ABMF SF2 members and experts have regularly discussed the harmonization of message flows in ASEAN+3 given that it is one of the most important issues. The Asian Development Bank (ADB) Consultant for ABMF SF2 proposed a few candidates as reference DVP flows for discussion based on the Phase 2 survey results. During Phase 3, the members and experts concluded that the DVP flow detailed below is to be proposed as the reference model DVP flow for ASEAN+3. Market infrastructure operators in each economy shall honor the reference model when they reconstruct their market infrastructures, including CSD and RTGS systems. The trade and settlement of bonds involves market infrastructures such as a trading system, post-trade matching system, CCP, PSMS, CSD, and RTGS. As a first step, the harmonization of flows from PSMS to settlement (both bond and cash settlement) was discussed, since harmonization of trade-related infrastructures are still a challenge in ASEAN+3.

Trade and post-trade matching systems are important for STP of bond trade and settlement. Also, direct transfer from an upstream system (e.g., trading, post-trade matching, and exchange) to a downstream system (e.g., PSMS and CSD) is very important. The connection between post-trade and trading systems remains a challenge because standardization is very difficult given the variety of players involved in trades.

**Concept of Harmonizing DVP Flows**

As an important step to achieving cross-border STP and better interoperability in ASEAN+3, a harmonized message flow known as the reference DVP flow has been proposed. The reference DVP flow is based on the following basic concepts:

1. RTGS is to be used for both bond settlement and cash settlement,
2. DVP is to be secured,
3. central bank money is to be used for cash settlement,
4. cash settlement for DVP should be effected by credit transfer,
5. data are to be transferred from upstream infrastructure to downstream infrastructure whenever possible, and
6. the quality of data transferred and processed is to be confirmed when the data are entered by different parties.

**Reference DVP Flow**

The proposed reference DVP flow is listed below and shown in Figure 7 as the basis for further discussion:
1. Custodians (both sell and buy sides) enter the term “Securities Settlement Transaction Instructions” into a PSMS (or a CSD if PSMS functions are provided by the CSD).

2. Pre-settlement matching needs to be completed 1 day before the settlement date (S-1).

3. Matched results (Securities Settlement Transaction Status Advice) are sent back to the sell side and buy side.

4. Matched results are transferred from a PSMS to a CSD, if the PSMS and CSD are operated in different platforms.

5. The CSD blocks (earmarks) the sell-side bond.

6. The CSD transfers cash settlement information to the RTGS to effect cash settlement for the DVP settlement.

7. The RTGS forwards the cash settlement information to the correspondent bank of the buy side. Although a forwarding message and the subsequent step, cash settlement instruction, is omitted in some markets, it is recommended that credit transfer instructions from the buy side be effected for high-value payments like bond DVP settlement, in particular for cross-border transactions. When omitting steps 7 and 8, a pre-arrangement, such as earmarking the exact amount for the settlement, needs to be secured beforehand.

8. The buy-side correspondent bank sends cash settlement instruction to the RTGS to effect credit transfer for DVP settlement.

9. Cash settlement is effected by transferring funds from the buy-side current account to the sell-side current account in the RTGS.

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3 The term “Securities Settlement Transaction Instructions” is an official term, although Figure 8 uses the term “Bond settlement instruction” since ABMF SF2 discussions cover bond transaction flows.
10. When cash settlement is successfully completed, cash settlement confirmations are sent to both the sell and buy sides.
11. Also, a cash settlement status report is sent from the RTGS to the CSD.
12. The blocked bond is released to the buy-side account in the CSD.
13. Bond settlement confirmations are sent from the CSD to both the sell and buy sides.