# 3rd ASEAN+3 Bond Market Forum (ABMF) Meeting

**16 – 17 February 2011 / Kuala Lumpur, Malaysia**

**Venue:** Securities Commission Malaysia

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAMME</th>
</tr>
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<tbody>
<tr>
<td>16 Feb 2011</td>
<td><strong>DAY 1 : ABMF Sub-Forum 1</strong></td>
</tr>
<tr>
<td>8:30 - 9:00</td>
<td><em>Registration</em></td>
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<tr>
<td>9:00 – 9:10</td>
<td>Welcome remarks by Datuk Ranjit Ajit Singh, Managing Director of Securities Commission Malaysia</td>
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<tr>
<td><strong>Part 1: Proposals to enhance regulations and standards for ASEAN+3 cross-border investment and issuance activities</strong></td>
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<tr>
<td>9:10 – 9:20</td>
<td>Introduction by Dato’ Lee Kok Kwan, Vice Chair of SF1 (Deputy CEO &amp; Treasurer of CIMB Group)</td>
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<tr>
<td><strong>Session 1 – Dialogue with leading credit rating agencies (CRAs) in the region</strong></td>
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<tr>
<td>9:20 – 10:50</td>
<td>Role of regional CRAs in promoting cross-border investments and primary issuances through higher levels of cooperation, including setting up of a new international CRA that covers global sovereign ratings, regional financial institution and corporate ratings and cross-border issuances</td>
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<tr>
<td></td>
<td>Presentation by selected CRAs from ASEAN countries (in alphabetical order of country name):</td>
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<tr>
<td></td>
<td>- <strong>Mr. Ronald T Andi Kasim</strong>, President Director of PT Pemeringkat Efek Indonesia (PEFINDO)</td>
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<td></td>
<td>- <strong>Mr. Chong Kwee Siong</strong>, Deputy CEO of RAM Rating Services Berhad (RAM Ratings)</td>
</tr>
<tr>
<td></td>
<td>- <strong>Dr. Santi Kiranan</strong>, President of TRIS Rating Co. Ltd. (TRIS)</td>
</tr>
<tr>
<td></td>
<td>Presentation by selected CRAs from Plus3 countries (in alphabetical order of country name):</td>
</tr>
<tr>
<td></td>
<td>- <strong>Mr. Guan Jian Zhong</strong>, Chairman and President of Dagong Global Credit Rating Co., Ltd. (Dagong)</td>
</tr>
<tr>
<td></td>
<td>- <strong>Mr. Kim Jung-Dong</strong>, General Manager, NICE Investors Service Co., Ltd. (NICE)</td>
</tr>
<tr>
<td>10:50 – 11:15</td>
<td><strong>Coffee Break</strong></td>
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</tbody>
</table>
### Session 2 – Dialogue with central bank, ACRAA, institutional investors and intermediaries in the region

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
<th>Facilitator</th>
</tr>
</thead>
</table>
| 11:15 – 12:45 | Linkages required by institutional investors and intermediaries in increasing ASEAN+3 cross-border investment and primary issuance flows, with particular views on mutual recognition of credit ratings and setting up of a new international CRA based in the region | - Mr. Adnan Zaylani bin Mohd Zahid, Director, Investment Operations and Financial Market, Bank Negara Malaysia  
- Mr. Wan Kamaruzaman Wan Ahmad, General Manager, Treasury Department, Employees Provident Funds  
- Mr. Santiago Dumlao, Secretary-General, Association of Credit Rating Agencies in Asia (ACRAA)  
- Mr. Takahiro Yazawa, Sumitomo Mitsui Banking Corporation (Japan’s National Member for ABMF) | CIMB Group          |

Outline/Presentation by:

#### 12:45 – 14:00 Lunch Break

#### 14:00 – 15:00

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
</tr>
</thead>
</table>
| 14:00 – 15:00 | Comments and opinions for other ABMF future project proposals          | • ABF 3  
• Asian Funds Passporting  
• Improving Bond Index  
• Common framework and mutual recognition of bond issuance program |

#### Part 2: Information collection update

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:00 – 15:30</td>
<td>Presentation by Prof. Shigehito Inukai, ADB Consultant on Data and Information collection update</td>
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<tr>
<td>15:30 – 15:45</td>
<td>Coffee Break</td>
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<tr>
<td>15:45 – 16:15</td>
<td>Information update: Republic of Korea</td>
<td>KCMI</td>
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<tr>
<td>16:15 – 17:30</td>
<td>Information update by other countries: Brunei Darussalam; Cambodia; PRC, Indonesia; Lao PDR; Malaysia; Myanmar; Philippines; Thailand; and Viet Nam</td>
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<tr>
<td>17:30 -17:45</td>
<td>Closing Remarks by SF1 Chair</td>
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<tr>
<td>19:00</td>
<td>Dinner hosted by CIMB Malaysia</td>
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</tbody>
</table>
### Schedule

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAMME</th>
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<tbody>
<tr>
<td>17 Feb 2011</td>
<td><strong>DAY 2 : ABMF Sub-Forum 2</strong></td>
</tr>
<tr>
<td>8:00 - 8:30</td>
<td>Registration</td>
</tr>
<tr>
<td>8:30 – 8:40</td>
<td>Opening Remarks by SF2 Chair, Mr. Jong Hyung Lee</td>
</tr>
<tr>
<td></td>
<td><strong>Part 1: How to construct the SF2 Study: Discussion on the draft questionnaires and Q&amp;A</strong></td>
</tr>
<tr>
<td>8:40 – 9:00</td>
<td>Presentation by Dr. Taiji Inui, ADB Consultant Data and information collection update</td>
</tr>
<tr>
<td>9:00-10:30</td>
<td>Presentation by the national members: Explaining market infrastructure and role of CSDs Brunei Darussalam; Cambodia; People’s Republic of China; Hong Kong, PRC; Indonesia</td>
</tr>
<tr>
<td>10:30 – 10:45</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>10:45 -12:15</td>
<td>Presentation by the national members Japan; Republic of Korea; Lao, PDR</td>
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<tr>
<td>12:15 – 13:30</td>
<td><strong>Lunch Break</strong></td>
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<tr>
<td>13:30 – 15:00</td>
<td>Presentation by the national members Philippines; Thailand; Viet Nam</td>
</tr>
<tr>
<td>15:00 – 15:15</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>15:15 – 16:00</td>
<td><strong>Information Session</strong> Regional custodian business chain and major IT obstacles for HSBC</td>
</tr>
<tr>
<td>16:00 – 16:45</td>
<td><strong>Information Session</strong> Pre-settlement matching system (PSMS) by JASDEC</td>
</tr>
<tr>
<td>16:45 – 17:00</td>
<td>Closing Remarks by SF2 Chair</td>
</tr>
<tr>
<td>17:10 – 17:40</td>
<td><strong>Closed session only among the SF2 members</strong></td>
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</table>

**Evaluation meetings among the Chairs, Vice Chairs, the ADB consultants and ADB:** 17 Feb 18:00-18:30: Evaluation meeting
3rd ABMF SF2 on 17 February 2011
in Kuala Lumpur

Taiji Inui, ADB consultant for ABMF SF2
NTT DATA Corporation

Programme of SF2

<table>
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<td><strong>17:10 – 17:40</strong></td>
<td><strong>Closed session only among the SF2 members</strong></td>
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</table>
ABMF SF2

Primary categories 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

Contributions: List of answers for the questionnaire from SF-2 National Members (draft)

<table>
<thead>
<tr>
<th>Country</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Comments</th>
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</table>

A: Answered, P: Partly answered
1. Bond Market Infrastructures (draft)

<table>
<thead>
<tr>
<th>Country</th>
<th>Domestic CDS</th>
<th>Central Depository</th>
<th>Settlement System</th>
<th>Post-trade</th>
<th>Settlement Currency</th>
<th>Systems</th>
<th>Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Germany</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

2. Survey on CSDs in each country (draft)
BOJ-NET new protocol

Terminal connection

Mainframe connection

Additional questions

10 Current issues
   Please explain current problems and challenges as much as possible

10.1 Description of issues
   10.1.1 Please describe the problems from a STP perspective
   10.1.2 Describe the problems from a cost perspective
   10.1.3 Possible short term solution
   10.1.4 Possible long term solution such as implementing infrastructure

10.2 Any other information and/or comments to be shared by the ABMF members
3.2 Business Process Flowchart for cross-border transactions  Level 1: Japanese Government Bond/DVP

**Seller** (including foreign and domestic broker):

1. Order
2. Notice of Execution
3. Settlement Instruction Data
4. Settlement Matching Data
5. Notice of Settlement Matching
6. Settlement Data

**BoJ-Net**

7. Notice of JGB Transfer Instruction for DVP
8. Notice of Acceptance of JGB Transfer Instruction for DVP
9-1. DVP Request Data
9-2. DVP Request Data
10-1. Notice of Acceptance of DVP Request
10-2. Notice of Acceptance of DVP Request
11. Notice of credit to current account for DVP

**Buyer** (including foreign investor, global and local custodian):

1. Order
2. Notice of Execution
3. Settlement Instruction Data
4. Settlement Matching Data
5. Notice of Settlement Matching
6. Settlement Data

**CSD (The BOJ-Net)**

7. Notice of JGB Transfer Instruction for DVP
8. Notice of Acceptance of JGB Transfer Instruction for DVP
9. Notice Data of DVP Settlement
10. Notice Data of DVP Settlement
11. Notice Data of DVP Settlement (Fund)

**Receiver of JGB**

8. Notice of Execution
9. Notice of Acceptance of JGB Transfer Instruction for DVP

**Sender of Funds**

9. Notice Data of DVP Settlement
10. Notice Data of DVP Settlement
11. Notice Data of DVP Settlement (Fund)

Source: State Street Global Services
3.2 Business Process Flowchart for cross-border transactions  Level 2: Japanese Government Bond/DVP

Attachment 3-b
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 (14 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 (17 February 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 (1 July 2011): discuss contents of the report to TF3

Country visit and workshop

Things to be done (draft)

1. Survey results will be interpreted and compiled
   - National members will provide the flowcharts based on their own market information. How to compile and compare the flowchart is very important issue for ABMF SF2. International Experts (global custodians) will support in this regard since they know each market well.
   - Market information from International Experts have been very useful.
   - Could you send the answer to the ADB consultant by the end of February 2011, please?

2. Supplemental survey will be carried out
   - In order to complete the objectives of ABMF SF2, additional survey will be necessary.
   - Also, organizing workshop is requested from the SF2 members for them to be fully understood the questionnaire and background concept including ISO 20022.

3. Contents of the report to TF3 will be drafted
   - Issues to be included need to be discussed.
   - Possible road maps in the ASEAN+3 region

4. Updating Market Comparison Matrices (for Bond)
   - Could you send updated results to the ADB consultant by the end of February 2011, please?
Preaching to Buddha

Thank you so much

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

This PowerPoint slide is made solely for the discussions at the 3rd ABMF SF2 on 17 February 2011. 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.
3.1 Business Process Flowchart Level 1: Japanese Government Bond / DVP with Matching and CCP (1/2)

Seller

1. Trade

2. Trade report

3. Trade Matching

4. Notice Data of Trade Matching Status

5. Matched Trade Report

6. Approval of Obligation

7. Notice Data of Approval of Obligation

8. Notice Data of Notiation

9. Notice Data of Notiation

10. Netting

11. Notice Data of Netting

12. DVP Order

Buyer

1. Trade

2. Trade report

3. Trade Matching

4. Notice Data of Trade Matching Status

5. Matched Trade Report

6. Approval of Obligation

7. Notice Data of Approval of Obligation

8. Notice Data of Notiation

9. Notice Data of Notiation

10. Netting

11. Notice Data of Netting

12. DVP Order

3.1 Business Process Flowchart Level 1: Japanese Government Bond / DVP with Matching and CCP (2/2)

Seller's agent for securities

13. JGB Transfer Instruction for DVP

15-1. DVP Request Data

14. Notice of Acceptance of JGB Transfer Instruction for DVP

16. Notice of Acceptance of DVP Request

17. Notice Data of DVP Settlement (Fund)

Buyer's agent for securities

14. Notice of Acceptance of JGB Transfer Instruction for DVP

15-2. DVP Request Data

16. Notice of Acceptance of DVP Request

17. Notice Data of DVP Settlement (Fund)

17. Notice of credit to current account for DVP

Seller's agent for funds

14. Notice of Acceptance of JGB Transfer Instruction for DVP

15-1. DVP Request Data

16. Notice of Acceptance of DVP Request

17. Notice Data of DVP Settlement (Fund)

Buyer's agent for funds

14. Notice of Acceptance of JGB Transfer Instruction for DVP

15-2. DVP Request Data

16. Notice of Acceptance of DVP Request

17. Notice Data of DVP Settlement (Fund)
18

6. Survey on standards including numbering and coding

1. Financial Instrument (Securities) identification
   BSN (ISO 6166)
   Cost implication

2. Party Identification and Account
   BIC (ISO 9362)
   Proprietary identification
   Name and address

3. Safekeeping (Securities) account identification
   Proprietary
   There is no account structure (simple text).

4. Cash account
   IBAN (ISO 13614)

5. Languages
   Unicode (ISO /IEC 10646)

6. Survey on standards including numbering and coding

18

5. Fit and gap analyses with the ISO 20022
JGB/DVB with matching and CCP

Note: fit and gap analysis is underway.

19
6.1.3 Is conversion between local numbering and ISIN provided?

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>Country code</th>
<th>Basic code 9 digit</th>
<th>Check digit</th>
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<td>JP</td>
<td>1</td>
<td>A</td>
</tr>
</tbody>
</table>

Japan new securities code (JGB)

<table>
<thead>
<tr>
<th>Issuer code</th>
<th>securities type code</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
</tr>
</tbody>
</table>

Type of securities: Name Issuance times

Issued serial number year month

Cost implication

---

6.2 Financial institution identification

Business Identifier Code (BIC) : ISO 9362:2009

- It is a unique identification code for both financial and non-financial institutions.


- 4 characters for financial institution
- 2 characters ISO country short name
- 2 characters Location code
- 3 characters Branch code, option ("XXX" means head office)

Example: BOJP JP JT XXX

Cost implication
6.3 Securities account

Securities account is practically proprietary numbering (Max35Text).

Account system of JGB back entry

<table>
<thead>
<tr>
<th>Participant code</th>
<th>Participant type</th>
<th>Account type</th>
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<tbody>
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<td>2 digits numeric</td>
<td>2 digits numeric</td>
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<tr>
<td>XXXX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>+ JGB name code</td>
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</tr>
</tbody>
</table>

Account is make up with participant code + type + account type and is managed under each JGBs.

Participant Account (4 digits XXXX)

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<th>Participant type</th>
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<td>Proprietary III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proprietary IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Account Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 Securities account</td>
</tr>
<tr>
<td>6.4 Cash account</td>
</tr>
</tbody>
</table>

Cost implication

6.4 Cash account

Cash account is practically proprietary numbering (Max34Text).

International Bank Account Number: IBAN

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

Example:
- Japan
  - Financial agency: 0051
  - Branch: 1168
  - Account Code: 1234567

Proprietary Account: Notation by the account system of each country can also be used.

Example:
- Japan
  - IBAN: JP0000110123456789/JP
  - Check Digit: 9

Cost implication
6.5 Character code and language

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

ISO20022
UTF-8
Japanese Language
JIS-X0208
BOJ-NET (JIS8)
ZENGIN

Financial Institution in Japan

Outside Japan

Cost implication

End of back-up slides

This PowerPoint slides are made solely for the discussions at the 3rd ABMF SF2 on 17 February 2011. 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.
**Figure 1**: Chinese bond market infrastructure

<table>
<thead>
<tr>
<th>Market</th>
<th>Inter-bank Bond Market</th>
<th>Commercial Bank Counter Market</th>
<th>Exchange Bond Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading</td>
<td>China Foreign Exchange trade System, Broker, Curb Market (telephone/FAX)</td>
<td>Bond Counter Trade Accepting Bank</td>
<td>Shanghai stock exchange, Shenzhen stock exchange</td>
</tr>
<tr>
<td>Clearing</td>
<td>Bond Counter Trade Accepting Bank</td>
<td>China Securities Depository and Clearing Corporation</td>
<td></td>
</tr>
<tr>
<td>Bond Settlement</td>
<td>China Central Depository &amp; Clearing Co. Ltd. (CCDC)</td>
<td>Bond Counter Trade Accepting Bank</td>
<td>China Securities Depository and Clearing Corporation Limited (SD&amp;C)</td>
</tr>
<tr>
<td>DVP</td>
<td>model1</td>
<td>model1</td>
<td>model3</td>
</tr>
<tr>
<td>Fund Settlement</td>
<td>PBoC’s HVPS (High Value Payment System which is a part of CNAPS)</td>
<td>Bond Counter Trade Accepting Bank</td>
<td>Commercial bank</td>
</tr>
</tbody>
</table>

**Figure 2**: Settlement process: all amount sequential DVP

Seller side:
1. Settlement command
2. Settlement command receiving
3. Settlement command matching notification
4. Settlement agreement generation
5. Settlement agreement execution on the due date
6. Garnishment by the buyer
7. DVP fund settlement requirement notification
8. Receipt of receivables on the due date
9. DVP fund settlement notification
10. Fund transfer notification

Buyer side:
1. Settlement command
2. Settlement command receiving
3. Settlement command matching notification
4. Settlement agreement generation
5. Settlement agreement execution on the due date
6. Garnishment by the buyer
7. DVP fund settlement requirement notification
8. Receipt of receivables on the due date
9. DVP fund settlement notification
10. Fund transfer notification

CNAPS

ONAPS

Fund transfer processing
Figure 3: systems and network configuration
Mr Shu-Pui Li  
Head, Financial Infrastructure Development Division  
Hong Kong Monetary Authority

Overview: Hong Kong’s financial infrastructure
Central Moneymarkets Unit (CMU)

- A debt securities custodian, clearing and settlement system operated by the HKMA
- Membership open to:
  - Authorized Institutions in Hong Kong
  - Members of the Asia Capital Markets Association
  - Other domestic or overseas financial institutions (at the discretion of the HKMA)
- Debt securities denominated in any currency can be lodged with the CMU
- Established linkage to ICSDs & CSDs in the region
- Has efficient interface with Hong Kong's RTGS systems

Services Provided by CMU

- Real time and end-of-day Delivery versus Payment (DvP) settlement
- Securities lodgement / allotment by tendering
- Market making arrangement
- Intraday repo and overnight discount window to banks for liquidity management via Collateral Management Service
- Cross-border settlement
- Bank to bank repo
- Securities lending
- Paying agent
- CMU fund order routing and settlement service
To broaden the issuance channel, CMU expanded similar tender arrangement to issuers and arrangers of non-HK Government debt securities.*

* First tendering of RMB Sovereign Bonds through the CMU bid was conducted on 30 Nov 2009

An alternative channel for bond issuance in Hong Kong

Benefits of tendering through CMU BID

- **Price Transparency**
  Competitive tender may better reflect the market prices, hence lowering the issuance cost

- **Broaden investor base**
  CMU has more than 160 participants. Issuing debt through the CMU platform can broaden the investor base, hence making the securities more popular

- **Lower operational cost and risk**
  CMU BID is a highly effective platform and cost efficient compared to other issuance channels

- **Reduced settlement risk**
  CMU’s seamless interface with RTGS systems in Hong Kong facilitates DVP settlement, thereby reducing settlement risk
Tendering arrangements for the RMB bonds issued by the Ministry of Finance

The Ministry of Finance of the People’s Republic of China (MoF) and the Hong Kong Monetary Authority (HKMA) signed a Cooperation Memorandum on 22 November 2010 to use the HKMA’s CMU BID service for the tendering of RMB sovereign bonds among institutional investors.

<table>
<thead>
<tr>
<th>Issue Size</th>
<th>3-year: RMB 2 billion</th>
<th>5-year: RMB 2 billion</th>
<th>10-year: RMB 1 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue Price</td>
<td>100% of the principal amount</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of Offering</td>
<td>Competitive coupon-based bidding. Successful bidders will be allotted bonds at the issue price of the bonds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coupon</td>
<td>Each series of bonds will bear interest at the highest bidding interest rate accepted during the competitive bidding process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tender Arrangement</td>
<td>Through the CMU BID operated by the HKMA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tender Date</td>
<td>30 November 2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlement Date</td>
<td>1 December 2010</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tender results of the sovereign bonds

<table>
<thead>
<tr>
<th></th>
<th>3-year bond</th>
<th>5-year bond</th>
<th>10-year bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue Amount</td>
<td>RMB 2,000 mn</td>
<td>RMB 2,000 mn</td>
<td>RMB 1,000 mn</td>
</tr>
<tr>
<td>Application Amount</td>
<td>RMB 29,658 mn</td>
<td>RMB 14,118.5 mn</td>
<td>RMB 5,478.5 mn</td>
</tr>
<tr>
<td>Average accepted interest rate</td>
<td>0.8902%</td>
<td>1.6095%</td>
<td>2.2713%</td>
</tr>
<tr>
<td>Lowest accepted interest rate</td>
<td>0.50%</td>
<td>0.5%</td>
<td>1.20%</td>
</tr>
<tr>
<td>Highest accepted interest rate (bonds’ coupon)</td>
<td>1.00%</td>
<td>1.80%</td>
<td>2.48%</td>
</tr>
</tbody>
</table>
Developments in RMB offshore market

- July 2010: Clearing Agreement revised
  - FI participants: opened up to all types of financial intermediaries
  - Product range: banks are free to develop and offer all types of Renminbi products
  - Client coverage: extended to all corporates
  - RMB conversion: no restrictions between banks or with clients
  - Two-tier clearing structure: participating banks in the RMB RTGS system in Hong Kong can offer all types of Renminbi services to other banks and financial institutions

RMB deposits in Hong Kong

RMB RTGS system – average daily turnover

Milestones of developing RMB bond market

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Issuer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 2007</td>
<td>The first RMB bond issued in Hong Kong</td>
<td>China Development Bank</td>
</tr>
<tr>
<td>Oct 2009</td>
<td>The first RMB bond issued by the Mainland Government</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>Aug 2010</td>
<td>The first RMB bond issued by Multinational corporation</td>
<td>McDonald’s Corporation</td>
</tr>
<tr>
<td>Oct 2010</td>
<td>The first RMB bond listed on the Hong Kong Stock Exchange</td>
<td>Asia Development Bank</td>
</tr>
<tr>
<td>Nov 2010</td>
<td>The first RMB bond tendered through CMU platform</td>
<td>Ministry of Finance</td>
</tr>
</tbody>
</table>

- As of end-January 2011, the outstanding balance of RMB bonds lodged with CMU amounted to RMB 67 bn.
- Non-bank issuers of RMB bonds include Caterpillar Financial Services Corp, McDonald’s Corp, Hopewell Highway Infrastructure Ltd, Sinotruk (HK) Ltd and Galaxy Entertainment Group Ltd, etc.
Efforts in promoting the region’s bond market development

- Formed a Task Force with a group of central banks and CSDs in the region
- Vision: to gradually improve the post-trade infrastructure for bond clearing and settlement in the region
- Issued a White Paper in June 2010, outlining:
  - Concept of a Common Platform Model (CPM)
  - Launch of the Pilot Platform
- CPM offers:
  - Better cross-border access to local Asian bonds
  - Greater issuance of local bonds
  - Improved automated process to manage operational risk
  - Access to a larger pool of collateral
  - Reduced costs for post-trade execution

Common Platform Model
**Pilot Platform - a tactical solution to deliver early benefits**

- **Flexible access**
  - Direct access
  - Increase coverage of ICSD database

- **Leverage existing links**
  - Issuer CSD
    - Local systems
    - Local database
  - Foreign currency RTGS connectivity tool

- **Increase coverage of ICSD database**
  - ICSD database
  - Foreign currency facilities

**New functions provided by the Pilot Platform**

- Target launch date: first half of 2011
- Hong Kong, Malaysia and Euroclear as “early movers”
Bond Market & Settlement Mechanism
Indonesia
17 February 2011

<table>
<thead>
<tr>
<th>CHARACTERISTICS OF 2 CSD</th>
<th>KSEI</th>
<th>BI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruments</td>
<td>Equities, Corporate Debts, Government Debts, SBI</td>
<td>Government Debts, SBI</td>
</tr>
<tr>
<td>Depository Systems</td>
<td>C-BEST</td>
<td>BI-SSSS</td>
</tr>
<tr>
<td>Participants</td>
<td>Brokers, Custodian Banks</td>
<td>Sub-registries; ie, KSEI and Custodian Banks</td>
</tr>
<tr>
<td>Account Structure</td>
<td>Segregated under the clients’ names</td>
<td>Omnibus under each sub-registry’s name</td>
</tr>
<tr>
<td>Cash Payments - RTGS</td>
<td>4 Payment Banks</td>
<td>BI</td>
</tr>
<tr>
<td>Withholding Tax Agent</td>
<td>Yes for government bonds</td>
<td>No</td>
</tr>
</tbody>
</table>
## BOND MARKETS & SETTLEMENT MECHANISM

<table>
<thead>
<tr>
<th>Market Caps</th>
<th>As of Jan 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Bonds</td>
<td>Total Outstanding government securities: IDR 1,704 trillion</td>
</tr>
<tr>
<td>Corporate Bonds</td>
<td>Tradable government securities: IDR 813 trillion</td>
</tr>
<tr>
<td></td>
<td>Non tradable government securities: IDR 261 trillion</td>
</tr>
<tr>
<td></td>
<td>Total Outstanding of corporate bonds: IDR 117 trillion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foreign Ownership</th>
<th>Government Bonds: 30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Bonds: 4%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Securities Number</th>
<th>Yes, ISIN issued by KSEI.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Listed securities - allocated after the effective letter received by KSEI from Baepam-LK.</td>
<td></td>
</tr>
<tr>
<td>• Non listed securities - allocated after the agreement between issuer and KSEI is signed.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trading</th>
<th>- Mostly in the OTC market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Via FITS; a bond trading platform provided by IDX</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reporting of OTC transaction</th>
<th>Yes by the intermediaries or custodian banks to the exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reporting must be done within 30 minutes after the transaction is done by an intermediary, or after the settlement instruction is received by a custodian bank</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Settlement</th>
<th>Mostly on T+2 settlement cycle. Book-entry settlement method in C-BEST or BI-SSSS</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Netting</th>
<th>No - Gross to Gross</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>FOP</th>
<th>Allowed only for certain purposes i.e. NCBO, inheritance, grant, court settlement, swap, lending and borrowing, repo</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Paying Agents</th>
<th>Government Bonds – KSEI, Custodian Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Bonds – KSEI</td>
<td></td>
</tr>
<tr>
<td>BOND MARKETS &amp; SETTLEMENT MECHANISM</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Pre-matching</strong></td>
<td></td>
</tr>
<tr>
<td>It’s not guaranteed for settlement and does not commit both parties.</td>
<td></td>
</tr>
<tr>
<td><strong>Withholding Tax on interest or capital gain</strong></td>
<td></td>
</tr>
</tbody>
</table>
| • Residents: 15%  
  • Domestic mutual fund: 2010 – 2013: 5%, 2014: 15%  
  • Non residents: 20% or DTA rates |
| In order for non residents to enjoy the treaty benefits, they are required to provide a set of documents under the account names registered in KSEI or custodians. |

*Table 1: Pre-matching and Withholding Tax on interest or capital gain*

<table>
<thead>
<tr>
<th>BOND MARKETS &amp; SETTLEMENT MECHANISM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foreign Investors</strong></td>
</tr>
<tr>
<td><strong>Registration process for foreign investors</strong></td>
</tr>
</tbody>
</table>
| • No specific registration requirement for foreign investors.  
  • All capital market investors will need to have Single Investor ID (SID), which is issued by KSEI.  
  • The custodian or brokers appointed by the investors will arrange the SID issuance with KSEI.  
  • Investors are required to provide their information according to BapepamLK regulation V.D.10 to the broker or custodian for KYC purposes |
| **IDR restrictions**                |
| Crediting IDR into non-resident accounts must be supported by underlying proof on economic activities |
| **Repatriation of funds restrictions** |
| Allowed, with supporting documents or declaration |
| **Overdraft**                       |
| Not allowed |

*Table 2: Foreign Investors Registration and IDR Restrictions*
THANK YOU
Malaysian Financial Market Infrastructure

3rd ASEAN+3 Bond Market Forum (ABMF) Meeting
Kuala Lumpur

Thursday, 17 February 2010
Presentation Coverage

- Malaysian Financial Market Systems
- Role of MyClear as CSD
- Securities and Settlement Services
- RENTAS access
- RENTAS architecture
Overview of Securities and Payment systems in Malaysia

**Members**
- Licensed Banks
- Cagamas Berhad
- Provident Funds
- MEPS

**Systems**
- RENTAS
- eSPICK
- IBG, SAN, FPX

**Operator**
- MyClear
- MEPS

*Infrastructure for money market and over-the-counter securities under the purview of Bank Negara Malaysia*

*Infrastructure for exchange traded instruments under the purview of Securities Commission*

- Investment Banks & Stock Brokers
- Derivatives Firms
- Securities/Equities Clearing
- Derivatives Clearing
- Bursa Malaysia Securities Clearing
- Bursa Malaysia Derivatives Clearing

**Key Terms**
- IBG: Interbank GIRO
- SAN: Shared ATM Network
- FPX: Financial Process Exchange
- eSPICK: Cheque Clearing system
- RENTAS: Real-time Electronic Transfer of Funds and Securities

**Legend**
- Large value payment systems
- Retail payment systems
- Securities Settlement Systems
MyClear as operator of key market infrastructure for money market and OTC securities market.

Background of MyClear

- Incorporated in Oct 2008 and commenced operations on 2\textsuperscript{nd} January 2009
- Established as a wholly-owned subsidiary of BNM with the following objectives:
  - Accelerate migration to e-payment;
  - Separate the overseer and operator role of systematically important payments system (SIPS); and
  - Support the Malaysia International Islamic Financial Centre (MIFC) agenda

Role of MyClear

- Provide securities and payment services via the following systems:
  - RENTAS - CSD and the RTGS
  - FAST - Issuing system for unlisted debt securities
  - eSPICK - Cheque Clearing System
- Facilitate cross-border securities payments and settlements; and
- Promote an effective and sustainable A&P programmes to enhance consumers awareness on e-payments
FAST and RENTAS systems are capable to provide issuance, depository and settlement of Sukuk and bonds in MYR and USD.

**FAST**
- Issuance in Primary Market
  - Settlement on the issue date
- Depository and Settlement for both Primary & Secondary Markets

**RENTAS**
- Secondary Trading in OTC Market
  - Securities Information
  - Outright deals
  - Repo/SBL activities
  - Liquidity Management
  - Payment & Depository Instructions to Custodian banks (RENTAS members) in Malaysia

The Delivery vs Payment (DvP) and Payment vs Payment (PvP) link of RENTAS to USD Chats in Hong Kong provides an alternative to improve liquidity management & mitigate the settlement risks.

**DvP** is where securities and payments are exchanged simultaneously.

**PVP** is where a final transfer of one currency occurs only and only if a final transfer of other currency takes place.
Issuance of Debt Securities in Primary Market via FAST

FAST is a web-based system that provides transparency in the issuance process regardless mode of issues and is integrated to the RENTAS system for settlement on the issue date.

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Systems</th>
<th>Mode of Issue</th>
<th>Custodian Banks</th>
<th>Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government/ Central Banks/ Corporate</td>
<td>FAST</td>
<td>Tender</td>
<td>Primary Dealers</td>
<td>Local &amp; Foreign Investors</td>
</tr>
<tr>
<td></td>
<td>Placement/Bought Deal</td>
<td>Direct Bidders</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tender Panel Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary Subscribers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial Institutions/Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RENTAS</td>
<td></td>
<td>Settlement on Issue Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Institutional investors</td>
<td></td>
</tr>
</tbody>
</table>

Background on FAST:  [https://fast.bnm.gov.my](https://fast.bnm.gov.my)

- FAST has been handling various issuance of the Government/BNM papers, private debt securities since 1996.
- FAST has also been entrusted to handle issuances by leading multilateral finance institutions, International banks such as:
  - ADCB Finance (Cayman) Ltd
  - Gulf Investment Corporation (2008)
  - International Bank for Reconstruction & Development (2007)

### Issuance via FAST by Foreign Issuer

<table>
<thead>
<tr>
<th>Year of Issue</th>
<th>No. of Foreign Issuers</th>
<th>Amount (RM’m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>2</td>
<td>1,150</td>
</tr>
<tr>
<td>2009</td>
<td>3</td>
<td>1,520</td>
</tr>
<tr>
<td>2008</td>
<td>8</td>
<td>6,785</td>
</tr>
<tr>
<td>2007</td>
<td>3</td>
<td>1,665</td>
</tr>
<tr>
<td>2006</td>
<td>2</td>
<td>900</td>
</tr>
<tr>
<td>2004</td>
<td>1</td>
<td>400</td>
</tr>
</tbody>
</table>
RENTAS holds securities in dematerialized form and processes securities by book entry transactions

RENTAS as the Centralised Security Depository (CSD):

- Registration of securities in electronic form in a centralised book-entry system. Total outstanding debt securities as at Dec 2010 is RM763.4b (BNM & Government securities outstanding =58%)
- Custodian of Global Certificate for scripless securities deposited/lodged with RENTAS
- Record of custodian banks holdings arising from trading activities

Issuance in 2010

<table>
<thead>
<tr>
<th></th>
<th>BNM Papers</th>
<th>Government Papers</th>
<th>PDS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>147</td>
<td>197.4</td>
<td>61</td>
<td>41.6</td>
</tr>
<tr>
<td>Islamic</td>
<td>88</td>
<td>64.7</td>
<td>26</td>
<td>23.1</td>
</tr>
<tr>
<td>Total</td>
<td>237</td>
<td>262.1</td>
<td>87</td>
<td>64.7</td>
</tr>
</tbody>
</table>

Redemptions in 2010

<table>
<thead>
<tr>
<th></th>
<th>BNM Papers</th>
<th>Government Papers</th>
<th>PDS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>56</td>
<td>150.9</td>
<td>50</td>
<td>22.7</td>
</tr>
<tr>
<td>Islamic</td>
<td>65</td>
<td>43.6</td>
<td>22</td>
<td>7.6</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>194.5</td>
<td>72</td>
<td>30.3</td>
</tr>
</tbody>
</table>
Settlement Services provided by RENTAS

Payment via RENTAS is final and irrevocable under the Payment Systems Act 2003.

RENTAS as the LVPS:
- Settlement for new issuance in primary market including re-opening of existing issues
- Settlement for OTC market transactions
- Payment of Coupon/Dividend throughout during the tenure of securities
- Payment of final redemption to bondholders via the custodian banks (RENTAS members)

<table>
<thead>
<tr>
<th>Type of Transactions</th>
<th>Value</th>
<th>RM’trillion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
<td>2006</td>
</tr>
<tr>
<td>Money market</td>
<td>7.3</td>
<td>10.6</td>
</tr>
<tr>
<td>FX</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>3rd Party</td>
<td>-</td>
<td>0.5</td>
</tr>
<tr>
<td>Others</td>
<td>9.0</td>
<td>10.2</td>
</tr>
<tr>
<td>Securities Trxs</td>
<td>1.7</td>
<td>2.2</td>
</tr>
</tbody>
</table>
RENTAS Membership Criteria

- Financial Institutions regulated by Bank Negara Malaysia and investment banks co-regulated with the Securities Commission.
- Central Banks/Monetary Authorities;
- International Central Securities Depository (ICSD)/ National CSDs
- Clearing Houses;
- Qualified domestic institutions that actively involved in payment activities;
- Domestic institutions that promote the development of capital market.
RENTAS Components

1. **Interbank Funds Transfer System (IFTS)** for settlement of ringgit interbank transactions

2. **Scripless Securities Depository System (SSDS)** to settle RM and USD debt securities transactions on a DvP basis

### IFTS
- To effect, process and settle the transfers of high value ringgit interbank funds with BNM and among the participating member institutions
- Transfers are settled individually (i.e. without netting debits against credits)
- Provides intra-day finality for individual transfers

### SSDS
- To effect, process and settle scripless securities (Government Securities, BNM Papers, Cagamas Bonds and unlisted private debt securities) on a DvP
Cash Account

- Every participant has a primary settlement account, a statutory reserves account as well as an unlimited number of optional sub-accounts.

Securities Account

- Every participant has a primary securities account, a collateral account as well as an unlimited number of optional customer sub-accounts.
Settlement Process-Payments

**Payment Order released by Member A**

Queue *Transaction*

**Sufficient Funds?**

- Yes: Settle Transaction
- No: Queue *Transaction*

**Collateral Available?**

- No: Collateral Available?
- Yes: Select And Earmark Securities

**Release Funds**

**Payment Order released to Member B**

*All transactions in queue will be cancelled at the close of RENTAS*
Settlement Process – Securities (DvP)

Seller - Member A
Initiate Transaction

Queue * Transaction

Sufficient Securities?  
Yes → Sufficient Funds?  
Yes → Settle Transaction  
No → No

Sufficient Funds?  
Yes → Release Funds  
No → Collateral Available?  
Yes → Select And Earmark Securities  
No → No

Buyer - Member B
Confirm Transaction

Securities release to Member B
Payment release to Member A

*All transactions in queue will be cancelled at RENTAS cut-off time

Extend Intraday Credit (only to eligible institutions)
Thank You
Answer sheet for the survey of “Implementing STP and reducing cross-border transaction cost”
3rd ABMF SF2 on 17 February 2011 in Kuala Lumpur (draft)

<table>
<thead>
<tr>
<th>Contact person</th>
<th>Mr. Yuji Sato, Senior Manager, Fixed Income and Investment Trust Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Japan Securities Depository Center, Inc. (JASDEC)</td>
</tr>
<tr>
<td>mailing address</td>
<td>Daini-Shoken Kaikan Bldg., 1-1, Nihombashi-Kayaba-Cho 2-chome, Chuo-ku, Tokyo, 103-0025, Japan</td>
</tr>
<tr>
<td>phone number</td>
<td>+81-3-3661-7193</td>
</tr>
<tr>
<td>mobile phone number</td>
<td></td>
</tr>
<tr>
<td>e-mail address</td>
<td><a href="mailto:y-sato@jasdec.com">y-sato@jasdec.com</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternate person</td>
<td>Mr. Hiroshi Ikegami, Director, Fixed Income and Investment Trust Department</td>
</tr>
<tr>
<td>Institution</td>
<td>Japan Securities Depository Center, Inc. (JASDEC)</td>
</tr>
<tr>
<td>mailing address</td>
<td>Daini-Shoken Kaikan Bldg., 1-1, Nihombashi-Kayaba-Cho 2-chome, Chuo-ku, Tokyo, 103-0025, Japan</td>
</tr>
<tr>
<td>phone number</td>
<td>+81-3-3661-7193</td>
</tr>
<tr>
<td>mobile phone number</td>
<td></td>
</tr>
<tr>
<td>e-mail address</td>
<td><a href="mailto:y-ikegami@jasdec.com">y-ikegami@jasdec.com</a></td>
</tr>
<tr>
<td>1</td>
<td>Bond market infrastructures</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>1.1</td>
<td>Bond settlement infrastructure diagram</td>
</tr>
<tr>
<td>1.2</td>
<td>Explanation of the diagram</td>
</tr>
</tbody>
</table>

- There are two bond markets which are the **OTC (over the counter) market** and the **Securities Exchange market** operated by TSE (Tokyo Stock Exchange) in Japan just like other countries.
- Bonds are **mostly dealt at OTC market**.
  
  Debt securities (bonds) are mainly categorized into:
  1) **JGB (Japanese Government Bond)**
  2) **Agency bond**
  3) **Municipal bond**
  4) **Corporate bond**
  etc.
- Regarding **matching systems**, the **Pre-Settlement Matching System (PSMS)** is provided by the Japan Securities Depository Center, Inc (JASDEC) for all types of debt securities. But, some transactions go directly to the CSDs.
- Regarding **clearing systems**.
  1) **The Japan Government Bond Clearing Corporation (JGBCC)** is the **CCP for JGB**.
  2) **Japan Securities Clearing Corporation (JSCC)**, which was established by the Exchanges (Tokyo Stock Exchange and other four Securities Exchanges) and the Japan Securities Dealers Association, is a clearing organization which conducts the Financial Instruments Obligation
Assumption Business under the Financial Instruments and Exchange Law.

- There are two CSDs.
  1) **BOJ-NET (Bank of Japan Financial Network System)** JGB Book-Entry System is the CSD for JGBs, and
  2) **JASDEC is the CSD for all other securities in Japan.**

- All securities can be **settled by central bank money (JPY) using DVP.**

<table>
<thead>
<tr>
<th>1.3</th>
<th>Bond market</th>
<th>Tokyo OTC market</th>
<th>TSE market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1</td>
<td>Name of the bond market</td>
<td><strong>Tokyo OTC market</strong></td>
<td><strong>TSE market</strong></td>
</tr>
<tr>
<td>1.3.2</td>
<td>Owner and operator of the bond market</td>
<td>No single owner nor operator</td>
<td>TSE is the owner and operator</td>
</tr>
</tbody>
</table>
| 1.3.3 | Name of network and communication protocol | No single name of network | Network: TSE arrownet
Communication protocol: FIX and TSE protocol are available |
| 1.4 | Matching system | This matching system is for the Tokyo OTC market | The matching system for TSE market |
| 1.4.1 | Name of the matching system | **Pre-Settlement Matching System (PSMS)**
*Please refer to the presentation material for “Pre-Settlement Matching System (PSMS)”* | **TSE derivatives trading system** |
| 1.4.2 | Owner and operator of the matching systems | Japan Securities Depository Center Inc. | TSE is the owner and operator |
| 1.5 | Clearing systems | | There are two CCPs in Japan. |

**Tokyo OTC market** and **Tokyo Stock Exchange (TSE) market**
<table>
<thead>
<tr>
<th>(CCP)</th>
<th><strong>JGBCC</strong> and <strong>JSCC</strong></th>
</tr>
</thead>
</table>
| **1.5.1** Name of the clearing system | Japan Government Bond Clearing Corporation (JGBCC) system.  
JGBCC is connected with the Tokyo OTC market.  
| **1.5.2** Owner and operator of the clearing system | • **The Japan Government Bond Clearing Corporation was established through a joint capital investment by the major market participants**, namely the securities companies, the banks and the money market brokerage companies, **as means to enhance the safety, efficiency and convenience of the Japanese Government Bond market.**  
| | • **Japan Securities Clearing Corporation was established in 2002** as the first cross-market clearing organization in the Japanese securities market by the Tokyo Stock Exchange, Osaka Securities Exchange, Nagoya Stock Exchange, Sapporo Securities Exchange, Fukuoka Stock Exchange and the Japan Securities Dealers Association.  
• In January 2003, JSCC was licensed as the first clearing organization in Japan to conduct the Securities Obligation Assumption business (now called Financial Instruments Obligation Assumption business) under the Securities and Exchange Law (now called the Financial Instruments and Exchange Law).  
| **1.5.3** Name of network and communication protocol | No specific name: networks provided by JGBCC.  
| | Network: TSE arrownet  
Communication protocol: FIX and TSE protocol are available |
<table>
<thead>
<tr>
<th>1.6</th>
<th>Cash settlement systems</th>
<th>Only one cash settlement system is connected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6.1</td>
<td>Name of the cash settlement system</td>
<td>BOJ-NET Funds Transfer System (BOJ-NET FTS)</td>
</tr>
<tr>
<td>1.6.2</td>
<td>Owner and operator of the fund settlement system</td>
<td>Bank of Japan (owner and operator)</td>
</tr>
<tr>
<td>1.6.3</td>
<td>Name of network and communication protocol</td>
<td>Proprietary network, TCP/IP</td>
</tr>
<tr>
<td>1.6.4</td>
<td>DVP and BIS model</td>
<td>Model 1 (for all bonds) and Model 3 (JGB only from JGBCC)</td>
</tr>
<tr>
<td>1.6.5</td>
<td>Intraday overdraft and liquidity saving features</td>
<td><strong>Intraday overdraft is allowed</strong> (collateral to secure debt incurred as a result of use of the intraday overdraft facility is required)</td>
</tr>
</tbody>
</table>
There are two CSDs in Japan.

**BOJ-NET Securities Services** and **JASDEC system**.

<table>
<thead>
<tr>
<th>2</th>
<th>Survey on CSDs in each country¹</th>
<th>There are two CSDs in Japan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1a</td>
<td>Name of the CSD</td>
<td>New BOJ-NET JGB Book-Entry System</td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ will start production operation in 2015. Please note that all following descriptions related to the new BOJ-NET are due to be introduced by 2015.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Current BOJ-NET JGB Book-Entry System started in 1990.</td>
</tr>
<tr>
<td>2.2</td>
<td>Owner and operator of the CSD</td>
<td><strong>Bank of Japan</strong></td>
</tr>
<tr>
<td>2.3</td>
<td>Types of Securities and status of dematerialization</td>
<td><strong>Japan Securities Depository Center, Inc.</strong></td>
</tr>
<tr>
<td></td>
<td>· Government bonds (book entry)</td>
<td>· Eligible Securities are:</td>
</tr>
<tr>
<td></td>
<td>· All types of government bonds are held in book entry form.</td>
<td>1) Corporate bonds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Municipal bonds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Investment company bonds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4) Specified corporate bonds prescribed in the “Law Concerning Liquidation of Assets”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5) Rights that should be represented by bond certificates issued by companies under</td>
</tr>
</tbody>
</table>

¹ If there are more than one CSDs in your country, please provide your answer in the following page in detail about the other CSDs.
special law
6) Rights that should be represented by bond certificates issued by any government or by companies in foreign countries, such as Samurai Bonds.

- **All types of bonds are held in book entry form.**

| 2.4 | The number of stakeholders | 168 Domestic banks including 18 trust banks, 33 foreign banks, 64 securities companies, 17 insurance companies and 33 other participants (as of Nov 2010) | 2,514 issuers
88 JASDEC participants
432 indirect asset management institutions
146 fund settlement corporations
204 Agents (as of Dec. 2010) |
| 2.5 | List of business transactions | JGB DVP / JGB FOP / JGB Issuance / JGB Purchase Sale / JGB Interest Payment / JGB Redemption | DVP / FOP Purchases and sales
Issuances and redemptions
Interest payments |
<p>| 2.6 | Networks used for the CSD. | <strong>Network for BOJ-NET Securities services</strong> | <strong>Network for JASDEC system</strong> |
| 2.6.1 | Name of the network | proprietary network BOJ-NET | proprietary network JASDEC system |
| 2.6.2 | Type of the line e.g., leased line, ISDN, internet, IP-VPN) | IP-VPN | ISDN and leased line |
| 2.6.3 | Communication protocol | TCP/IP protocol | TCP/IP protocol |
| 2.6.4 | Communication | CORBA | (to be confirmed) |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Interface</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
</table>
| 2.6.5   | Message format | CSV and XML  
Note: Proprietary format or ISO 15022 (But ISO 15022 has not been used actually)                                                                                                                   | ISO 15022 messages (MT Format) or CSV?                                                                           |
| 2.6.6   | System, network, and center configurations | Diagrams showing system configuration, network configuration, and center configuration will be attached later.                                                                                                    | Diagrams showing system configuration, network configuration, and center configuration will be attached later. |
| 2.7     | Other CSDs and ICSDs linked to the CSD | No, direct connection.                                                                                                                                                                                     | No, direct connection.                                                                                                                                                  |
Bond Market in Korea

Jong-Hyung Lee
Head of Int'l Relations & Planning Team
Korea Securities Depository

Contents

I. Bond Market Infrastructures
II. CSD
III. Market Comparison
IV. Matching
V. Settlement Cycles
VI. Numbering and Coding
### I. Bond Market Infrastructures

<table>
<thead>
<tr>
<th></th>
<th>Bond Market Infrastructures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Bond settlement infrastructure diagram</td>
</tr>
</tbody>
</table>
| 1.2 | Explanation of the diagram | - There are two bond markets in Korea, which are OCT market and exchange market operated by KRX. Four types of bonds are traded on the markets such as KGB (Korean gov’t bond), Corporate bond, CP (Commercial paper), CD (Certificate of deposit).  
- Regarding matching, KRX executes it only for the trade on KRX market. For other trades on OTC market, KSD executes it.  
- With regard to netting, KRX calculates net position for the trades on KRX market as a CCP. No netting process for the trades on OTC market.  
- As for settlement, KSD is in charge of securities settlement for all kinds of bonds and BOK is in charge of cash settlement as a central bank. Settlement is done in DVP |

### I. Bond Market Infrastructures

<table>
<thead>
<tr>
<th></th>
<th>Bond market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
<td>KRX market and OTC market</td>
</tr>
<tr>
<td>1.3.1a</td>
<td>Name of the bond market</td>
</tr>
<tr>
<td>1.3.2a</td>
<td>Owner and operator of the bond market</td>
</tr>
<tr>
<td>1.3.3a</td>
<td>Name of network and communication protocol</td>
</tr>
<tr>
<td>1.3.1b</td>
<td>Name of the bond market</td>
</tr>
<tr>
<td>1.3.2b</td>
<td>Owner and operator of the bond market</td>
</tr>
<tr>
<td>1.3.3b</td>
<td>Name of network and communication protocol</td>
</tr>
<tr>
<td>1.4</td>
<td>Matching system</td>
</tr>
<tr>
<td>1.4.1a</td>
<td>Name of the matching system</td>
</tr>
</tbody>
</table>

- KRX owns the market and operates it as well  
- No owner or operator  
- For KRX market, KRX operates matching system. For OTC market, KSD operates it.
# I. Bond Market Infrastructures

<table>
<thead>
<tr>
<th>1.4.2a</th>
<th>Owner and operator of the matching system</th>
<th>KRX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4.3a</td>
<td>Name of network and communication protocol</td>
<td>Proprietary network for KRX, TCP/IP</td>
</tr>
<tr>
<td>1.4.1b</td>
<td>Name of the matching system</td>
<td>Bond Institutional Settlement System</td>
</tr>
<tr>
<td>1.4.2b</td>
<td>Owner and operator of the matching system</td>
<td>KSD</td>
</tr>
<tr>
<td>1.4.3b</td>
<td>Name of network and communication protocol</td>
<td>Proprietary network for KSD, TCP/IP</td>
</tr>
<tr>
<td>1.5</td>
<td>Clearing systems (CCP)</td>
<td>KRX owns and operates netting system for the trades on exchange market as a CCP</td>
</tr>
<tr>
<td>1.5.1a</td>
<td>Name of the clearing system</td>
<td>No name of the system</td>
</tr>
<tr>
<td>1.5.2a</td>
<td>Owner and operator of the clearing system</td>
<td>KRX</td>
</tr>
<tr>
<td>1.5.3a</td>
<td>Name of network and communication protocol</td>
<td>Proprietary network for KRX, TCP/IP</td>
</tr>
</tbody>
</table>

## I. Bond Market Infrastructures

<table>
<thead>
<tr>
<th>1.6</th>
<th>Cash settlement systems</th>
<th>The Bank of Korea owns and operates cash settlement system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6.1</td>
<td>Name of the cash settlement system</td>
<td>BOK-Wire*</td>
</tr>
<tr>
<td>1.6.2</td>
<td>Owner and operator of the fund settlement system</td>
<td>BOK</td>
</tr>
<tr>
<td>1.6.3</td>
<td>Name of network and communication protocol</td>
<td>Proprietary network for BOK, TCP/IP</td>
</tr>
<tr>
<td>1.6.4</td>
<td>DVP and BIS model</td>
<td>Model 3 for exchange market, Model 1 for OTC market * Exchange market will adopt Model 1 from Nov. 2011</td>
</tr>
<tr>
<td>1.6.5</td>
<td>Intraday overdraft and liquidity saving features</td>
<td>n/a * BOK will provide intraday overdraft through self-collateral REPO from Nov. 2011.</td>
</tr>
</tbody>
</table>
I. Bond Market Infrastructures

<table>
<thead>
<tr>
<th></th>
<th>Government Bond</th>
<th>Corporate Bond</th>
<th>CD/CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade</td>
<td>Korea Exchange (KRX)</td>
<td>OTC market</td>
<td></td>
</tr>
<tr>
<td>Clearing</td>
<td>Matchmaking</td>
<td>Korea Securities Depository (KSD)</td>
<td>n/a</td>
</tr>
<tr>
<td>Netting</td>
<td>Securities</td>
<td>Korea Securities Depository (KSD)</td>
<td></td>
</tr>
<tr>
<td>Settlement</td>
<td>DVP</td>
<td>Model 3*</td>
<td>Model 1</td>
</tr>
<tr>
<td></td>
<td>Cash</td>
<td>The Bank of Korea (BOK)</td>
<td></td>
</tr>
</tbody>
</table>

* DVP Model 1 will be adopted for onshore gov’t bond trade from Nov. 2011.

II. CSD

<table>
<thead>
<tr>
<th>2</th>
<th>CSD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Name of CSD</td>
</tr>
<tr>
<td>2.2</td>
<td>Owner and operator of CSD</td>
</tr>
<tr>
<td>2.3</td>
<td>Types of Securities and status of dematerialization</td>
</tr>
<tr>
<td>2.4</td>
<td>The number of stakeholders</td>
</tr>
<tr>
<td>2.5</td>
<td>List of Business transactions</td>
</tr>
<tr>
<td>2.6</td>
<td>Networks used for the CSD</td>
</tr>
<tr>
<td>2.6.1</td>
<td>Name of the network</td>
</tr>
<tr>
<td>2.6.2</td>
<td>Type of the line e.g., Leased line, ISDN, internet, IP-VPN</td>
</tr>
</tbody>
</table>
**II. 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><strong>Issuance</strong></td>
<td>Gov’t bond</td>
<td>Registrar and depository of national housing Bond</td>
</tr>
<tr>
<td></td>
<td>Municipal bond</td>
<td>Depository of all kinds of gov’t bond except for national housing bond</td>
</tr>
<tr>
<td></td>
<td>Corporate bond</td>
<td>Registrar and depository of corporate bond and CD issued in an electronic form</td>
</tr>
<tr>
<td></td>
<td>CD</td>
<td>Depository of CD issued in physical certificate form (no more new issuance)</td>
</tr>
<tr>
<td></td>
<td>CP</td>
<td>- Depository of CP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* KSD has been making much efforts to change CP into short-term corporate bond issued in an electronic form. If legislation will be done in April 2011, CP will be changed into short term corporate bond.</td>
</tr>
<tr>
<td><strong>Settlement</strong></td>
<td>DVP for KRX</td>
<td>Receiving settlement data from KRX</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transmit settlement report to participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transmit cash payment instruction through BOK-wire or commercial banks</td>
</tr>
<tr>
<td></td>
<td>DVP for OTC</td>
<td>Receiving trade data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transmit the data to the counterparty for affirmation</td>
</tr>
<tr>
<td></td>
<td>FOP for OTC</td>
<td>Generating settlement data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Restriction from disposal</td>
</tr>
<tr>
<td><strong>Rights Exercise</strong></td>
<td>Coupon payment</td>
<td>Fix payment amount</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dissemination payment related information to the bond holders</td>
</tr>
<tr>
<td></td>
<td>Redemption</td>
<td>Levy withholding tax and relay it to the tax office</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payment of principal and interest to the bond holders</td>
</tr>
</tbody>
</table>
### III. Comparison of Business Flowchart

<table>
<thead>
<tr>
<th>3</th>
<th>Comparison of the typical business flowchart</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Business flowchart of FOP and DVP</td>
</tr>
<tr>
<td>3.2</td>
<td>Business flowchart for cross-border transactions</td>
</tr>
<tr>
<td>3.3</td>
<td>Fit and gap analysis with the ISO 20022</td>
</tr>
<tr>
<td>3.4</td>
<td>If there are any other candidates as typical business processes to be analyzed, please list them up</td>
</tr>
</tbody>
</table>

Please see the slide number 12-14 for 3.1 and 3.2. It will be done after 3rd meeting for 3.3 and 3.4.

#### DVP settlement (KRX market)

- **Settlement Party A**
  - Trade order
  - Settlement Detail

- **Korea Exchange**
  - Trade order
  - Matching (Locked-in)
  - Clearing (Netting)

- **Korea Securities Depository**
  - Settlement statement
  - Securities Settlement System

- **Settlement Part B**
  - Trade order
  - Settlement Detail

- **The Bank of Korea**
  - Cash Payment
III. Comparison of Business Flowchart

*DVP settlement (OTC market)*

- Settlement Party A
  - Trade Data
  - Matching Status Advice (unmatched)
  - Settlement Data (matched)
  - Settlement Report
  - Cash Payment
- Korea Securities Depository
  - Central Matching
  - Securities Settlement System
- Settlement Part B
  - Trade Data
  - Matching Status Advice (unmatched)
  - Settlement Data (matched)
  - Settlement Report
  - Cash Payment
- The Bank of Korea

---

*FOP settlement (OTC market)*

- Settlement Party A
  - Trade Data
  - Matching Status Advice (unmatched)
  - Settlement Data (matched)
  - Payment Result
  - Settlement Report
- Korea Securities Depository
  - Central Matching
  - Securities Settlement System
- Settlement Part B
  - Trade Data
  - Matching Status Advice (unmatched)
  - Settlement Data (matched)
  - Payment Result
  - Settlement Report
III. Comparison of Business Flowchart

Inbound transaction business flow chart by U.S. Investor through Local Custodian: KSD

- Trade Order
- Reporting of Trade
- Deposit & Settlement Instruction
- Foreign Investor
- Wiring
- F/X Bank

Korea

- Trade Order
- Reporting of Trade
- Deposit & Settlement Instruction
- KSD (Local Custodian)
- Custody & Settlement
- KRX (Exchange)
- Trade Execution

Outbound transaction business flow chart for Hong Kong market through Global Custodian, Citibank HK

- Domestic Investor
- 1. Trading Order (HTS, Telephone)
- 6. Settlement confirmation
- Investment Broker
- 4. Settlement Instruction
- 6. Settlement confirmation
- KSD

H.K

- Foreign Broker
- 3. Trading Confirmation
- 6. Settlement confirmation
- HKSCC
- Clearing & Book Transfer
- HKICL
- Cash settlement
IV. Matching

<table>
<thead>
<tr>
<th></th>
<th>Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1a</td>
<td>Type of matching</td>
</tr>
<tr>
<td>4.2a</td>
<td>Comment</td>
</tr>
<tr>
<td>4.1b</td>
<td>Type of matching</td>
</tr>
<tr>
<td>4.2b</td>
<td>Comment</td>
</tr>
</tbody>
</table>

---

IV. Matching

- Two sided matching (KRX)
IV. Matching

- One sided matching (OTC)
  - Trust bank
  - Asset management
  - Korea Securities Depository
  - Securities company

1. Trade report
2. Allocation
3. Matching (1 vs. 2)
4. Allocation
5. Affirmation
6. Matching (1 vs. 5)
7. Settlement statement

V. Settlement Cycles

<table>
<thead>
<tr>
<th>5</th>
<th>Settlement Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1a</td>
<td>Settlement Cycle</td>
</tr>
<tr>
<td>5.2a</td>
<td>Reasons of difference between settlement cycles</td>
</tr>
<tr>
<td>5.3a</td>
<td>Settlement cycle of cross-border</td>
</tr>
<tr>
<td>5.4a</td>
<td>Reasons of difference between settlement cycles of cross-border and local transaction</td>
</tr>
<tr>
<td>5.5a</td>
<td>Initiative to shorten settlement cycle</td>
</tr>
<tr>
<td>5.1b</td>
<td>Settlement Cycle</td>
</tr>
<tr>
<td>5.2b</td>
<td>Reasons of difference between settlement cycles</td>
</tr>
</tbody>
</table>
V. Settlement Cycles

| 5.3b | Settlement cycle of cross-border | It depends on the contract. Usually, the settlement cycle of cross-border transaction through Euroclear or Clearstream is T+1~3. |
| 5.4b | Reasons of difference between settlement cycles of cross-border and local transaction | - |
| 5.5b | Initiative to shorten settlement cycle | - |

VI. Standards

<table>
<thead>
<tr>
<th>6 Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Securities numbering</td>
</tr>
<tr>
<td>6.1.1 ISIN</td>
</tr>
<tr>
<td>6.2 Financial Institution identification</td>
</tr>
<tr>
<td>6.2.1 Coding scheme</td>
</tr>
<tr>
<td>6.2.2 Conversion between BIC and local code</td>
</tr>
<tr>
<td>6.2.3 Manual operation</td>
</tr>
<tr>
<td>6.3 Securities account</td>
</tr>
</tbody>
</table>
VI. Standards

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.1</td>
<td>ISO 20022</td>
</tr>
<tr>
<td>6.3.2</td>
<td>Coding scheme</td>
</tr>
<tr>
<td>6.3.3</td>
<td>Account identification</td>
</tr>
<tr>
<td>6.3.4</td>
<td>Manual operation</td>
</tr>
</tbody>
</table>
| 6.4 | Cash account | - Proprietary account number by BOK or commercial banks.  
- If necessary, mapping IBAN onto proprietary code is executed and vice versa |
| 6.5 | Character code and language | Korean is not used for coding |

VI. Standards

- KRX is authorized institution for securities numbering in Korea. ISIN is adopted as a numbering standard by KRX. In the domestic market, short code is also used to identify bond name. Short code is composed of 9 digit. First digit is alphabetic code, it means type of securities

**Example: 1st issued Korean Treasury Bond in 2006**

<table>
<thead>
<tr>
<th>Basic code 9 digit</th>
<th>Check digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>KR 10 35 01 70 6 3</td>
<td></td>
</tr>
</tbody>
</table>

Type of Securities: 1 (Gov’t bond)
Type of Interest Payment: 7 (Coupon)
Issued Year: 0 (2010)
Issued month: 6

<table>
<thead>
<tr>
<th>Short code</th>
<th>9 digit</th>
</tr>
</thead>
</table>
| 003501706  | 8 digits from ISIN code  
(from 3rd digit to 11th digit of ISIN code) |

Type of securities (B: Corp. bond, C: Gov’t bond, etc)
VI. Standard

KSD uses account number as an identification number. KSD's all participants have one or more than one account number. It has 12 digits. First 6 digit means account holder, 4 digits in the middle means sequential number of accounts, next 1 digit means purpose of the account, and last 1 digit means securities' belongings (proprietary or client's).

**KSD’s code structure**

<table>
<thead>
<tr>
<th>Account holder</th>
<th>Sequential Number of the accnt.</th>
<th>Purpose of the accnt.</th>
<th>Securities' Belongings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung securities company</td>
<td>0 0 0 0 3 0</td>
<td>0 0 0 0</td>
<td>0 : General deposit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 : Proprietary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 : Clients'</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 : Foreign securities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 : Separate safekeeping</td>
</tr>
</tbody>
</table>

Securities Settlement System Reform in Korea
Securities Settlement System Reform

- **Purpose**
  - Building a **cost effective** Securities Settlement System (SSS)
  - Enhancing **risk management** in SSS

- **Working Group for SSS reform**
  - ’09.02.23: KSD, BOK and KRX joined Working Group for SSS reform
  - ’09.11.30: “Agreement for SSS reform” (KSD, BOK, KRX)
  - ’09.12.01: Press Release, “The SSS reform plan” (FSC, W/G)

---

Securities Settlement System Reform

- **Outline of New SSSs**
  
<table>
<thead>
<tr>
<th>Settlement</th>
<th>As-Is</th>
<th>To-Be</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRX Market</td>
<td>Equities</td>
<td>DVP3(DNS)</td>
</tr>
<tr>
<td>Settlement</td>
<td>Government</td>
<td>DVP3</td>
</tr>
<tr>
<td></td>
<td>Bonds</td>
<td></td>
</tr>
<tr>
<td>Institutional Settlement</td>
<td>Equities</td>
<td>DVP3</td>
</tr>
<tr>
<td></td>
<td>Bonds</td>
<td>DVP1</td>
</tr>
<tr>
<td>Settlement Liquidity</td>
<td>-</td>
<td>Auto Collateralization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Central Bank</td>
</tr>
</tbody>
</table>

- **Schedule**: To be launched in **Nov 2011**
1. KRX Market Equity Settlement

- CNS (Continuous Net Settlement)
  - DVP Model 3
  - Eligible securities: Stock, ETF, ELW, Company Warrant, Investment Trust, KDR
  - Fail System: Failed settlement position will be carried over to the following day. DB (due bill) system will be abolished.
  - Settlement process will begin at 9:00 on Settlement day

- **Settling Bank**: Commercial Bank, Central Bank

3. KRX Market Bonds Settlement

- **DVP Model 1**
  - DVP Model 1 after netting per member and securities
  - Eligible securities: Government Bonds
  - Settlement Method: Settlement via the KSD book-entry transfer system and BOK-Wire*
  - Process: Book-Entry Delivery of Securities [gross basis]
  
  
  Transfer of Funds [gross basis]
Securities Settlement System Reform

2. Institutional Equity Settlement

- **DVP Model 2**
  - Eligible transactions: Non-Exchange Transaction deliveries between B/Ds and Institutional Investors
  - Eligible securities: Stock, ETF, ELW, Company Warrant, Investment Trust, KDR
  - Process: Book-Entry Delivery of Securities [gross basis]
  - Transfer of Funds [net basis]
  - Default Procedure

![Diagram of DVP Model 2]

3.1

4. Institutional Bonds Settlement

- **DVP Model 1**
  - RTGS (Real Time Gross Settlement)
  - Eligible securities: Bonds, CD, CP
  - Process: Book-Entry Delivery of Securities [gross basis]
  - Transfer of Funds [gross basis]

- **Auto-Collateralization**
  - BOK provides funds to the Buyer against securities-to-be-received
Update Information:-
Lao Securities Exchange

Prepared by: Sompasong Phommasane
Securities & Exchange Commission Office
Bank of the Lao PDR

February 2011

Government Bond market

- Ministry of Finance
  - Treasury bills (1990s)
  - Deficit financing

- Bank of the Lao PDR
  - Monetary stabilization bills

- Banking Operation Department, BOL
Securities and Exchange Commission (SEC - 25.05.2009)

1. Deputy Standing Prime Minister
   Chairman
2. Governor of the Bank of the Lao PDR
   Standing Deputy Chairman
3. Minister to the Prime Minister’s Office
   Deputy Chairman
   Chairman of the National Business Reform Committee
4. Vice Minister of Industry and Commerce
   Commissioner
5. Vice Minister of Finance
   Commissioner
6. Vice Minister of Planning and Investment
   Commissioner
7. Vice Minister of Justice
   Commissioner
8. Government Secretariat
   Commissioner
9. Vice Chairman of Public Administration and Civil Service Authority
   Commissioner
10. Director General of the SEC Office
    General Secretary

A joint venture company as a limited company

- Bank of the Lao PDR – 51%
- Korea Exchange Inc. – 49%

An official launching – 10.10.2010
First of first trading day - 11.01.2011
Lao Securities Exchange

- Electronic trading platforms
  - Stocks
  - Bonds

- A division as a securities depository center

Securities Companies

- BCEL+KT Securities Company Limited
  - BCEL: 70%
  - KT-ZMICO Securities Company (Thailand): 30%

- Lanexang Securities Company Limited
  - Lao Development Bank: 49%
  - Sacomebank Securities Company (Vietnam): 51%
Listed Companies

- **BCEL:**
  - Ministry of Finance: 75%
  - Domestic investors: 15%
  - Foreign strategic investor: 10%

- **EDL-Gen:**
  - EDL: 70%
  - Domestic investors: 20%
  - Foreign investors: 10%

Some Action Plan 2011

- **Public education:**
  - Potential listed companies
  - Investors

- **Listed companies:** 2 – 3

- **Securities companies:** 1 – 2
LSX Building
PHILIPPINES

Bond Market Settlement Infrastructure

**Philippine Securities Market Landscape**

Trading

Clearing

Securities Settlement and Custody (Note)

Registration

Central Securities Depository (Phil. Depository & Trust Corp.)

OTC-like Fixed Income Market (Quote-driven & Order-driven)

Exchange-like Fixed Income Market (Margin-based Quote-driven)

CCP Agent

Stock Exchange

Central Clearing Counterparty

Foreign Custodians

Domestic Custodians

Domestic Custodians

Foreign Custodians

GS Registry

Private Debt Registry

Transfer Agents 1 to 22

Note: Cash Settlement is done through accredited Settlement Banks and the BSP RTGS System.
DvP Settlement for PDEEx Trades

TRADING

Buyer

Seller

FI Trading System

GS Ex

Both parties

GSEDs?

Yes

No

CLEARING & SETTLEMENT

PDEEx-RoSS STP Facility

RoSS-

PhilPaSS DvP System

PDEEx-eDvP System

PDTC-Depository

Cash Settlement Banks

BSP

PhilPaSS

GSED = Government Securities Eligible Dealer
RoSS = Registry of Scripless Government Securities
PhilPaSS = Phil. Payment & Settlement System; the central bank RTGS

Settlement through RoSS-PhilPaSS DvP

(FOR GS TRADES WHERE BOTH PARTIES ARE MEMBERS OF THE RoSS-PhilPaSS DvP SYSTEM)

TRADING

Buyer

Seller

FI Trading Systems

• Parties execute trades using the PDEEx FI Trading Systems.

• GS trades where both parties are members of the RoSS-PhilPaSS DvP are automatically downloaded to PDEEx-RoSS STP facility.

• RoSS DvP settlement instructions are generated automatically from PDEEx GS trades. No more manual encoding.

CLEARING

PDEEx-RoSS STP Facility

Seller & Buyer Authorizers

Securities Settlement BTr-RoSS

SETTLEMENT

RoSS-

PhilPaSS DvP System

BSP

PhilPaSS

Cash Settlement

• Operations officers of both buyer and seller review and authorize trade/settlement instructions.

• On settlement day, authorized settlement instructions are sent to RoSS for settlement.

• RoSS settles the trade through the existing RoSS-PhilPaSS DvP System.
Settlement through PDEEx Expanded DvP (eDvP)

*For all trades in Corporates; for GS trades where one or both parties are not GSEd*

**TRADING**
- Parties execute trades using the PDEEx FI Trading Systems.
- GS trades where at least one party is not a member of the RoSS-PhilPaSS DvP are automatically downloaded to eDvP System.
- eDvP settlement instructions are generated automatically from PDEEx GS trades. No more manual encoding.

**CLEARING**
- Seller and Buyer Authorizers
  - Operations officers of both buyer and seller review and authorize trade/settlement instructions.
  - On settlement day, eDvP system executes settlement process:
    - securities = depository
    - funds = BSP-PhilPaSS or with Cash Settlement Banks

**SETTLEMENT**
- Securities Settlement
  - PDTC Depository
  - Cash Settlement Bank
- Cash Settlement

**General eDvP Process Flow**

1. **Pre-settlement**
   - Backroom of Buying and Selling Brokers authorize the buy/sell trade (AM or PM of trade date)

2. **Settlement Day**
   - Depository earmarks the sold securities in the selling investor’s account (automated interface)
   - Broker transfers security from depository to investor’s account at BTr Registry or its designated custodian

3. **Settlement Bank of Buying Investor confirms/authorizes the cash settlement (online input or automated interface)**

4. **BSP debits DDA of the Buying Investor’s Settlement Bank and credits DDA of Selling Investor’s Settlement Bank (automated interface)**

5. **Settling Investor’s Settlement Bank confirms/authorizes credits to the selling investor’s settlement account (online input or automated interface)**

6. **Depository debits the earmarked securities of the seller and credits the Depository account of the Buyer**
**POST-TRADE REVIEW**

2. Trades are downloaded to PDS Gateway.
3. Designated settlement officers (checker) of both buyer and seller review and authorize the release of each trade for settlement.

---

**ON SETTLEMENT DAY**

4. PDS Gateway sends authorized trades to Depository System for settlement.
5. Depository System makes initial entries and sends fund transfer request to PhilPaSS.
6. PhilPaSS debits the DDA of the Repo Buyer and credits the DDA of the Repo Seller.
7. Upon receipt of PhilPaSS confirmation, Depository System makes final entries.
8. Operations Officers monitor settlement status through their Depository System online access.

---

**Repo Near Date Settlement**

1. Repo trades are executed in the PDEx Repo Trading System.
2. Trades are downloaded to PDS Gateway.
3. Designated settlement officers (checker) of both buyer and seller review and authorize the release of each trade for settlement.
4. PDS Gateway sends authorized trades to Depository System for settlement.
5. Depository System makes initial entries and sends fund transfer request to PhilPaSS.
6. PhilPaSS debits the DDA of the Repo Buyer and credits the DDA of the Repo Seller.
7. Upon receipt of PhilPaSS confirmation, Depository System makes final entries.
8. Operations Officers monitor settlement status through their Depository System online access.

---

**Repo Maturity Date Settlement**

1. Depository System checks availability of underlying securities to be returned. This step will always pass under the tri-party repo model.
2. Depository System sends transfer instruction to PhilPaSS to debit the DDA of the Repo Seller and credit the DDA of the Repo Buyer.
3. PhilPaSS executes the fund transfer if there is sufficient balance in the Repo Seller’s DDA or put the transaction in queue. Confirms to the Depository System when transfer is done.
4. Depository System makes the necessary repo maturity entries which will release the underlying securities back to the Repo Seller’s Depository account and close the repo transaction.
5. Operations Officers monitor settlement status through Depository System online access.
**What is PhilPaSS?**

*PhilPaSS Computer to Computer Interfaces*

- Interdealar GS trades
- Check clearing and ATM EOD interbank
- ATM intraday interbank

- Public GS trades
- Repo trades
- USD-PHP settlement

*PhilPaSS Front-end Systems*

- DDA
- Single PhilPaSS queue

*PhilPaSS is the interbank Peso real-time-gross-settlement (RTGS) system operated by the central bank*
Agenda

- “True STP” Interdependencies
  - Off-shore and On-shore
- True DVP – BIS rating
- Bond Process Flows
  - Singapore
  - Indonesia
  - Hong Kong
  - Thailand
  - Viet Nam
  - Korea
- Conclusion – Best Practice
Off-Shore Process Flow

- Sovereign Wealth
- Mutual Funds
- Pension Funds
- Private Wealth
- Insurance Co-funds

Communication Modes:
- Fax
- SWIFT
- Online GUI

Global Custodian Mainframe

To On-shore Sub-custodian

Market Maker

On-Shore Process Flow

- Settlement Engine
- Pre-matching Engine
- Depository
- Central Bank
- Payment System

Method of Communication:
- Proprietary Application
- SWIFT (network or format)

Matching Results

Settlement Results (Settled or Failed)

Other Participants:
- Brokers / Bank
- Sub-custodians

Payment System

Sub Custodian Mainframe

To On-shore Client

SWIFT
Fax
Prop System

Repair
Conversion
Account Maintenance
Reference Data
STP Interdependencies

- Standardize reference data – international standards where applicable. (eg, ISIN, ISO, BIC)
  - International standards vs. domestic requirements
- Use of international messaging standards such as SWIFT MT and ISO 15022 / 20022
  - Standards exist so that different practices can live together
  - ABMF Sub Forum 2 data collection is the starting point to understand different practices
- Currency controls
  - On-shore only FX
  - Investment linked FX
  - Restricted OD facilities
- TAX calculation timing suh

Bank of International Settlement (BIS) Settlement Models

- Model 1: Systems that settle transfer instructions for both securities and funds on a trade-by-trade (gross) basis, with final (unconditional) transfer of securities from the seller to the buyer (delivery) occurring at the same time as final transfer of funds from the buyer to the seller (payment)
- Model 2: Systems that settle securities transfer instruction on a gross basis, with final transfer of securities from the seller to the buyer (delivery) occurring throughout the processing cycle, but settle funds transfer on a net basis, with final transfer of funds from the buyer to the seller (payment) occurring at the end of the processing cycle
- Model 3: Systems that settle transfer instructions for both securities and funds on a net basis, with final transfers of both securities and funds occurring at the end of the processing cycle
Singapore – Government Bond Settlement
Model 1 DVP

Indonesia – Government Bond Settlement
Model 1 DVP
Hong Kong – Bond Settlement
Model 1 during the day. Model 3 at the end of the day

Instruction Mode:
• SWIFT = 96.0%
• HSBCnet = 3.5%
• Hardcopy = 0.5%

Wish list
• Pre-matching platform
• Standard settlement cycle
• Turnaround trade functionality

OTC Trades: Negotiable

Thailand – Bond Settlement
Model 1 DVP

Instruction Mode:
• SWIFT = 90%
• HSBCnet = 3%
• Hardcopy = 7%

TSD – Thailand Securities Depository
TCH – Thailand Clearing House
PTI – Post Trade Integration System

Wish list
• Electronic pre-matching process
Vietnam – Bond Settlement
Model 2 DVP

<table>
<thead>
<tr>
<th>Time</th>
<th>On T-1</th>
<th>Trade-date (T)</th>
<th>On T+1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>08:30 – 11:00</td>
<td>13:30</td>
</tr>
<tr>
<td>HOSE Trading time</td>
<td>08:30 – 11:00 Continuous order matching</td>
<td>08:30 – 11:00 Session for put-through transactions</td>
<td></td>
</tr>
</tbody>
</table>

11

Custodian Bank
Send data files to VSD
Place orders with Broker
Prepare and send Report on matched trades to the custodian and broker

Broker
Upon obtaining custodian bank’s confirmation, place orders into HOSE / HASTC’s system

Broker
Receive orders
Call custodian bank to check on client’s ability to trade

Client’s Bank
Inform brokers & VSD on the discrepancies and corrective actions (if any)

Custodian Bank
Check securities holdings of members on VSD’s system
Send Report on Net settlement obligation & send to VSD’s members and BIDV in hard copy

Custodian Bank
Deadline for VSD’s members to submit documents requesting post-trade correction

Branch
Client sends Settlement instructions and advise custodian bank on discrepancies (if any)

Customer
By 15:00

Vietnam – Bond Settlement
Model 2 DVP

<table>
<thead>
<tr>
<th>Time</th>
<th>On Trade date (T)</th>
<th>T+1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15:30</td>
<td></td>
</tr>
<tr>
<td>HOSE</td>
<td>14:30</td>
<td>15:30</td>
</tr>
<tr>
<td>Custodian Bank</td>
<td>14:30</td>
<td>15:30</td>
</tr>
<tr>
<td>Broker</td>
<td>14:30</td>
<td>15:30</td>
</tr>
</tbody>
</table>

Instruction Mode:
- SWIFT – 56%
- HSBCnet – 23%
- Hardcopy – 21%

(*) Value on T or T+1 is also applicable

Credit to client’s VND account as per FX instruction

Upon obtaining custodian bank’s confirmation, place orders into HOSE / HASTC’s system

Send Report on Net settlement obligation to custodian bank and client

Upon obtaining custodian bank’s confirmation, place orders into HOSE / HASTC’s system

Check securities holdings of members on VSD’s system
Send Report on Net settlement obligation to custodian bank and client

JPMorgan HSBC
### Vietnam – Bond Settlement
**Model 2 DVP**

<table>
<thead>
<tr>
<th>Time</th>
<th>T-1</th>
<th>T+0</th>
<th>T+1</th>
<th>T+2</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td></td>
<td></td>
<td>09:00</td>
<td></td>
</tr>
<tr>
<td>08:00</td>
<td>09:00</td>
<td>10:00</td>
<td>11:00</td>
<td>12:00</td>
</tr>
<tr>
<td>12:00</td>
<td></td>
<td></td>
<td>13:00</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>15:00</td>
<td>16:00</td>
<td>17:00</td>
<td>18:00</td>
</tr>
<tr>
<td>18:00</td>
<td></td>
<td></td>
<td>19:00</td>
<td></td>
</tr>
</tbody>
</table>

**Debit**
- Prepare and send Report on cash clearing and settlement to VSD (debit entries only)
- Credit cash account for clearing and settlement of VSD’s members at BIDV
- Credit securities accounts of members at VSD

**Wish list**
- Check balance of VSD’s member’s cash a/c at BIDV and notifies VSD
- FX based on clients FX instructions on a trade-by-trade basis

### Korea – Corporate and Government Bond Settlement

**ID Card Holder (Foreign Investor)**
- Order placement (T)
- Trade execution report (T)
- Trade instruction (T or T+1)
- Payment instruction (T+2)
- Trade and FX instruction (T or T+1 or T+2)
- Settlement confirmation / FX details (T+2)

**Broker**
- Trade execution report (T)
- Trade instruction (T or T+1)
- Confirmation of Trade (T+2)
- Transfer of securities / cash (T+2)

**KSD**
- Transfer of securities / cash (T+2)
- Confirm receipt of securities / cash (T+2)

**BDK (FOREX System)**
- Reporting of cash flow

**Global Custodian**
- Settlement confirmation / FX details (T+2)

**HSBC (Local Custodian / FX Bank)**
- Connect to KSD system

**Wish list**
- Connectivity to KSD system
Conclusion – Best Practice

- Real time processing creates efficiency
- True DVP = Model 1 not only is safer intra-day but drives efficiency
- Electronic pre-matching eliminates operational complexity through the process
- No foreign investment restrictions translates to simpler settlement processes
- No pre-funding requirements lead to simpler settlement flows
- Multi-currency issuance
Trade/Settlement Matching and Standardization

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17 February 2011

Agenda

➤ Why is Matching necessary?
➤ Characteristics of JASDEC’s PSMS
➤ Standardization
Why is Matching necessary?

Institutional Trade’s Life Cycle

- Provide Pre-settlement Matching function for Clearing and DVP settlement
  - Settlement conditions such as settlement parties, securities ID, settlement date, settlement quantity, settlement amount, account numbers need to be verified between deliverer and receiver

- Also provide Post-trade Matching function
  - Executed trade needs to be allocated to the multiple accounts in the case of a block order
  - Trade conditions such as securities ID, trade date, trade quantity, trade amount, commission, tax need to be verified between the trading parties in the block level and/or allocated level

- Thus promote STP throughout the life cycle of securities transactions and mitigate operational risk & cost
Domestic Stock Trade Diagram

Inbound Stock Trade Diagram
Characteristics of JASDEC’s PSMS

 Launched in Sept. 2001
 **Central Trade Matching** service and **Central Settlement Matching** service for Domestic Trades
 Automatic Settlement Instruction Generation using SSI(Standing Settlement Instruction) Database
 **Central Settlement Matching** service for Inbound Trades

Faster, more accurate, more standardized than Local Matching

 Asset class: Equities, Fixed Income and Listed Derivatives
 Trade type: Cash Trades and Securities Financing Trades (Lending & Borrowing Trades and Repo Trades)
 700 Users (Investment Managers, Broker/Dealers, Trust Banks, Commercial Banks, Insurance Companies, etc.)
 Realizing over 99.9% matched ratio for Trade Matching on T+0 (S-3)
 Realizing 90-95% matched ratio for Settlement Matching on S-2 for Inbound Trades
Adopt Customized ISO15022 message formats

- Small gaps in Pre-settlement and Settlement space
- Big gaps in Post-trade space
  Business flow, coverage of asset class and trade type

Use proprietary communication network

To fill the gaps:

- Act as a member of Maintenance Working Group for ISO15022 S&R
- Also Act as a member of Securities SEG of ISO20022

- Incorporate JP requirements to ISO standards
- Abolish too specific practices
- Introduce new processes in conformity with global standards
Going to

- Introduce ISO20022 message formats in 2014 not only to PSMS but Book-entry Transfer Systems
- Introduce SWIFTNet also in 2014
- Terminate Customized ISO15022 message formats/proprietary message formats in 2019

ISO20022 is not a message standard itself but a methodology to develop the message standard

Based on the concept that the standardization of message formats can be realized through the standardization of business processes and communication flows

Important to recognize the business processes and communication flows of each market and identify the gaps at ABMF

First step to harmonize with the international standards