

Enhancements to the BIS International Banking Statistics and Highlights of the Results of the Statistics in Japan

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With the lessons learned from the international financial crisis of 2008, the Bank for International Settlements (BIS) and central banks worldwide have been working on enhancements to the BIS international banking statistics (IBS) which comprehensively quantify cross-border capital and credit flows through the banking sector. The purpose of the enhancements is to help capture the build-up of risks in the financial system such as credit exposures to the shadow banks. The Bank of Japan (BOJ), in line with its cooperation to enhance the IBS, has made some improvements to the results of the statistics in Japan. These enhanced statistics are independently published by the BOJ and include further breakdown of the counterparty sector and calculation of aggregated figures for Japanese banks. By virtue of these enhancements, analyses of these newly available data clarify that, for example, external claims have been increasing mainly due to investments in U.S. securities and in funds registered in offshore centers by such entities as Japanese banks and institutional investors subjected to persistently low interest rates in Japan.

Introduction¹

Capital flows through international active banks have become larger and more complex in recent decades due to an increase in cross-border investments and loans and availability of financial instruments denominated in foreign currencies. 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 developments in capital flows. The IBS have been evaluated as unique statistics that comprehensively indicate cross-border capital flows in the banking sector and credit exposures by residence of the counterparty. Due to their unique nature, the IBS have been utilized in various analyses of international finance including "Financial System Report"³ published by the Bank of Japan (BOJ). The BOJ has been cooperating with the BIS in compiling the statistics by providing figures of the reporting banks located in Japan to the BIS every quarter. At the same time, with the aim of making the obtained information widely available to the public, the BOJ has been independently aggregating the figures of the reporting banks located in Japan, and publishing them as the

results of the statistics pertaining to Japan (the IBS in Japan) in both Japanese and English.⁴

The IBS have been developed and enhanced since their first publication in 1977, by the BIS and the central banks worldwide with the lessons learned from international financial crises such as the Latin American debt crisis of 1982 and the Asian financial crisis of 1997.⁵ In particular, since the international financial crisis of 2008, the BIS and the central banks worldwide have been working for further enhancements to the statistics in response to the request of the G20. The G20 was seeking to capture the build-up of risks in the financial system that could not be measured sufficiently by the existing statistics. As one of the efforts, with the understanding and cooperation of the reporting banks in Japan, the BOJ enhanced its submissions to the BIS and its subsequent publications of the IBS in Japan.

In this article, we provide an overview of the IBS and then briefly explain the recent enhancements to the statistics, focusing on the IBS in Japan. We further present various findings revealed in the recent trends of external claims and liabilities of the reporting banks located in Japan through the newly developed statistics.

Enhancements to the IBS

Structure of the IBS

The IBS consist of two sets of statistics: the Locational Banking Statistics (LBS) and the Consolidated Banking Statistics (CBS). The LBS mainly focus on clarifying the structure of external claims and liabilities, with such breakdowns as residence of counterparty and currencies of banks located in 46 countries/economies (reporting countries)⁶ that participate in the statistics. By contrast, a key purpose of the CBS is to clarify international credit exposures (claims on a consolidated basis) of banks headquartered in 31 reporting countries.

In what follows, more detailed characteristics of the LBS and CBS are expounded. First, as to the coverage of reporting populations, taking the IBS in Japan as an example, Japanese banks' domestic bases (headquarters, branches and subsidiaries) and foreign-owned banks' affiliates (branches and subsidiaries) located in Japan (foreign banks) are subject to reporting in the LBS⁷. Overseas affiliates of Japanese banks are not subject to reporting (their positions are reported in the statistics of the reporting countries where they are located). On the other hand, in terms of the CBS, Japanese banks including overseas affiliates are subject to reporting while foreign banks are not (their positions are reported in the statistics of the reporting countries where their headquarters are located).

Second, as to the coverage of positions that are reported and aggregated (Chart 1), the two statistics sets share in common that positions resulting from cross-border transactions and those denominated in foreign currencies are mainly subject to reporting. On the other hand, while international division's on-balance external claims and liabilities are both reported in the LBS, external claims (credit exposures) are mainly reported in the CBS. At the same time, the positions of domestic bases including those resulting from interoffice transactions with overseas affiliates of a bank are reported in the LBS. Meanwhile, in the CBS, which is compiled on a consolidated basis, the positions of overseas affiliates are reported while those resulting from interoffice transactions between different offices of a bank are not reported.

Third, with respect to specific published items (Chart 2), both the LBS and CBS are broken down by counterparty residence and sector (the sector of the counterparty); but only the LBS provide a currency

breakdown; while only the CBS provide a maturity breakdown.

[Chart 1] Coverage of the LBS and CBS

Items for reporting and aggregation			Positions of domestic bases			Positions of overseas affiliates
			Non cross-border transactions	Cross-border transactions	Interoffice transactions with overseas affiliates	
Japanese banks	FCY	Claims	LBS	LBS, CBS	LBS	CBS
		Liabilities	LBS	LBS	LBS	—
	Yen	Claims	—	LBS, CBS	LBS	CBS
		Liabilities	—	LBS	LBS	—
Foreign banks	FCY	Claims	LBS	LBS	LBS	—
		Liabilities	LBS	LBS	LBS	—
	Yen	Claims	—	LBS	LBS	—
		Liabilities	—	LBS	LBS	—

Note: FCY denotes foreign currencies.

[Chart 2] Published items in the LBS and CBS

		LBS	CBS	
			IR basis	UR basis
Subjects	Frequency	Quarterly at the end of March, June, September, and December		
	Reporting banks	Japanese banks, Foreign banks	Japanese banks	
	Reported items	Claims and liabilities of international division	Mainly claims of international division	
Breakdowns	By residence of counterparty	Yes	Yes	Yes
	By sector	Yes	Yes	Yes
	By currency	Yes	See note3	No
	By maturity	No	Yes	No

Notes: 1. IR and UR denote Immediate counterparty risk and Ultimate risk respectively.
2. Yes and No indicate whether there exists a breakdown in the statistics or not.
3. On an IR basis of the CBS, figures for "local claims in local currency" of overseas affiliates are collected. The figures can be interpreted as representing positions by currency of counterparty country.

In addition, the CBS have two subsets compiled on different bases: Immediate counterparty risk (IR) basis and Ultimate risk (UR) basis. Claims on an IR basis classify counterparty countries uniformly according to the location of the counterparty (subject to credit exposure). Claims on a UR basis identify counterparties not based on their location, but on where an entity (entities) finally responsible for payment is (are) located taking account of risk transfers through guarantees and collaterals in case of immediate counterparty's default.⁸ In the meantime, claims on a UR basis independently collect off-balance sheet positions such as derivative claims to capture an overall image of risks.

Reflecting the different characteristics of both sets of statistics, the LBS have been utilized to analyze international capital flows through the banking sector. The CBS have been utilized to capture country risks to

which each country's banking sector is exposed.

Efforts to enhance the IBS

After the international financial crisis of 2008, the importance of capturing the build-up of risks in the financial system was recognized. The risks are those that could not sufficiently be measured by the existing statistics such as credit exposures to the so-called shadow banks. The risks also include the currency composition of external claims and liabilities of the banking sector in each country. Taking account of the risks, the G20 requested further enhancements to the IBS as part of the twenty recommendations⁹ relating to "The Financial Crisis and Information Gaps" adopted in 2009. Based on the recommendations, the BIS and the central banks worldwide have been carefully considering¹⁰ enhancements to the IBS via the Committee on the Global Financial System¹¹ (CGFS) whose aim is to improve the function and stability of international financial markets.

Specifically, in order to capture entities subject to credit exposure including shadow banks, it was agreed that improvement in terms of (1) further breakdown of counterparty sectors (LBS and CBS) should be sought. At the same time, to clarify funding and fund management by each country's banks, it was agreed that it would be appropriate to (2) start aggregating the data by nationality of reporting banks (LBS) and (3) enlarge the reported and aggregated items¹² (LBS and CBS) (Chart 3).

[Chart 3] Principal enhancements to the IBS

Main policy for enhancements	Specific changes (The underlines signify the beginning of publication in the IBS in Japan in 2015)
(1) Further breakdowns by sector	<ul style="list-style-type: none"> • Further <u>sector classification of "non-bank sector" in the LBS into "non-bank financial institutions" and "non-financial sectors."</u> Also, "non-financial sectors" were further broken down into "general government," "non-financial corporations," and "households." • Further <u>classification of "non-bank private sector" in the CBS into "non-bank financial institutions" and "non-financial private sector"</u> took place. Also, "non-financial private sector" was further broken down to "non-financial corporations" and "households."
(2) Start aggregating figures by nationality of reporting banks	<ul style="list-style-type: none"> • "Sector," "currency," and "residence of counterparty" breakdowns of the LBS were aggregated by nationality of reporting banks ("<u>sector</u>" and "<u>currency 'JPY' and 'foreign currency'</u>" are aggregated only for Japanese banks).
(3) Enlargement of reporting and aggregating items	<ul style="list-style-type: none"> • "Claims and liabilities denominated in domestic currency for residents" were added in the LBS (please see note). • "Liabilities" and "capital and equity" were added to the instrument breakdown of the CBS (only on an IR basis)

Note: Those denominated in foreign currencies have been published in the IBS in Japan.
Source: BIS, BOJ

At present, the central banks worldwide are endeavoring to improve the figures reported to the

BIS taking account of, for example, actual business practices in the banking sector. The BIS has gradually been increasing the number of published items in the global results of the IBS.

Enhancements to the IBS in Japan

The BOJ has also been collecting additional figures with the understanding and cooperation of the reporting banks, reporting the figures to the BIS, and working on enhancements to the IBS in Japan. First, in June 2015, the BOJ implemented the above mentioned (1) further classification of counterparty sectors (LBS and CBS) and started to publish the data retroactively from end-December 2014. At the same time, the BOJ started to compile data by sector "Banks-interoffice" in the LBS, and publish the external claims and liabilities resulting from interoffice transactions with foreign branches of a bank.¹³ Second, in December 2015, in order to implement (2) aggregation of data by nationality of reporting banks (LBS), the BOJ started to calculate and publish retroactively the aggregated figures for Japanese banks from end-December 2007.¹⁴ The BOJ has also started the reporting with (3) enlargement of reported and aggregated items (LBS and CBS).

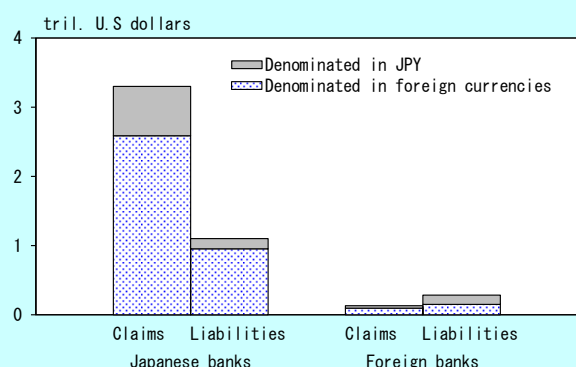
With those efforts, more specific analyses have been made possible by combining existing methods of analysis based on the data by residence of counterparty and by currency with further breakdowns by sector or bank nationality.

The structure of external claims and liabilities of Japanese banks and foreign banks

In the LBS in Japan, as mentioned above, the figures for Japanese banks have become available due to the recent enhancements. By subtracting the figures for Japanese banks from the total, the figures for foreign banks can be revealed.

The estimated figures can clarify the breakdown of external claims and liabilities of banks located in Japan by Japanese banks and foreign banks. The Japanese banks hold more than 90% of the total in external claims and about 80% of the total in external liabilities. The currency composition (Japanese Yen "JPY" and foreign currencies) of the external claims and liabilities shows that claims and liabilities denominated in foreign currencies hold a large proportion in Japanese banks. At the same time, the liabilities denominated in JPY account for a relatively large proportion in foreign banks (Chart 4).

[Chart 4] External claims and liabilities by currency and nationality of reporting banks (end-September 2016)



Note: The figures are exchange rate adjusted (to remove the impacts of foreign exchange rate changes. Currencies other than USD are converted into USD based on exchange rate as of end-of-2015).

More concretely, net external claims can be determined by netting out gross external claims and liabilities of Japanese banks. This implies their JPY funded in Japan (not reported as external liabilities) are invested in foreign countries (reported as external claims regardless of whether they are denominated in JPY or foreign currencies). Some of them are converted into foreign currencies through financial products such as currency swaps before investments. At the same time, the positions on trust accounts are also reported.¹⁵ Thus, Japanese banks hold external claims that reflect not only their own loans and investments, but also the increasing foreign bond investments by institutional investors such as pension funds and investment trusts under persistently low interest rates. This seems to be resulting in increasing external claims in recent years (Chart 5).

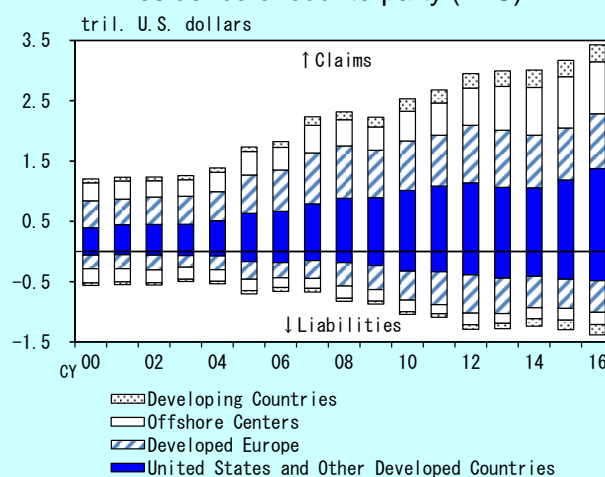
On the other hand, net external liabilities can be determined by netting out gross external claims and liabilities of foreign banks located in Japan. This implies that they are funding from foreign countries including their overseas affiliates (reported as external liabilities regardless of whether those are denominated in JPY or foreign currencies) and investing in Japan with assets denominated in JPY such as Japanese Government Bonds (not reported as external claims).

External claims and liabilities by residence of counterparty and sector

It is also possible to capture external claims and liabilities of the reporting banks in Japan by residence of the counterparty with the LBS in Japan.¹⁶ The amounts outstanding of their external claims and liabilities have been increasing on a long-term trend. The changes by residence of counterparty indicate that the increases in the external claims vis-à-vis "United

States and other developed countries" and "offshore centers" are notable. They also indicate that the increases in the external liabilities vis-à-vis "United States and other developed countries" and "developed Europe" are conspicuous. More specifically, both external claims and liabilities remained almost constant after 2012, but have resorted back to an increasing trend driven by a rise in external claims mainly vis-à-vis "United States and other developed countries" since 2015 (Chart 5).

[Chart 5] External claims and liabilities by residence of counterparty (LBS)



Notes: 1. Figures are end-of-year values, excepting 2016 where end-of-September values are used. Figures are exchange rate adjusted.
2. "United States and other developed countries" consist of the United States, Australia, Canada, and New Zealand.

In what follows, trends in terms of external claims and liabilities in recent years are elaborated with a further breakdown by sector that has become available as a result of the recent enhancements.

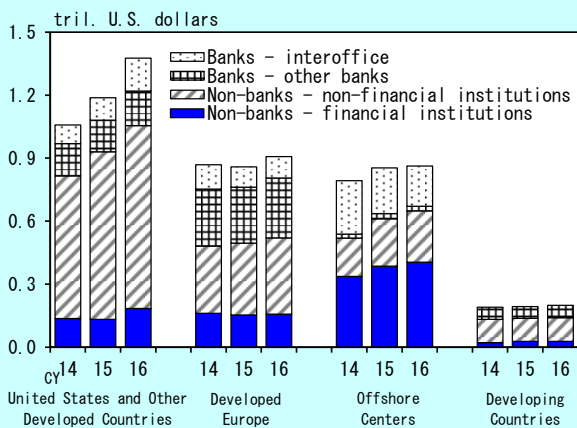
External claims

According to the LBS data from end-December 2014 where specific figures by sector are available, external claims by residence of counterparty and sector show that these claims have been increasing across all countries (Chart 6).

The external claims vis-à-vis "United States and other developed countries" have especially been increasing. This seems to result from the relatively good performance of the US economy and the higher interest rates compared to those in other countries. By sector, as to the external claims vis-à-vis "United States and other developed countries," "non-banks - non-financial institutions" has a large proportion, and this increased further in 2015. A large portion of the external claims seems to consist of bonds.¹⁷ Since the central government is included in the definition of the

sector, it can be interpreted as representing strong demands for US government bonds as a principal product in foreign securities investments. An increase in "non-banks - financial institutions" is also notable in 2016. "Non-banks - financial institutions" include securitized products whose underlying assets are, for example, housing and car loans, and special purpose companies (SPC) that are used as a vehicle for fund investments. An increase in the sector implies a further diversification of risk taking behavior that seeks higher yields under globally lowering interest rates among such entities as institutional investors.

[Chart 6] External claims by residence of counterparty and sector (LBS)



Note: Figures are end-of-year values, excepting 2016 where end-of-September values are used. Figures are exchange rate adjusted.

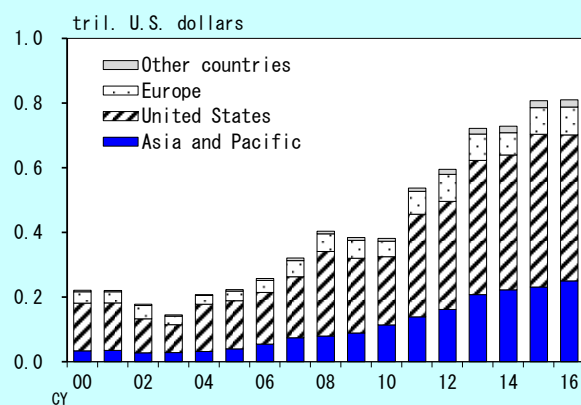
As to "developed Europe," the region was originally characterized by the large amount of external claims resulting from interbank transactions including reporting banks' interoffice transactions with their own foreign branches. Taking this into account, examining the trend in recent years clarifies that the increases in the amounts outstanding of interbank transactions are relatively small compared to those associated with "United States and other developed countries." In addition, the same evaluation can be applied to "non-banks - non-financial sector" and "non-banks - financial institutions" which include investments in government bonds and other financial products. These imply a possibility that they are reflecting relatively low incentives of entities such as domestic institutional investors to the investments compared to those to the United States under relatively low interest rates in the Euro area.

With respect to "offshore centers" including the Cayman Islands, Hong Kong, and Singapore for example, "non-banks - financial institutions" possess a relatively large share compared to the other regions, and have been mainly contributing to an increase in

external claims. The vehicles of fund investments such as SPCs are often registered in the region, leading to an increase of capital inflows in parallel with the increasing investments to the funds by domestic institutional investors and individual investors. It is also notable that the transactions with "banks-interoffice" that indicate those between different offices of a bank account for a large proportion. Their residence of counterparty breakdown shows that the transactions with Hong Kong and Singapore, where banks' affiliates for Asia-related businesses are located, have a large share.

On the other hand, as to developing countries that include several Asian countries such as China where many Japanese companies run businesses, the amounts outstanding of external claims are relatively small and remain near-constant. Since the LBS do not capture the external claims of overseas affiliates of the reporting banks, the CBS can be invoked to capture local claims in local currency of overseas affiliates of Japanese banks (Chart 7). As a result, the claims vis-à-vis "Asia and Pacific" have also been increasing in parallel with those of the United States. There is a possibility that the Japanese banks have been focusing more on loans and investments through overseas affiliates than debt securities investments through their domestic bases.

[Chart 7] Local claims in local currency of overseas affiliates of Japanese banks (CBS)

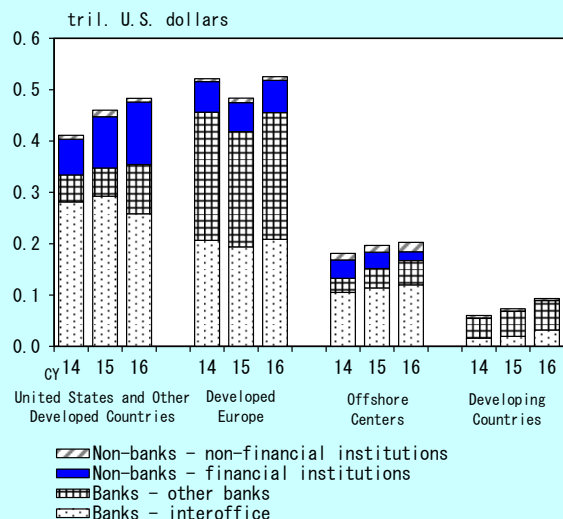


Notes: 1. Figures are end-of-year values, excepting 2016 where end-of-September values are used.
2. "Asia and Pacific" consist of developing countries of Asia and Pacific, Hong Kong, Singapore, Australia, and New Zealand.

External liabilities

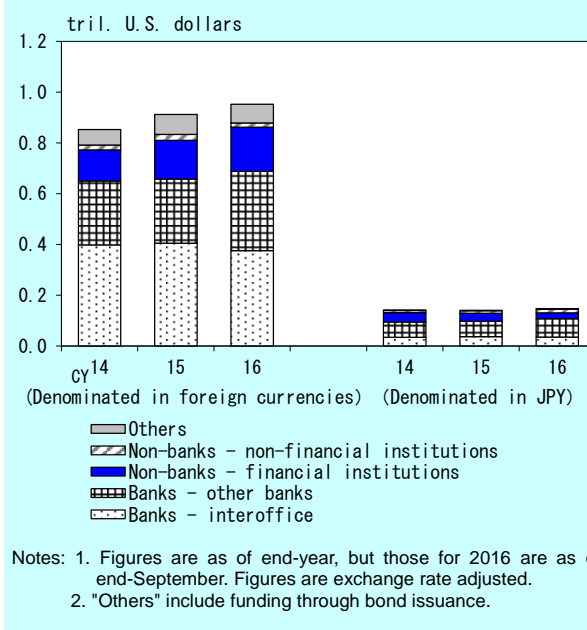
The LBS data for external liabilities with residence of counterparty and sector breakdowns show the external liabilities vis-à-vis "developed Europe" have a large share, and the funding from "United States and other developed countries" has been increasing recently (Chart 8).

[Chart 8] External liabilities by residence of counterparty and sector (LBS)



It should be noted that the amounts outstanding of external claims by residence of counterparty depend on the nationality of foreign banks that comprise the reporting banks and the locations of international financial centers. Based on this understanding, the external liabilities of Japanese banks by currency and sector breakdown attest to the following (Chart 9). First, Japanese banks' external liabilities have been increasing in recent years mainly due to an increase in those denominated in foreign currencies which account for a large share of the total. This results from an increase in investments to the assets denominated in foreign currencies and an increase in demands for foreign currencies by their customers. Second, by sector, "banks-interoffice" which represent a transfer of money funded by overseas branches to domestic bases of a reporting bank, constantly hold a large share. In addition, it is notable that external funding such as "non-banks - financial institutions" and "banks-other banks" that include repo transactions has been increasing in recent years.

[Chart 9] External liabilities of Japanese banks by currency and sector (LBS)



Currency composition of external claims of Japanese banks on a consolidated basis

The recent enhancements of the IBS in Japan also enable us to analyze the currency composition of external claims including those of overseas affiliates of Japanese banks (consolidated basis). The IBS in Japan were associated with the following limitations before the enhancements (cross-reference with Charts 1 and 2).

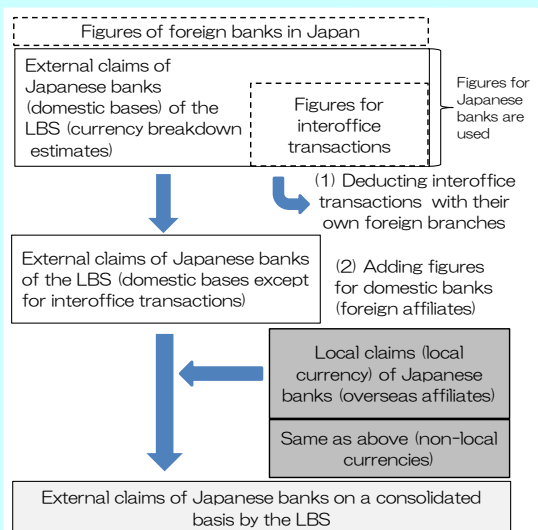
- (1) The aggregated figures of Japanese banks had not been published in the LBS in line with the published items of the BIS. Even with a hypothesis that all the external claims pertain to Japanese banks, only a currency breakdown could be obtained, and there remained a problem that external claims and liabilities of overseas affiliates were not included. Further, since the interoffice transactions with overseas affiliates were included, the external claims and liabilities of Japanese banks (consolidated basis) were overestimated (due to double-counting).
- (2) It is possible, with the CBS, to capture the external claims of Japanese banks including those of their overseas affiliates (consolidated basis) without interoffice transactions, but their currency compositions cannot be captured except for those of local claims in local currency of overseas affiliates.

The recent enhancements have enabled us to use (1) the aggregated figures for Japanese banks and (2) external claims and liabilities resulting from interoffice transactions with foreign branches of a reporting bank in the LBS. As a result, capturing the currency composition of external claims of Japanese banks (consolidated basis) has become generally possible by combining the LBS and CBS.

The details of estimations are shown in Chart 10.¹⁸ First, Japanese banks' external claims resulting from interoffice transactions with their own foreign branches are deducted from the external claims of Japanese banks in the LBS ("(1)" of Chart 10). By adding local claims of overseas affiliates of Japanese banks captured in the CBS to the figures above, approximate external claims of Japanese banks on a consolidated basis can be determined ("(2)" of Chart 10). As to claims in "local currency" that hold a large share in local claims of overseas affiliates, their figures by residence of counterparty can also be regarded as those by local currency of residence of counterparty. As a result, the currency composition of external claims of Japanese banks (consolidated basis) can be captured almost entirely.

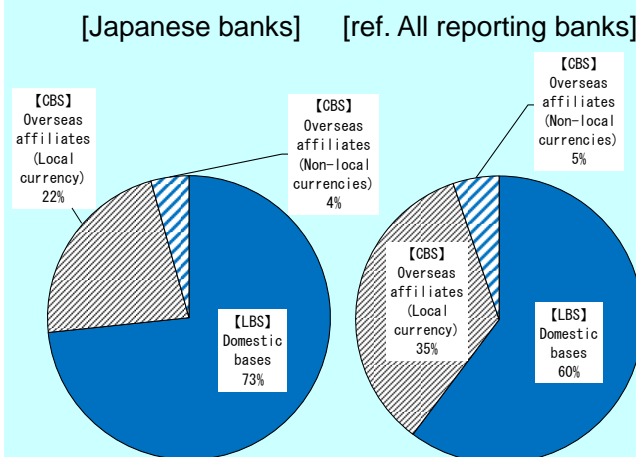
It is also necessary to emphasize the following points when conducting the analysis mentioned above: (1) the reporting populations of the LBS and CBS are not identical;¹⁹ (2) there exists a possibility that precise external claims of overseas affiliates cannot be fully captured;²⁰ and (3) the currency breakdown partially contains estimates²¹ and has the possibility of containing those that cannot be allocated to any currencies.²²

[Chart 10] Method to estimate external claims of Japanese banks using the LBS and CBS (consolidated basis)



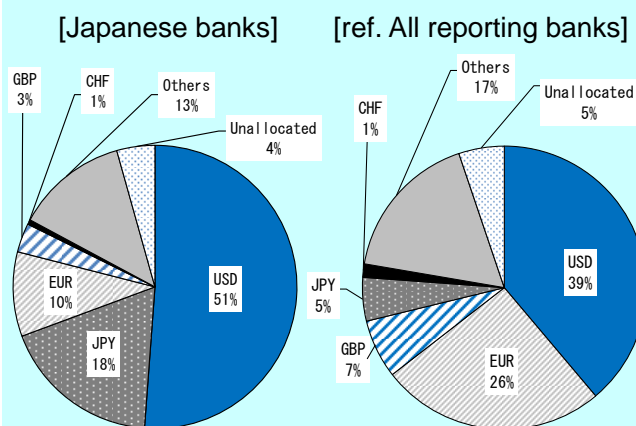
Charts 11 and 12 present estimated figures of external claims of Japanese banks (consolidated basis) with domestic bases/overseas affiliates breakdown and currency composition at the end of 2015 by applying the aforementioned method. According to the estimates, as to Japanese banks, the domestic bases hold a large share including foreign bond investments on their trustee accounts, while local claims of the overseas affiliates account for only one-third of those of domestic bases, most of which are denominated in local currency. At the same time, external claims in terms of currency composition show that U.S. dollars (USD) holds by far the largest share with 51% of the total, and JPY holds the second largest share (Chart 12).

[Chart 11] External claims of Japanese banks by domestic bases/overseas affiliates breakdown



Note: Figures are as of end-of-2015. Source: BIS

[Chart 12] Currency composition of external claims of Japanese banks (consolidated basis)



Note: Local claims in local currency of overseas affiliates that can be captured by the CBS are calculated as those denominated in local currency of counterparty country (for example, claims on the U.S. are calculated as those denominated in USD). Figures are as of end-of-2015.

Source: BIS

Concluding Remarks

The BIS and the central banks worldwide have developed and enhanced the IBS based on lessons learned from international financial crises. After the financial crisis of 2008, enhancements such as further breakdown of counterparty sector and aggregation of data by nationality of the reporting banks were implemented. With the enhancements, more detailed analyses on international capital flows and credit exposure through the banking sector have become possible. Accordingly, and as discussed above, some noteworthy observations can be made about the IBS in Japan, such as concerning the increase in external claims of the banking sector. This trend has been observed due to the persistently low interest rate environments resulting in an increase in investments to debt securities such as US government bonds and an increase in funds registered in offshore centers. At the same time, it has also become possible to largely capture the characteristics of international activities of Japanese banks on a consolidated basis by comparing them with those of internationally active banks of each nationality.

The BIS and the central banks worldwide are planning to implement further enhancements to the IBS concerning, for example, revisions in the definition of related items in the statistics. In addition, Russia and China started to participate in the statistics as reporting countries as of January 2017, and the BIS is maintaining its efforts to secure further increases in the number of reporting countries. As a result, coverage of the statistics is also expected to increase further.

It has also become possible with the recent enhancements to provide useful information on structural changes of financial markets and their effects on financial system. The BOJ will continue contributing to further developments and enhancements of the IBS. The BOJ, to make the statistics more accessible for users, will also work on further enhancements of usability and convenience of the IBS in Japan while paying attention to reporting burdens on individual reporting banks.

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

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

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

³ "Financial System Report" conducts analyses on international activities of Japanese banks overall including their foreign branches and subsidiaries and risks related to these activities. The IBS are also referred to in the analyses.

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

⁴ Please see here for the IBS in Japan with associated details.

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

⁵ With the lessons learned from the Latin American Crisis, the necessity to precisely capture credit exposures of banks by residence of counterparty was increasingly appreciated, thus leading to the compilation of the CBS. In addition, with the lessons learned from the Asian Currency Crisis, the necessity to consider credit risk transfer by guarantees and collaterals in capturing country risks was increasingly appreciated, thus leading to the compilation of the CBS on an "ultimate risk basis."

⁶ Please see here for a list of reporting countries of the LBS and CBS.

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

⁷ The reporting banks of the statistics are, in principle, holders of Japan Offshore Market (JOM) accounts among the banks located in Japan. The figures subject to reporting are external claims and liabilities of the international division including those on trustee accounts. Transactions with residents in Japan are published as reference items only when they are denominated in foreign currencies.

⁸ For example, on an IR basis, claims on the New York branch of a U.K. bank are classified as those vis-à-vis the United States, while they are classified as those vis-à-vis the United Kingdom on a UR basis.

⁹ International Monetary Fund and Financial Stability Board [2009] "The Financial Crisis and Information Gaps."

¹⁰ Bank for International Settlements [2012] "Improving the BIS international banking statistics," *CGFS Papers*, No 47.

¹¹ The CGFS mainly consists of deputy governors and assistant governors of central banks of principal countries/economies. The Committee has a mandate to identify and assess potential sources of stress in global financial markets, to further the understanding of the structural underpinnings of financial markets, and to promote improvements to the functioning and stability of these markets. Please see here for the publications of the CGFS.

(<https://www.bis.org/cgfs/>)

Summaries are also provided on the BOJ website for each publication (available only in Japanese).

(https://www.boj.or.jp/paym/intlact_pm/cgfs/index.htm/)

¹² Bank for International Settlements [2015] "Enhanced data to analyze international banking," *BIS Quarterly Review*, September 2015.

¹³ For details, please see "Release of New Items in 'BIS International Locational Banking Statistics and International Consolidated Banking Statistics in Japan'" (June 19, 2015).

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

[\(http://www.boj.or.jp/en/statistics/outline/notice_2015/not150619a.htm/\)](http://www.boj.or.jp/en/statistics/outline/notice_2015/not150619a.htm/)

¹⁴ For details, please see "Release of New Time Series Data of 'BIS International Locational Banking Statistics in Japan'" (December 4, 2015).

[\(http://www.boj.or.jp/en/statistics/outline/notice_2015/not151204b.htm/\)](http://www.boj.or.jp/en/statistics/outline/notice_2015/not151204b.htm/)

¹⁵ The reporting guidelines of the IBS require reporting including positions on trustee accounts with the aim of, for example, capturing an overall picture of external claims and liabilities of banks. For details, please see Bank for International Settlements [2013] "Guidelines for reporting the BIS international banking statistics," [2014] "Guidelines for reporting the BIS international banking statistics Proposed revisions and clarifications to the March 2013 version."

¹⁶ In the LBS in Japan, as to residence of counterparty breakdown of external claims and liabilities, aggregated figures for Japanese banks are not published, and thus the figures for foreign banks are also contained in Charts 5, 6, and 8. Nevertheless, as shown in Chart 4, the Japanese banks hold a large share in external claims and liabilities (about 96% of total external claims and about 80% of total external liabilities). It can be construed that changes in external claims result from the activities of Japanese banks.

¹⁷ According to "Debt Position (Assets) by Currency (Foreign Currency/Japanese Yen)," external claims denominated in foreign currencies of the banks located in Japan consist of bonds (74%), loans (22%), and others (4%) by instrument at the end of 2015.

¹⁸ The calculations in Charts 11 and 12 were accomplished with reference to the following procedure presented by BIS economists.

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

¹⁹ The reporting banks of the LBS are, in principle, holders of JOM accounts while the reporting banks of the CBS are those possessing a foreign branch or whose external claims exceed 100 billion yen in year-end among JOM account holders.

²⁰ As to procedure (1) shown in Chart 10, the external claims of Japanese banks in the LBS contain not only the interoffice transactions with their foreign branches, but also those with their foreign subsidiaries. Since the latter cannot be deducted, it leads to an overestimation of external claims of Japanese banks on a consolidated basis. In addition, as to the procedure (2) shown in Chart 10, although it is possible to capture local claims of overseas affiliates in the CBS, it is not possible to extract and add cross-border claims (external claims on countries other than Japan) of overseas affiliates. This leads to an underestimation of external claims of Japanese banks (consolidated basis).

²¹ Among the external claims of Japanese banks (domestic bases) in the LBS, currency breakdown of foreign currencies are estimated based on currency weight of total external claims (after deducting interoffice transactions) including those of foreign banks.

²² Among the local claims of overseas affiliates, local claims in "non-local currencies" cannot be decomposed into specific currencies.

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