

Executive Summary

This report, *Harmonization and Standardization of Bond Market Infrastructures in ASEAN+3*, is an outcome of Phase 3 discussions under the ASEAN+3 Bond Market Forum Sub-Forum 2 (ABMF SF2) and follows the ABMF SF2 Phase 2 Report, *ASEAN+3 Information on Transaction Flows and Settlement Infrastructure*.

Harmonization of Message Flow

An important step to achieving cross-border straight-through-processing (STP) and better interoperability in ASEAN+3 is the proposal of a harmonized message flow known as the reference delivery-versus-payment (DVP) flow based on the following basic concepts:

- i. Real-time gross settlement (RTGS) is to be used for both bond settlement and cash settlement,
- ii. DVP is to be secured,
- iii. central bank money is to be used for cash settlement,
- iv. cash settlement for DVP should be effected by credit transfer,
- v. data are to be transferred from upstream infrastructure to downstream infrastructure whenever possible, and
- vi. the quality of data transferred and processed is to be confirmed when the data are entered by different parties.

Standardization of Message Items Related to DVP Settlement

In order to secure interoperability in ASEAN+3, essential and minimum message items to effect DVP settlement are expected to be standardized in accordance with ISO 20022. Bond settlement instruction, matched result, bond settlement confirmation, cash settlement information and instruction, and cash settlement confirmation shall be standardized based on the ISO 20022 definition taking the existing message items in ASEAN+3 into account.

Adoption of International Standards in ASEAN+3

The current status of adopting international standards for central securities depository (CSD) and RTGS systems in each economy of ASEAN+3 is presented as a preliminary result. The CSDs of all 10 economies where bond markets already exist in ASEAN+3 have adopted or decided to adopt international standards, either ISO 20022 or ISO 15022, for messages. China Central Depository and Clearing and the Japan Securities Depository Center are operating book-entry systems based on ISO 20022.¹ The Hong Kong Monetary Authority, Monetary Authority of Singapore, and Thailand Securities Depository are operating book-

¹ The 10 economies include the People's Republic of China; Cambodia; Hong Kong, China; Indonesia; Japan; Malaysia; the Philippines; Singapore; Thailand; and Viet Nam.

entry system based on ISO 15022. All CSDs in ASEAN are expected to adopt ISO 20022 by 2020. Regarding the RTGS systems, the People's Bank of China and Autoriti Monetari Brunei Darussalam are operating RTGS based on ISO 20022. The Hong Kong Monetary Authority, Monetary Authority of Singapore, and Bank of Thailand are operating their RTGS systems based on the international standard. All central banks in ASEAN are expected to adopt ISO 20022 for their RTGS systems by 2020, since ASEAN central banks have already agreed to adopt ISO 20022 as their standard for CSD and RTGS systems.

International Securities Identification Number

Adoption of international standards in ASEAN+3, in particular the International Securities Identification Number (ISIN), for cross-border transactions has been agreed by the members and experts of ABMF SF2. Also, the recommendation of the Association of National Numbering Agencies to allocate an ISIN within 24 hours following a request is expected to be met by ASEAN+3 economies. This recommendation is being implemented in the region. ISIN allocation flows in individual economies are presented in the Attachment.

Collateral and Repo

A survey was conducted to generate an overview of repo transactions in ASEAN+3 economies. Also, experiences in Europe were shared with ABMF SF2 members and experts, since the use of bonds as collateral or in similar ways to obtain local currency liquidity in other economies is an urgent issue given increasing demand for collateral in ASEAN+3 markets.

There are several types of repo transactions. In this report, repo transactions are categorized into two types. One is a repurchase agreement (sell and buy-back), which is commonly known as repo in many markets, by transferring ownership title. The other type is borrowing or lending (including pledged) that does not transfer ownership title, considering the transaction flows and interest payment processes. A repurchase agreement (sell and buy-back) is a standard repo transaction adopted globally and generally in accordance with the Global Master Repurchase Agreement. However, to introduce the standard repurchase agreement (sell and buy-back), the payment of tax on coupon payments and capital gains needs to be streamlined or waived to avoid complex transaction flows. This remains a barrier for smooth securities transactions in ASEAN+3.

Settlement Barriers

ABMF SF2 members and experts have reviewed the current status of settlement barriers related to the payment process (message standard, pre-matching, securities numbering, settlement cycle, and physical certificates). It was recognized that a lack of clear legislation in clearing and settlement, taxation, and capital and cash controls remain challenges.

Policy Recommendations

ABMF SF2 has been promoting the adoption of international standards for bond market infrastructures in the region, which has also been supported by the Asian Bond Markets Initiative Task Force 3. ABMF SF2 members and experts are grateful for the understanding and support of the region's authorities. The following are the policy recommendations in line with the joint statement of the Asian Bond Markets Initiative objectives:

- A. **Harmonization of Message Flow**
DVP Model 1 of the Bank for International Settlements definition shall be adopted for bond settlement in ASEAN+3 whenever the market infrastructures (CSD and RTGS systems) in each economy undergo reconstruction. A bond shall be blocked (earmarked) first; after transferring funds, which means after completing cash settlement, a blocked bond shall be released to effect (complete) DVP settlement given that bonds are less liquid than cash.
- B. **Adoption of International Standards**
International standards shall be adopted when the market infrastructures (CSD and RTGS systems) in each economy undergo reconstruction and/or total refurbishment. The following are examples of the international standards to be adopted:
- message standard: ISO 20022,
 - financial institution identifier: ISO 9362 (BICFI),
 - securities numbering: ISO 6166 (ISIN),
 - country code: ISO 3166-1, and
 - currency code: ISO 4217.
- C. **Standardization of Message Items**
Essential and minimum message items to effect DVP settlement shall be standardized based on ISO 20022. The following messages and their items are proposed as a preliminary basis for further discussions on standard message items:
- bond settlement instruction: sese.023,
 - matched results: sese.024,
 - bond settlement confirmation: sese.025,
 - cash settlement information and instruction: pacs.009, and
 - cash settlement confirmation: camt.054.
- D. The region's active participation in international standard decision-making is highly desirable. In this regard, it is advised that each economy that does not yet have an ISO 20022 Technical Committee 68 (TC68) national mirror committee establish the committee by joining TC68 as a participating member when the economy becomes ready to contribute to the decision-making processes related to ISO 20022.
- E. **Establishment of National Numbering Agency**
ABMF SF2 has been promoting ISIN as the standard securities numbering in ASEAN+3 for cross-border STP. Therefore, it is advised that each economy that does not yet have a national numbering agency establish it when the economy reaches the stage of issuing a significant amount of bonds.
- F. **Repo**
ABMF SF2 recommends adopting a repurchase agreement (sell and buy-back), which is a standard repo transaction in line with the Global Master Repurchase Agreement. It is also recommended that transaction flows related to collateral and repo services be surveyed.

Roadmap and Next Steps

The current roadmap for ABMF SF2 includes the following Phases:

- A. 2015–2016: Standardization phase
 - i. Agree on a reference model of DVP flow and essential and minimum items
 - ii. Prompt ISIN and Bank Identifier Codes
 - iii. Promote awareness of international standards and support establishment of standard evaluation groups (SEGs) in the region such as a Securities Standard Evaluation Group and Payment Standard Evaluation Group to promote ISO standards
 - iv. Conduct study on collateral and repo services, including interest payment flows
 - v. Support the Cross-Border Settlement Infrastructure Forum

- B. 2017–2018: Implementation Phase
 - i. Support establishment of SEGs in the region and ISO TC68 national mirror committees in each economy to support financial services standardization
 - ii. Implement standards in the economies that are ready for adoption of and migration to international standards
 - iii. Review the reference model and standard message items (group members and experts)
 - iv. Coordinate regional activities of harmonization and standardization in economies that are ready to contribute to such activities

- C. 2019–onward: Fully Operational Phase
 - i. Participate in international standardization through SEGs and ISO TC68 activities
 - ii. Implement international standards
 - iii. Review the reference model and standard message items
 - iv. Confirm operationalization of the regional activities of harmonization and standardization in ASEAN+3
 - v. Promote further harmonization and standardization in the region

Next steps include (i) a draft reference DVP flow agreed upon by ABMF SF2 members; (ii) draft message items based on ISO 20022 agreed upon by ABMF SF2 members; (iii) ISIN adopted as the common standard of securities numbering in ASEAN+3 and allocated in each economy in line with the Association of National Numbering Agencies' recommendation (within 24 hours); (iv) further study of the harmonization of market practices in ASEAN+3 economies, including collateral and repo practices; and (v) support from other ASEAN+3 economies and the Asian Development Bank for Brunei Darussalam, Cambodia, the Lao People's Democratic Republic, and Myanmar, which are still developing their bond market infrastructures.