Foreign Currency Funding Challenges for Japanese Banks

Hitotsubashi University and the IMF Joint Seminar on the Future of International Monetary System for Asia

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Japanese banks go global

International claims from each country's FIs

<All countries>

<U.S.>

<Asia and Pacific>

Notes:
1. The latest data are as of end-September 2016.
2. For Germany and France, claims on euro area are excluded.
Source: BIS, "Consolidated banking statistics."
Gradually restoring its presence in global banking

Banking system centrality

Note: The graph shows each country's importance in the network measured by the eigenvector centrality, which captures how connected the country is by giving a higher weight to connections to more connected counterparties in terms of bank credit.

Foreign currency funding by Japanese banks

Structure of foreign currency funding and investments by major Japanese banks

<Investments>
- Corporate bonds, etc.
- Medium- to long-term FX swaps and currency swaps
- Client-related deposits
- Loans

<Investing>
- Stability gap among major Japanese banks
- Resilience to foreign currency liquidity stress among major Japanese banks

Note: The latest data are as of end-August 2016.
FX swap implied USD funding rates and banks’ creditworthiness

Notes: 1. The latest data are as of November 2016.
2. The shaded areas correspond to Japan's financial crisis (November 1997 through March 1999), the global financial crisis (December 2007 through June 2009), and the Eurozone sovereign debt crisis (May 2011 through June 2012).
3. Non-U.S. banks' default probability is the average of the EDF (Expected Default Frequency) of G-SIBs that are headquartered in each jurisdiction. "Japan Premium" is calculated as 3-month USD TIBOR less 3-month USD LIBOR.

Sources: Bloomberg; Moody's; BOJ.
Outward portfolio investment (Euro area and Japan)

Notes: 1. The latest data are as of end-September 2016.
2. In each chart, ▲/▼ indicates the timing and direction of monetary policy changes since 2013.

Sources: ECB; Ministry of Finance; BOJ.
Prime MMF holdings of bank related securities

As of end-June 2016

As of end-October 2016

Note: Prime MMF holdings of bank related securities are aggregated by country based on the location of banks' global headquarters. "Australia" includes New Zealand.

Source: SEC.
Amount of foreign currency funding and FX swap transaction volume

Amount of foreign currency funding via FX swaps and currency swaps by Japanese financial institutions

Transaction volume in the FX swap market (USD/JPY) via Tokyo FX market brokers

Notes:
1. The latest data are as of September 2016.
2. Average transaction volume for each business day (includes outright forwards).
3. Trends are calculated using the two-sided HP filter.

Source: BOJ.

Notes:
1. Estimates by the BOJ. The latest data are as of end-September 2016. The data are taken from fiscal year.
2. "Major banks and institutional investors, etc." includes major banks, depository institutions with a particular focus on market investment, and life insurance companies.

Sources: Bloomberg; The Life Insurance Association of Japan; Published accounts of each company; BOJ.
Japanese financial institutions’ outward investments in foreign securities

Notes: 1. The latest data are as of end-September 2016.
2. The amounts are calculated by adding the flow during each period to the stock as of end-December 1997, to adjust for the impact of exchange rate fluctuations.

Source: BOJ.
Increasing need for local currency funding

Increasing share of local currency-denominated loans

Loans outstanding and loan-to-deposit ratio by currency

Notes: 1. "USD-denominated claims" include claims denominated by foreign currencies other than local currencies.
2. The latest data are as of end-September 2016.

Source: BIS, "Consolidated banking statistics."

Notes: 1. The data are the total of loans by five major banks.
2. The data are as of end-September 2015.

Cross-border collateral arrangements (CBCA)

<table>
<thead>
<tr>
<th>Counterparts</th>
<th>Dates of agreement</th>
<th>Eligible collaterals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of Thailand (BOT)</td>
<td>Nov. 2011</td>
<td>JGBs, JPY cash (since May 2012)</td>
</tr>
<tr>
<td>Monetary Authority of Singapore (MAS)</td>
<td>Jul. 2013</td>
<td>JGBs, JPY cash (since May 2015)</td>
</tr>
<tr>
<td>Bangko Sentral ng Pilipinas (BSP)</td>
<td>Feb. 2015</td>
<td>JPY cash (since Aug. 2016)</td>
</tr>
<tr>
<td>Bank Indonesia (BI)</td>
<td>Dec. 2013</td>
<td>JGBs (in preparation)</td>
</tr>
</tbody>
</table>

Note: This slide shows how overseas central banks allow banks operating in that country to access local currency liquidity against their JGBs or Japanese Yen holdings in case of emergency or liquidity shortage.
Swap arrangements for financial system stability

Bilateral local currency swap agreement with the Reserve Bank of Australia

Australia

Reserve Bank of Australia

AUD

Australian bank A

Japanese bank B

Japan

Bank of Japan

JPY

Australian bank C

Japanese bank D

Local currency swap

AUDJPY

JPYAUD
Thank you for your attention.

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