BOJ-NET's foreign exchange yen clearing and SWIFT's migration to ISO 20022

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Executive Summary

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NOTE

1) The new BOJ-NET is an upgraded BOJ-NET fully launched on October 13, 2015, to better accommodate networked settlement infrastructure, globalization of financial transactions and anticipated changes in financial services and various needs related thereto.

2) ISO 20022 is an international standard established by the International Organization for Standardization (ISO) to standardize procedures for electronic messaging used for financial services.

3) In broad terms, transactions settled by BOJ-NET consist of current account deposit, Japan government securities (JGS) and foreign currency (foreign exchange yen clearing) transactions. ISO 20022 was adopted as the main messaging format for JGS and foreign currency transactions.

4) STP is seamless processing of transactions from execution through settlement through use of standardized message formats and automated linkages between IT systems.

5) The SWIFT (Society for Worldwide Interbank Financial Telecommunication) Network is a highly secure financial electronic message service provided by SWIFT, a nonprofit cooperative located in Belgium.

6) FIN is one of SWIFT's message services. FIN messages are identified by three-digit codes prefixed with "MT" (Message Type). Examples include MT202 (messages concerning remittances between banks) and MT103 (messages concerning single customer credit transfer).

7) Users of Japan's foreign exchange yen clearing system include financial institutions that settle foreign currency transactions in yen themselves using BOJ-NET and financial institutions that outsource such settlement. The former are referred to herein as direct participants.

BOJ-NET's Foreign Exchange Yen Clearing System (The FXYCS) has been using the ISO 20022 message format since last year. When SWIFT migrates from its existing MT message format to ISO 20022, even BOJ-NET settlement services may be affected.

BOJ-NET now using ISO 20022 message format for forex clearing

The new BOJ-NET[1] (Bank of Japan Financial Network System) went fully live on October 13, 2015. For the new BOJ-NET, the BOJ adopted the ISO 20022[2] message format for certain BOJ-NET services[3] to facilitate broader use of straight-through processing[4] (STP) in the future.

One such service is foreign exchange yen clearing. The new BOJ-NET has been using ISO 20022-compliant messaging since its full-scale launch. Foreign exchange yen clearing refers to BOJ-NET clearing of transactions in yen between financial institutions, including foreign exchange transactions and yen remittances from overseas to Japan.

Messages exchanged via BOJ-NET in the course of foreign exchange yen clearing are closely related to messages exchanged via the SWIFT Network (SWIFTNet)[5]. When Japanese banks receive requests from overseas banks to remit funds to Japanese payees, the remittance instructions are sent via SWIFTNet. SWIFTNet currently uses the FIN messaging service as its standard for interbank messages. The FIN messaging service uses the MT message format[6]. Accordingly, when the new BOJ-NET clears remittances pursuant to instructions received as FIN messages, it must convert the messages from MT to ISO 20022 format (see diagram).

Additionally, most financial institutions use SWIFT's MT format internally for inter-branch messages exchanged via their intranets because the MT format is the most widely used interbank messaging standard. Consequently, conversion of SWIFTNet or intranet messages from MT format to the BOJ-NET's ISO 20022 format (and vice versa) has become extremely important for financial institutions that are direct participants in the FXYCS[7].
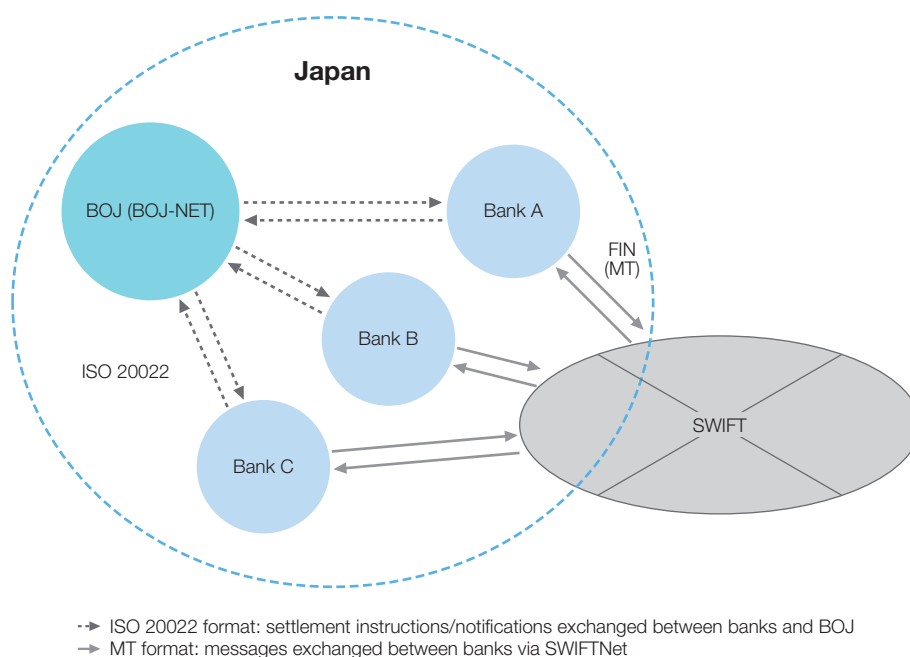
JBA's forex clearing protocol facilitates yen clearing of foreign currency remittances

Smooth message exchanges require conversion rules for both the MT and ISO 20022 formats. The FXYCS is based on the Japan Bankers Association's (JBA) foreign exchange yen clearing protocol. The JBA's protocol has not only standard procedures and regulations for its participating financial institutions but also rules for converting messages between SWIFT's MT format and the BOJ-NET's ISO 20022 format to facilitate clearing and to more efficiently process both outgoing and incoming remittances.

In comparison to the MT format, the ISO 20022 format is distinguished by a larger amount of configurable information (more information entries). In other words, MT-format messages exchanged via SWIFTNet or an intranet that are to be converted to ISO 20022 format lack certain information from an ISO 20022 standpoint.

The JBA's foreign exchange yen clearing protocol's conversion rules adroitly compensate for such information deficiencies to convert information received in MT format to ISO 20022 format. Currently, the FXYCS is smoothly clearing transactions based on the JBA's Japan-specific ISO 20022 formatting rules.

Diagram of message flow in foreign exchange yen clearing

ISO 20022 format: settlement instructions/notifications exchanged between banks and BOJ
MT format: messages exchanged between banks via SWIFTNet

Source: NRI

SWIFTNet's future migration to ISO 20022

As already mentioned, SWIFTNet currently uses the MT format as its interbank messaging standard, but SWIFTNet has been capable of sending and receiving messages in both MT and ISO 20022 format since 2000. It could migrate from MT to ISO 20022 at any time. In the wake of the post-Lehman financial crisis, SWIFT temporarily de-prioritized migration to ISO 20022, but it will likely move forward with migration to the ISO 20022 standard in the near future.

When that time comes, financial institutions must convert their intranets and SWIFTNet-connected systems' message format from MT to ISO 20022. Even financial institutions whose systems are already partially ISO 20022-compliant like BOJ-NET would of course need to upgrade their systems if the ISO 20022 format's usage rules were to change.

Additionally, foreign exchange yen clearing is a process involving more financial institutions than most other payment services. All financial institutions involved in the process are unlikely to migrate from MT to ISO 20022 at the same time. Interim compatibility fixes consequently may be needed to enable the financial institutions that delay migrating to ISO 20022 to continue exchanging messages via SWIFTNet. The need to ensure such compatibility could lead to large-scale system upgrades at financial institutions.

In sum, migration from MT to ISO 20022 format may take quite a while, given the number of financial institutions connected to SWIFTNet. The JBA foreign exchange yen clearing protocol's ISO 20022 usage rules also would continue to be subject to change during the transition period. Any such changes could necessitate system upgrades at financial institutions that directly use the JBA protocol. While the timeline for migration from MT to ISO 20022 messaging has yet to be determined, the migration process will undoubtedly impose a major burden on financial institutions. Financial institutions need to start preparing.

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