<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAMME</th>
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<tbody>
<tr>
<td>14 Dec 2010</td>
<td>DAY 2: ABMF Sub-Forum 2</td>
</tr>
<tr>
<td>8:30 - 9:00</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00 – 9:20</td>
<td>Opening Remarks by SF2 Chair, Mr. Jong Hyung Lee, and Vice Chair, Ms. Margaret Tang - and other administrative issue</td>
</tr>
<tr>
<td>9:20 – 10:15</td>
<td>Part 1: How to construct the SF2 Study: Discussion on the draft questionnaires and Q&amp;A</td>
</tr>
<tr>
<td></td>
<td>Presentation by Dr. Taiji Inui, ADB Consultant - Explaining the scope of the study and steps to identify transaction procedures in the region</td>
</tr>
<tr>
<td>10:15 – 10:30</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>10:30 -12:00</td>
<td>Gathering opinions from the members and experts - collecting opinions from all the members and experts whether the proposed approach would fit to each market. Q&amp;A and Discussion</td>
</tr>
<tr>
<td>12:00 – 13:30</td>
<td>Lunch Break</td>
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<tr>
<td>Part 2: Information session</td>
<td></td>
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<tr>
<td>13:30 – 14:15</td>
<td>Information session (1) - Will Transaction Costs be High in Asia? : A global custodian’s view Presentation by Mr. Mike Tagai, JP Morgan</td>
</tr>
<tr>
<td>14:15 – 14:30</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>14:30 – 15:15</td>
<td>Information Session (2) - How to make efficient and effective discussion to set standards: lessons from the EU and SMPG and tips for a successful international discussion Presentation by Mr. Alex Kech, SWIFT Standards</td>
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<tr>
<td>15:15 – 16:00</td>
<td>Information Session (3) - How to make international IT developments successful Presentation by a guest speaker from Sun Gard</td>
</tr>
<tr>
<td>16:00 – 16:15</td>
<td>Closing Remarks by SF2 Chair</td>
</tr>
<tr>
<td>16:20 – 16:45</td>
<td>Closed session only among the SF2 members</td>
</tr>
<tr>
<td>19:00</td>
<td>Farewell Dinner (Santan Room, Ground Floor, Garden Wing, Edsa Shangri-La, Manila)</td>
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2nd ASEAN+3 Bond Market Forum (ABMF) Meeting
12 – 14 December 2010 / Manila, Philippines
Background idea of the questionnaire (draft)

Scope and background idea of questionnaire

1. Bond market infrastructures
2. CSDs in each country
3. Typical business flowchart
4. Matching
5. Settlement cycles
6. Standards including numbering and coding
7. ISO and the local practices
8. Transaction cost
9. Medium to long term strategy
10. Any other information

Implementing STP and Reducing cross-border transaction cost
1. Bond market infrastructures

<table>
<thead>
<tr>
<th>Trading</th>
<th>Tokyo OTC market</th>
<th>PSMS</th>
<th>TSE</th>
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</thead>
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<tr>
<td>Clearing</td>
<td></td>
<td>JGBCC</td>
<td>JSCC</td>
</tr>
<tr>
<td>Bond settlement &amp; Asset servicing</td>
<td>PSMS</td>
<td>JASDEC Book-Entry Transfer System</td>
<td>Corporate bond</td>
</tr>
<tr>
<td>Cash settlement</td>
<td>BOJ-NET Funds Transfer Services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Source: The ABMI GoE report
2. Survey on CSDs in each country

Basic features of CSDs in the ASEAN+3 countries

2.1 Name of the CSD
2.2 Owner and operator of the CSD
2.3 Types of Securities
2.4 Stakeholders (participants of each CSD)
2.5 List of all business transactions
2.6 Network related information of each CSD
2.7 Other CSDs and ICSDs linked to the CSD
## List of Business Transactions

<table>
<thead>
<tr>
<th>major category</th>
<th>secondary category</th>
<th>detailed category</th>
</tr>
</thead>
<tbody>
<tr>
<td>JGB DVP</td>
<td>JGB DVP</td>
<td>Instruction of JGB delivery (simultaneous delivery of funds) (from seller)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instruction of JGB delivery (simultaneous delivery of funds) (from seller) with detailed section (from seller)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instruction of JGB delivery (simultaneous delivery of funds) (from buyer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instruction of JGB delivery (simultaneous delivery of funds) (from buyer) with detailed section (from buyer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instruction of JGB delivery (simultaneous delivery of funds) cancellation</td>
</tr>
<tr>
<td></td>
<td>Instruction of funds settlement</td>
<td>Instruction of funds settlement for JGB delivery</td>
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<tr>
<td>JGV FOP</td>
<td>JGB book-entry transfer</td>
<td>Instruction for JGB book-entry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>separation of principal and interest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>consolidation of principal and interest</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japanese Government Bonds for retail investors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japanese Government Bonds for retail investors cancellation</td>
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<td>JGB Issuance</td>
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<tr>
<td>Pledge Purchase/Sale</td>
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## 3. Typical business flowchart

### 3.1 Drawing business flowchart of FOP and DVP

### 3.2 Drawing the business flowcharts of FOP and DVP for cross-border transactions including the transactions by nonresidents (inbound) and residents (outbound)

### 3.3 Preliminary fit and gap analyses with the ISO 20022

### 3.4 Any other candidates to be analyzed
Business Process Flowchart Level 1: DVP with Matching and CCP

1. Order
2. Notice of Execution
3. Allocation
4. Trade Report Data
5. Investment Instruction Data
6. Trade Matching
7. Notice Data of Trade Matching Status
8. Trade Report Affirmation/Disaffirmation Data
9. Notice Data of Trade Report Affirmation Status
10. Notice Data of Trade Matching Status
11. Standing Settlement Instruction (SSI)
12. Automatic Generation of Settlement Instruction Data
13. Settlement Matching Data
14. Notice Data of Settlement Matching Status
15. Settlement Matching Data
16. Approval of Obligation
17. Notice Data of Approval of Obligation
18. Novation
19. Notice Data of Novation
20. Netting
21. Notice Data of Netting
22. DVP Order
23. JGB Transfer Instruction for DVP
24. Notice of Acceptance of JGB Transfer Instruction for DVP
25-1. DVP Request Data
25-2. DVP Request Data
26-1. Notice of Acceptance of DVP Request
26-2. Notice of Acceptance of DVP Request
27. Notice Data of DVP Settlement
28. Notice Data of DVP Settlement (Fund)
29. Notice of Credit to Current Account for DVP Settlement
30. Notice Data of Credit to Current Account for DVP Settlement
31. Notice of Acceptance of JGB Transfer Instruction for DVP
32. Notice of Acceptance of JGB Transfer Instruction for DVP (Receiver of JGB)
33. Notice of Acceptance of JGB Transfer Instruction for DVP (Deliverer of JGB)
34. Notice of Acceptance of JGB Transfer Instruction for DVP (For Deliverer of JGB)
35. Notice of Acceptance of JGB Transfer Instruction for DVP (For Receiver of JGB)
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96. Notice of Acceptance of JGB Transfer Instruction for DVP (For Deliverer of JGB)
97. Notice of Acceptance of JGB Transfer Instruction for DVP (For Receiver of JGB)
98. Notice of Acceptance of JGB Transfer Instruction for DVP (For Deliverer of JGB)
99. Notice of Acceptance of JGB Transfer Instruction for DVP (For Receiver of JGB)
Business Process Flowchart Level 2: DVP with Matching and CCP (1/3)

ABMF SF2

Attachment 3-b

Business Process Flowchart Level 2: DVP with Matching and CCP (2/3)

ABMF SF2

ADB
1. Business processes such as message transactions themselves and message flows need to be surveyed.

2. MT (ISO 15022) to MX (ISO 20022) reverse engineering will be required. But, before that fit and gap analysis between local standard and international standard (MT) needs to be carried out.

MT messages to be used later in this slide:
- MT540 Receive Free
- MT541 Receive Against Payment
- MT542 Deliver Free
- MT543 Deliver Against Payment
- MT544 Receive Free Confirmation
- MT545 Receive Against Payment Confirmation
- MT546 Deliver Free Confirmation
- MT547 Deliver Against Payment Confirmation
- MT548 Settlement Status and Processing Advice
Securities settlement and cash settlement

An example of DVP Settlement Flow

Securities related messages have information to be used for cash settlement.

DVP settlement is completed in the CSD since both securities account and cash account are within the CSD. Therefore, cash settlement related messages do not come out of the CSD. Some local CSD may have different message flows compared to that of ISO 15022.

This slide is prepared by ADB consultant based publicly available information and may not reflect actual situation.
DVP settlement type No. 2

CSD and cash settlement system are operated by different parties.

This slide is prepared by ADB consultant based publicly available information and may not reflect actual situation.

DVP settlement type No. 3

CSD and Cash settlement parties are different.

This slide is prepared by ADB consultant based publicly available information and may not reflect actual situation.
Split Settlement: securities settlement and cash settlement are done by different parties.

Two transactions (Notice Data of DVP Settlement and Notice of Credit to Current Account for DVP) are generated and returned to Delivery Agency for one DVP Request instruction.

DVP Settlement (case of U.S.A.)
ABMF SF2

Business Process Level 1 (2/2)

** FIT & GAP analyses between ISO20022 and a local standard **

** FIT & GAP of messages themselves **

- ISO20022 versus local standard
  - 1-to-1
  - 1-to-N, N-to-1

- Messages ISO20022 covers but CSD does not
- Messages CSD covers but ISO20022 does not

** FIT & GAP of formats **

- ISO20022 versus Local standard
  - 1-to-1
  - 1-to-N, N-to-1
  - Items need to be converted

- Messages ISO20022 covers but CSD does not
- Messages CSD covers but ISO20022 does not

Message mapping:

- To be tackled this time

Message flow:

- Cross-border transactions

Message transactions covered by ISO20022 will be checked.

Attachment 4

partly quoted from Federal Reserve Bank Services
3. Typical business flowchart drawn

- Harmonization of business processes of typical transactions is an essential matter to implement STP. Therefore, comparing typical business flowchart including cross-border transactions by nonresidents (inbound) and foreign securities transactions by residents (outbound) is an important (next) step to implement STP.

- Step by step approach will be taken. Firstly, business processes for typical government bond transactions such as FOP and DVP will be surveyed. Then, other transactions such as issuance, interest payment, redemption may be covered. Also, bonds other than government bonds such as corporate bonds may be covered after this initial survey.

   | Tax related transactions including interest payment may be the candidate for the next step. |
   | Prioritization |

4. Survey on matching

4.1 What kind of matching is introduced?

4.2 Pros and cons of “one-sided” and “two-sided” matching including cost implication
Two-sided transaction: Pre-Settlement Matching System (PSMS) (refer to the Reference)

Source: JASDEC

Two-sided transaction: Pre-Settlement Matching System (PSMS) for cross-border transactions (refer to the Reference)

Source: JASDEC
Matching of FOP transactions

Pros and cons of the one-sided or two-sided transaction

One-sided transaction

Sell side → Settlement instruction → CSD → settlement (book entry transfer) → Buy side

Two-sided transaction

Sell side → MT542 → Settlement matching → MT541 → Buy side

5. Survey on settlement cycles

5.1 How long is the standard settlement cycle from trade in government bond to the settlement?

5.2 In case there’re differences between settlement cycles of typical business processes (FOP and DVP transactions), what are the reasons for that?

5.3 The settlement cycles of cross-border transaction and local transaction are same?

5.4 If there is difference between the settlement cycles of cross-border and local transactions, how long is the cycle of these transactions? And what are the reasons for the differences?

5.5 If there is any initiative to shorten the settlement cycles, please describe it.

5.6 If there are target settlement cycles to be shortened, please describe them including target date to start them.

5.7 What are the background and reasons for the initiative concerning shortening the settlement cycle? What is cost implication of shortening of settlement cycle?
5. Survey on settlement cycles

Survey on the settlement cycles of typical business processes for both local and cross-border transactions.

1. Lessons learned from the collapse of Lehman Brothers
   - An unprecedented number of failures occurred in the bond market. The failures were originated in the settlement defaults caused by Lehman Brothers. Since the failures caused a short-term but significant decline in the market liquidity, market players realized the importance of shortening of the bond settlement cycle for building a more robust clearing and settlement system.
   - A shorter bond settlement cycle will contribute to reducing the settlement risk through lower unsettled outstanding trades. The price fluctuation risk, the cost of rebuilding positions can also be reduced.

2. Implementing STP is essential in order to make settlement cycle shorter. Also, settlement cycles of the cross-border transactions need to be harmonized in the ASEAN+3 countries.

What is cost implication of settlement cycle from cross-border transaction point of view?

6. Standards such as numbering and coding

6.1 Securities numbering
6.2 Financial institution identification
6.3 Securities account
6.4 Cash account
6.5 Character code and language

Refer to: ISO 20022 Securities Settlement and Reconciliation Message Definition Report Approved by the Securities SEG on 14 December 2009
New BOJ-NET adopted ISIN as securities identification number. JASDEC already adopted ISIN for bonds. ISIN will be the standard in Japan. But, for your reference, conversion is also possible between proprietary numbering and ISIN as follows.

Example: 296th 10-year bonds

<table>
<thead>
<tr>
<th>ISIN</th>
<th>Country code</th>
<th>Basic code 9 digit</th>
<th>Check digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP 11029618A X</td>
<td>J P</td>
<td>1 1 0 2 9 6 1 8 A</td>
<td>X</td>
</tr>
</tbody>
</table>

Japan new securities code (JGB)

<table>
<thead>
<tr>
<th>Issuer code</th>
<th>Type of securities</th>
<th>Name</th>
<th>Issuance times</th>
<th>serial number year</th>
<th>Issued month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0 2 9 6</td>
<td>1 8</td>
<td>A</td>
</tr>
</tbody>
</table>

Cost implication

Securities Account

Account system of JGB book-entry
Securities account under MT message

Participant code + participant type + account type + JGB name code
Account is made up with participant code + type + account type and is managed under each JGBs.

Cost implication

Securities account under ISO message

Account type and is managed under each JGBs.
Cash account is practically proprietary numbering (Max34Text).

Proprietary Account:
An account system peculiar to each country can also
be used. Example:

<table>
<thead>
<tr>
<th>IBAN: JP300001191234567</th>
<th>Account Code (JP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Code (JP)</td>
<td>Check Digit</td>
</tr>
</tbody>
</table>

Format:
- Country Code (2 digits)
- Check Digit (2 digits)
- Alphanumeric character (30 digits)

Example:
- JPY, ISO11012345678

ISO20022 UTF-8
Japanese Language JIS-X0208
BOJ-NET
ZENGIN

UTF-8 contains Japanese settlement system's character set.

SWIFT-NET accepts only Latin-1 character set. Even if ASEAN language characters are accepted, it may be difficult to be understood by the people who don’t speak ASEAN languages.
7. ISO and the local practices in each country

7.1 Local practices to be proposed to an ISO standard
7.2 How to make the differences between local and global standards narrower?

ASEAN-3 proprietary practices

International standard (ISO 20022)

Vision of ABMF SF2

Asia should engage standard setting more closely and should lead discussions in the international forum

International standards (such as ISO20022) will be the focal point and hub of local standards
8. Transaction cost

8.1 Fee per one transaction
8.2 Fee for other cases including charging information and policy
8.3 Detailed analysis of cost for the typical cross-border transactions is desirable.

International Experts are expected to contribute by providing information on cross-border transaction procedures and related cost

Country A

Cross-border transaction

Country B

National Members and Experts are expected to contribute by providing information on transaction procedures and related cost in each country

9. Medium to long term strategy

9.1 Are there any official initiatives to promote STP of bond trading in each country?
9.2 From which area STP is promoted?
9.3 What are the biggest challenges for members when it comes to STP?
9.4 Please describe ISO 20022 related initiatives on cross-border securities settlement, if any.
Towards Japan Securities Settlement Systems and Infrastructures Reform

Case of Japan (as of around 2000)

Source: Reform Promotion Center For Securities Clearing and Settlement System

adoxact

Major Issues Overview

Towards Japan Securities Settlement Systems and Infrastructures Reform

Source: Reform Promotion Center For Securities Clearing and Settlement System
Securities Settlement Systems Reform Milestones

- Legislation
- Financial Services Agency
-金融服务庁
- Ministry of Economy, Trade and Industry
- 内閣府経済産業局
- Financial Instruments Supervision Agency
- 金融庁
- Central Counterparty
- 中央清算機関
- Deposit Insurance Corporation
- 金融保険機構
- Securities Clearing and Settlement System
- 証券清算交換システム

Source: Reform Promotion Center For Securities Clearing and Settlement System

Securities Settlement Infrastructures

Case of Japan (current situation)

Towards Japan Securities Settlement Systems and Infrastructures Reform

Source: Reform Promotion Center For Securities Clearing and Settlement System
Laos Stack Exchange will be inaugurated in January 2011.

Please share information on Medium to long term initiatives with other members. It may be useful to make a roadmap of the ASEAN+3 region and to cooperate each other in the region.

10. Any other information

Any other information and/or comments to be shared by the ABMF members

What are problems?
What we can cooperate each other?
1. This questionnaire is prepared for a baseline survey on message standardization and transaction cost aiming at implementing STP in cross-border bond transactions between the countries of ASEAN+3 region.

2. This survey seeks to understand the bonds settlement infrastructures and business processes of government bond transactions in each country.

3. The survey for the bonds settlement infrastructures is to share essential information to implement STP such as level of automation and dematerialization of bonds as well as players in each country since manual operations and proprietary processes could be the reason for the higher cross-border transaction cost in the region.

4. It is desirable for National members to answer the questionnaire for all CSDs of each country by collecting necessary information and compiling them with their best efforts. National experts are expected to support the National members. International experts are expected to answer the questions from the viewpoint of cross-border transactions.

5. Outcome of this baseline survey may provide global market players such as custodians with useful information for cross-border transactions to be processed more efficiently. The outcome may also provide ABMI TF4 with useful information for the further study to implement an infrastructure for cross-border transactions such as CSD linkage (RSI).

6. If new CSD system is already under development, the answer to the questionnaire is expected to be based on the requirements and the specifications for the new system as much as possible. Inclusion of development schedule is desirable.

7. When publishing report of ABMF SF2, the report will be checked by all members beforehand. Therefore, any information and data which are helpful for this survey are appreciated.

8. It is desirable to update the “Market Comparison Matrices (for Bond), GoE Sub committee B, As of Feb. 9, 2009”.
Draft schedule of the SF2

1st ABMF SF2 (28 September 2010): discuss work plan and schedule of the SF2

Phase 1 (between 1st and 2nd SF2)
- Bond transactions to be surveyed will be selected
- Questionnaires (items) for the survey will be drafted

2nd ABMF SF2 (Mid-December 2010): discuss bond transactions and questionnaire for the survey (first reporting to TF3)

Phase 2 (between 2nd and 3rd SF2)
- Questionnaire survey will be filled in by the members

3rd ABMF SF2 (February or March 2011): present survey results and discuss how to compile them

Phase 3 (between 3rd and 4th SF2)
- Survey results will be interpreted and compiled
- Contents of the report to TF3 will be drafted
- Supplemental survey may be carried out if necessary

4th ABMF SF2 (June or July 2011): discuss contents of the report to TF3
Thank you so much

Taiji Inui  ADB consultant
NTT DATA Corporation
Phone: +81-50-5547-1282
E-mail: inui@nttdata.co.jp

This PowerPoint slides are made solely for the discussions at the 2nd ABMF SF2 on 14 December 2010. Views expressed are those of the ADB consultant and do not necessarily reflect those of Asian Development Bank, NTT DATA CORPORATION or any other organizations.
Pre-Settlement Matching System (PSMS)\(^1\)

1. Introduction

(1) Objective
Set up a central matching system for institutional investors' transactions to promote STP infrastructure and T+1 settlement

(2) Development Policy
① Implement the matching system by Spring 2001 accommodated to specific Japanese market settlement environments
② By tying up with ISITC Japan, set up the Japanese standard which conforms to the international standard so that cross-border transactions and domestic transactions can be dealt with in a same manner
➢ Adopt ISO15022 as a data format
➢ Adopt ISIN for securities identification code (local code is acceptable for the time being)
➢ Adopt BIC to standardize the financial institutions identification code
➢ Standardize the fund code
③ (3) Realize the T+0 confirmation/affirmation
④ (4) Reduce the development costs by utilizing the existing resources
⑤ (5) Link with other ETC services
⑥ (6) Support to realize DVP settlement
⑦ (7) Prepare for the T+1 settlement environment

(3) Concepts of the System
① Process Covered
From "Sending the Trade Report" to "Producing the settlement instructions" (Link with DVP settlement system in the future)
② (2) SSI function
Provide the SSI(Standing Settlement Instruction) database to generate a settlement instructions from trade data automatically
③ (3) Scope of securities
Initially handle stock certificates and include convertible bonds, etc at a later date
④ Scope of business

\(^1\) Source: JASDEC (modified by ADB consultant)
Pre-settlement matching among domestic investment managers, securities companies, banks and trust banks at Phase 1 (Scheduled for Spring 2001). Deal with the cross-border transactions at Phase 2 (Scheduled for Autumn 2001).

(4) Users
Institutional investors such as investment trusts, investment advisors as well as the present JASDEC users such as securities companies, banks, trust banks and life insurance companies.

(5) Terminals
Users can access to PSMS through Web Server using a PC and a Browser.

2. Domestic Transactions
(1) Scope of services
PSMS is developed to perform the post-trade procedure mainly for institutional investors, so it covers both of the transaction types that the buy-side consists of investment managers (investment trust management companies・investment advisory companies) and trust banks which perform matching for specified money trust transactions and that the buy-side consists of institutional investors such as life/non-life insurance companies and trust banks which perform matching for their own transactions as Proper Type. Further, the former type can be categorized into 3 types, by the difference of the data transmission method between the investment managers and the trust banks, as Three-party Center Matching Type (Without Using Investment Instruction Distribution Service), Three-party Center Matching Type (Using Investment Instruction Distribution Service) and Investment Instruction Support Unsubscribed Type. As long as the bonds are concerned, PSMS provides 2 more transaction types, Through Type and Two-party Center Matching. The former is that PSMS is not used for matching investment instruction data and trade report data and the latter is that two parties confirm the result of a bilateral trade.

a) Three Party Center Matching Type (Without Using Investment Instruction Distribution Service): This type receives Investment Instruction Data from the investment managers as well as receives Trade Report Data from Securities Company. s companies by the electronic data transmission.

b) Three-party Center Matching Type (Using Investment Instruction Distribution Service): This type does not receive Investment Instruction Data from the investment managers, but
PSMS, on their behalf, generates Investment Instruction Data based on Trade Report Data sent from the securities companies and transmits the data to the investment managers. After checking the contents of the data, the investment managers send it back to PSMS as Investment Instruction Data. The investment managers enable to replace Notice of Execution by Fax from the securities companies by the electronic data transmission.

c) Investment Instruction Support Unsubscribed Type: This type is for the case when investment managers do not participate in PSMS and send Investment Instruction Data (or Investment Instruction Statement) to trust banks by some other means. In this case, the trust banks receive only Trade Report Data sent by the securities companies via PSMS, match internally Trade Report Data with Investment Instruction Data (or Investment Instruction Statement) received by some other systems or methods and send Trade Report Affirmation Data to PSMS.

d) Through Type: This type is for cases that PSMS is not used for matching investment instruction data and trade report data. The investment instruction data sent from the investment managers and the trade report data sent from the broker/dealers are transmitted to the trust banks respectively. In this case, the trust banks match these two data internally and send the Trade Report Affirmation Data to PSMS.

e) Proper Type: This type is for the case when the buy-side consists of institutional investors such as life/non-life insurance companies or trust banks who perform investments and settlement for their own transactions. As parties involving the transactions in this case is only one, matching process becomes simpler than the case of specified money trust transactions, thus eliminating the transmission/receipt of Investment Instruction Data.

f) Two-party Center Matching Type: This type is for cases that two parties confirm the result of a bilateral trade and both the seller and buyer send the trade report data to PSMS respectively. PSMS executes matching of the trade report data sent from the seller and the buyer and immediately transmits Notice Data of Trade Matching Status.

(2) Outline of matching process

The matching process for Three-party Center Matching Type (Without Using Investment Instruction Distribution Service) is described below:

① Transmission of Trade Report Data and Investment Instruction Data (Fig. 1. ①②)
As stated above, Order from investment managers to securities companies, Notice of Execution from securities companies to investment managers and Allocation between investment managers and securities companies are out of the scope of services, the service
starts from the transmission of Trade Report Data from securities companies and Investment Instruction Data from investment managers. The data syntax used for Trade Report Data is MT515 of ISO15022 and that for Investment Instruction Data is MT541/543 (Buy/Sell).

② Matching of Trade Report Data and Investment Instruction Data (Trade Matching)(Fig. 1. (②))

When Trade Report Data/Investment Instruction Data are received, PSMS searches for the data to be matched in accordance with the matching logic. When the data to be matched are specified, the matching procedure takes place and Notice Data of Trade Matching Status (MT509) are transmitted to the investment manager and securities company (originators of matching data) in the real-time together with the status information of "Matched" or "Unmatched". (Fig. 1. (②)) In case of "Unmatched", the reason of discrepancy and details of counterpart for unmatched item will be transmitted.

③ Transmission of Trade Report Data and Investment Instruction Data to Trust Banks and Trade Report Affirmation/Disaffirmation Data (Fig. 1. (③)④⑥⑦⑧)

When the data is matched mentioned above item 2, Trade Report Data and Investment Instruction Data are immediately transmitted to the trust banks. (Fig. 1. (⑤)⑥) Trust banks then confirm the details of data and send out Trade Report Affirmation/Disaffirmation Data. ("Affirmed" or "Disaffirmed") (MT517) (Fig. 1. (⑦)Upon receipt of such data, PSMS transmits Notice Data of Trade Report Affirming Status to the securities companies. (MT509) (Fig. 1. (⑧) In case the status indicates "Disaffirmed" by the trust banks, securities companies (or/and investment managers) cancel Trade Report Data (or/and Investment Instruction Data) already sent and resend (corrected) Trade Report Data (or/and Investment Instruction Data).

(Note): As ISO15022 does not have the function to correct data elements (re-submission of corrected specific element is not available), the cancellation of the data (all elements) already sent and re-entry of the corrected data have to be transmitted.

④ Generation of Settlement Instruction Data (Fig. 1. (④)⑤)  

When Trade Report Affirmation/Disaffirmation Data sent by the trust banks mentioned above item 3 carries "Affirmed" flag, the process moves to the next step, Generation of Settlement Instruction Data.

To realize the straight-through nature of the process, PSMS provides Standing Settlement Instruction (SSI) database to register settlement conditions such as key account
information for all trading parties. By use of this database, PSMS automatically generates and transmits Settlement Instruction Data to the settlement matching unit, and eliminates manual efforts of creation and transmission of the settlement instruction data by trust banks and securities companies. (Fig. 1.⑤) Then, Notice of Settlement Matching Status Data (MT548) with "Matched" status is to be sent to both parties. (Fig. 1.⑥)

⑤ Generation of DVP Order (Fig. 1.⑥)
When Settlement Instruction Data carrying "LINK/DVP" mentioned above item 4 is matching, PSMS prepares a DVP Order from the matched settlement instruction data of both deliverer and receiver immediately and transmits the order to the Book-entry Transfer System. (Fig. 1.⑥)

Fig. 1. Domestic Transactions - Three Party Center Matching Type (Without Using Investment Instruction Distribution Service)
3. Non-Residents' Transactions

(1) Scope of Services (Ref. Fig. 2)

In case of non-residents' transactions, Trade Matching is not performed, but matching of Settlement Instruction Data sent from settlement agents such as banks and securities companies, who perform custody operations for Japanese securities traded by non-residents, is utilized.

(2) Outline of Matching Process

① Transmission of Settlement Instruction Data/Notice Data of Settlement Matching Status Data (Fig. 2 ➊➋)

When Settlement Instruction Data (MT540-543) are received from settlement agents such as banks and securities companies who perform custody operations(Fig. 2 ➊), PSMS searches for the data to be matched in accordance with the matching logic. When the data to be matched are specified, the matching procedure takes place and Notice Data of Settlement Matching Status (MT548) are transmitted to both of the deliverer and receiver in the real-time with the status of "Unmatched" when there is one or more unmatched items, "Matched (settlement not executable)" when all items are matched but Release Flag, which carries the information whether the settlement is executable or not, on deliverer or receiver side stays "Release Not Executable", or "Matched (settlement executable on settlement date)" when all items are matched and Release Flags on both sides stay "Release Executable". (Fig. 2 ⒵)

② Transmission of Settlement Instruction Modification Data/Notice Data of Settlement Instruction Modification Completion Data (Fig. 2 ⒶⒸ)

When Release Flag in Settlement Instruction Data transmitted as above item 1 is "Release Not Executable", settlement agents resend the correction data (MT599) to change Release Flag to be "Release Executable", after checking the balance of securities or funds, which caused the delivery to be suspended, and making the delivery to be executable. (Fig. 2 Ⓐ) When the modification data are received, PSMS rewrites Release Flag of Settlement Instruction Data already recorded and transmits the modification completion data (MT548/578), with the corrected status, to both deliverer and receiver. (Fig. 2 Ⓐ) It should be noted that the modification data could be issued not only to change Release Flag but to correct the settlement amount.
3. Generation of DVP Order (Fig. 2)

When Settlement Instruction Data carrying "LINK/DVP" mentioned above item 2 is matching, PSMS generates a DVP Order from the matched settlement instruction data of both deliverer and receiver immediately and transmits the order to the Book-entry Transfer System. (Fig. 2)

Fig. 2 Non-Residents’ Transactions

4. Network (connection with users)

(1) User connection format

The formats of connection to PSMS by users can be basically two. One is to connect the user’s own system directly (CPU Direct Connection) to PSMS and the other is to use PC with web browser as a terminal of PSMS (Terminal Connection). The former can utilize either of two types of processing, on-line real-time processing and batch processing by file transfer. For on-line real-time processing and batch processing by file transfer, users can choose either to connect their own systems to PSMS or to have the systems of their computer service subcontractors connected to PSMS. In case of on-line real-time processing, dedicated lines are commonly used, and for file transfer and terminal connection, ISDN lines are used.
(2) Terminal functions

For the users who have large volume of trades, direct on-line real-time connection of their systems to PSMS is efficient in view of the possibility to further shorten the settlement cycle in the future. However, for such users who do not have large volume of trades and wish to curtail the initial investment for system development, Terminal Connection to PSMS is convenient. In order to utilize the services we provide, users only need to prepare PC of certain specifications level with web browser and log-on to the web server of PSMS. The transmission/receipt of data explained in above item 3 is all possible by means of this terminal function. For the data transmission, users may choose either key-input through the form on browser or CSV (Comma Separated Value) file transfer.
Will Transaction Costs Be High in Asia?
A Global Custodian’s View

Presentation for the 2nd ABMF SF-2 Meeting in Manila
December 14, 2010
Masayuki Tagai
Executive Director
Global Market Infrastructures
Treasury & Securities Services

Background (ABMF Sub-Forum 2)

Sub-Forum 2: Reduce Cross-Border Transaction Costs by Enhancing Regional STP
- Transaction costs as a measurement of market efficiency
- Clarify procedures involved in cross-border transactions on an end to end basis
- Identify processes and elements which may be leading to higher cost
- Explore common standards that should allow straight through processing of messages
Current Findings and Assumptions (GOE Report)

- The GoE survey results showed that:
  - Cross-border bond transaction costs in the ASEAN+3 region are generally higher than those of the US or the EU
  - Even within the ASEAN+3 markets, considerable variation is found across countries

- Possible Factors (other than competitive dynamics and market demand):
  - Technology of the Custodian Industry and Economies of Scale at work
    - High fixed costs to be absorbed through high volumes
  - Operational Efficiency of a National Market
    - Operational Risk, Liquidity Risk, extra processes leading to extra fees
  - Competition
    - Standardized Quotes? Room for consideration on transparency and unbundling in the future
  - Country Specific Regulation (e.g. tax related procedures and/or regulatory reporting)
    - Managing balances between safety and efficiency
  - Lack of Regional Policy Coordination

Defining a Cross-Border Transaction

- The domicile of the investor is different from that of the security
- Available channels in Asia
  - Prevailing Channel:
    - 1) Use of a custodian that has direct or indirect access to the foreign CSD
  - Emerging Channel:
    - 2) Use of a(n) (I)CSD that has direct or indirect access to the foreign CSD
    - 3) Direct remote access to the foreign CSD
1) The (Global) Custodian Model: Overview

- **Global Investor**
- **Global Custodian**
- **Sub-Custodians throughout the world**

**Partner Model with Local Agent**
Focus on Asset Safety and Efficiency

1. **Central Bank**
2. **Settlement Agent**
3. **Issuer CSD**
4. **Registrar**
5. **Trade Entry System**
6. **Clearing House**
7. **Trade Counterparty (B)**
8. **Settlement Agent**
9. **Local custodian**
10. **Trade settlement**
11. **Broker settlement entry**
12. **Counterparty confirm (critical)**
13. **Local custodian confirm**
14. **Settlement agent confirm**
15. **Matched instruction for tax**
16. **Client margin debit and notice**
17. **Matched instructions to clear**
18. **Settlement instruction (T+1, S-0)**
19. **Trade Settlement with Finality**
20. **Settlement notification**
21. **Margin refund and notification**
22. **Notification of repatriation**

Trade settlement flows are products of:
1) Documented Regulation
2) Visible Standards
3) Market Practice
4) Workings, Intricacies, Nuances
5) History

J.P. Morgan
1) The (Global) Custodian Model: Sample Flow (Bond sales on exchange via (I)CSD)

![Diagram showing the flow of transactions between different parties in the bond sales process.]

Trade settlement flows are products of:
1) Documented Regulation
2) Visible Standards
3) Market Practice
4) Workings, Intricacies, Nuances
5) History

Why Transaction Costs could be high in Asia?

- Direct Fees Observed by a Global Custodian (charged by the local sub-custodian)
- Transaction Fees
- Custody (Safekeeping) Fees
- A Custodian’s Service would have Multiple Dimensions
  - Serving its client’s needs (service quality and service levels)
  - Managing the risk associated to the business
  - Recovering the cost of investment and ongoing operating cost
- Single Market Providers and Regional Providers
- Standard Processes and Proprietary Processes
- Standard Infrastructure and non-Standard Infrastructure

Debt Managers seek Total Return that would Include non-Economic Costs such as:
- Settlement Risk and Finality of Title and Funds
- Market Practice and Nuances that Filter into Cost
- FX and Funding Related Timings and Cost
- Fail Management Process
- Clarity of tax liabilities

Becomes Evident in the Messaging Function
Current Steps and Challenges Going Forward

- Information gathering by National Experts and International Experts
  - Identifying and documenting the “actors” and their legal / business role
  - Identifying and documenting the “process” in conjunction with Sub-Forum 1 findings
  - Identifying and documenting the “efficiency” and “pricing” components where possible
- Most likely outcome would be “lack of consistency” but somewhat comparable
- Definition of Actors will need to be agreed as next step
  - Actors labeled similarly carrying out different roles
  - Actors labeled differently carrying out the exact same role
- Definition of Process and Scope of Process will need to be agreed as next step
  - e.g. Is matching and affirmation the same process?
  - e.g. What should we include in the settlement process?
- The Definition of Efficiency may be a challenge as Safety comes at a cost to the market

- Increased Visibility through Clearly Documented Processes using Shared Definitions
- Solid Basis to Develop Regional Interoperable Standards and Recognition at the ISO level

Global Custody Network — 2010
Standards setting and Market Practice harmonisation

Alexandre Kech
14 December 2010

Setting the scene

Why standards?

- International/regional standards enable processes to be cost effective and easy to implement and maintain.
- Standards such as ISO 20022 enables Japanese to interact with Belgians, Belgians with Taiwanese… everybody with everybody.
- But standards alone are not sufficient.
Setting the scene
Harmonisation of market practices: SMPG process

www.smpg.info

Securities Market Practice Group (SMPG)

Administration

National Market Practice Groups (NMPG)

Review, discussion & refinement
Collate common elements, specify additional country requirements, identify further opportunities for harmonization
Analyze & document local practices

ABMF
A similar process

http://asean3abmf.adb.org

ABMF Sub-Forum 2

Administration

National representatives

Publication

Review, discussion & refinement
Collate common elements, specify additional country requirements, identify further opportunities for harmonization
Analyze & document local practices
From... a country mindset
worth... from an institutional mindset

- Overcoming natural behavior:
  - My country market practices are better than the others
  - Why would my country have to change?
  - What X is saying is right but he is from country A so...
  - Will this have an impact on my institution system.
  - What is my national community going to think about me?
… to a regional mindset…

• Through
  – An *open mind* towards other market practices
  – Keeping *open agenda* ↔ hidden agenda
  – Regional focus
  – National *empowerment* and conviction
  – *Trust* in the facilitators

• Check list after each decision:
  – Is it best for the region?
  – Is it the most cost effective for *most* regional players?
  – Will it ease the life of all regional and global foreign investors?

… to a global mindset.

• Through
  – An interest in what the rest of the world is doing
  – Trust in the international experts
  – Participation to SMPG
    • Open to feedback from SMPG
    • Publication on www.smpg.info
  – Participation to ISO 20022 process

• Check list after each decision:
  – Is it in line with international practices?
  – If not, can we *justify* it?
All this…
Acknowledging and accepting differences

Knowledge
Make sure all participants have the same level of understanding

English
Make sure all participants have the time to talk

Culture
Make sure all participants have the opportunity to share their views (by written or orally)
The ISO 20022 business recipe (embraced by the SMPG and ISITC)

- Define clearly the scope of your analysis
- Identify all business actors and all roles
- Describe the business activities

Follow the ISO 20022 process (embraced by the SMPG and ISITC)

- Describe the flows
- Describe the business data required

- Including what is out of scope
- Roles are the most important
- Not mandatory but VERY useful for implementation
- Do not use message numbers, describe!
- Harmonise terminology based on ISO 20022 Financial Dictionary
- Agree on data standard, eg, ISO 9362
Follow the ISO 20022 process (embraced by the SMPG and ISITC)

- Market Practice rules (local/regional)
  - Start with local MP
  - Harmonise what can be harmonised
  - Clearly identify regional MP from remaining local MP
  - Make sure it is unambiguous. Wording is KEY

- ISO message illustrations
  - Very last step!

Summary
For such a process to work

- Open your mind
- Think ISO
- Be structured
- Reuse what already exists
Thank you
SunGard Introduction To:
ASEAN+3 Bond Market Forum (ABMF)

Todd Slater

SunGard

SunGard is one of the world’s leading software and technology services companies. Our four businesses serve 25,000 customers in over 70 countries.

In today's financial markets, trade-processing lifecycles undergo constant change. From pre-trade analysis to post-trade risk management, settlement and regulatory compliance, it has never been more important to be in control. SunGard provides solutions for today’s investment banking. Whether it be trading high volumes or creating complex structures, managing your exposures or operational control, there’s a SunGard solution for it.
ABOUT SUNGARD

 Fortune 500 company
 Ranked 380

 World’s 3rd largest
 provider of business applications software after Oracle & SAP

 Financial Systems
 More than
 25,000
 customers

 In over
 70
 Countries

 Including all the world’s
 Top 25
 Financial services companies

 SunGard

 Financial Systems 55%
 Public Services 7%
 Higher Education 10%
 Availability Services 28%

 SunGard in Asia Pacific

 Location | Staff Strength
 North Asia* | 1,230
 South Asia | 730
 Central Asia | 2,620

 SunGard’s Asian headquarter is located in Shanghai.
US$25 trillion in investment assets are accounted for and managed daily on SunGard systems.

Everyday more than 5 million trades are processed by broker-dealers and other financial intermediaries on SunGard systems.

“We provide the broadest portfolio of mission-critical software applications for the financial services industry”
Experience Counts!

- Our fixed income products are used by many of the largest international trading desks.
- SunGard currently maintains a development staff of 57 people dedicated to our fixed income solutions.
- Our products provide STP processing from front office trade input to back office settlement.
- SunGard is the only global vendor to provide fixed income trading tools coupled with trade reconciliation processing.
- Straight through processing with all major Tri-party agents for bond and collateral management.

Centralized Trading Systems

What's Good
✓ Very secure and safe
✓ Closed user group
✓ Control over settlement
✓ Process Control
✓ Limits failures

What's Not So Good
✗ Decision support
✗ Interrupts STP flow
The Benefits of Vendor Connectivity

1. Allow vendors to connect will increase STP efficiency.
2. Banks want records on their internal systems
3. Avoid double key entry
4. Global position keeping is a necessity
5. Repo decision support
   • The need to manage multiple trading accounts
   • Profit and Loss
   • Finding suitable collateral
   • Counterparty Credit Checking

Straight Through Processing (STP) Considerations

Let's examine the reason STP is critical in central bond trading systems, in four areas, and identify the problems vendors face and some considerations:

1. Data Feed Harmonization
2. Financing Products
3. Trade Confirmations
4. Reconciliations
1. Data Feed “Harmonization”

**Vendor Challengers**
- Everyone has a different data feed.
- 30% of Vendor installation costs are feed related.
- Local language documentation.
- Central counterparties will not speak to vendors.

**Our Suggestions**
- We all trade bonds, agree on a single format
- Keep documentation in English and updated
- Treat Vendors like a customer; we assist trade volume!

2. Financing Products

**Vendor Challengers**
- Some trade types (ex Money Fill Repo) are not supported in centralized trading systems

Can you handle changes in the interlife?
- Re-price  Recall  Rollover
- Term change  Substitution  Bulk Order

**Our Suggestions**
- Work with vendors to learn about new trade types.
3. Trade Confirmations

**Vendor Challengers**
- Can you send messages back from your settlement sys.
- Did the trade fail? Did it settle? Did the money move?
- Is it paper?

**Our Suggestions**
- We welcome transactional messages!
- Most Vendors can handle incoming messages.

4. Bond Reconciliations

**Vendor Challengers**
- Nobody in Asia does bond reconciliation; you simply flag a problem
- Reconciliations cover settlement date
- What about the life of the trade?

**Our Suggestions**
- Talk to the vendors about trade reconciliation.
- We hold the data that needs to be repaired so pass the failure to the vendor.
With Thanks…..
From SunGard

Todd Slater
SunGard, Singapore
todd.slater@sungard.com