedures, please see the following paper.

McGuire, P. and G. von Peter [2009] "The US dollar shortage in global banking and the international policy response," *BIS Working Papers*, No. 291

⁹ It should be noted that the banking-account-based differential of international claims and liabilities is not all funded by FX swaps and currency swaps. It rather broadly indicates the amount of cross-currency funding.

¹⁰ In this estimation, the differentials between international claims and liabilities vis-à-vis each of banks and non-banks are used as a proxy variable. The ratios of (1) the differential between the U.S. dollar-denominated international claims and liabilities, relative to (2) the U.S. dollar-denominated international claims are then determined. For details, please see the following paper.

IMF [2018] "A Bumpy Road Ahead," *Global Financial Stability Report April 2018*

¹¹ Please see "Financial System Report" for the evaluation on Japanese banks.

(<http://www.boj.or.jp/en/research/brp/fsr/index.htm/>)

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