16 JANUARY 2017  
(MONDAY) 

Venue: Grande Centre Point Terminal 21  
Grand Ballroom (C-floor)  
2 Soi 19 (Wattana), Sukhumvit Sukhumvit Rd, Bangkok 10110, Thailand

3RD WORKSHOP ON BOND PRICING AND EVALUATION IN ASEAN+3

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30 – 09:00</td>
<td>Registration</td>
</tr>
<tr>
<td>09.00 - 09.10</td>
<td><strong>Welcome Remarks</strong> by Dr. Pisit Leeahtam, Chairman, Thai Bond Market Association</td>
</tr>
<tr>
<td>09:10 – 09:20</td>
<td><strong>Opening Remarks</strong> by Mr. Noritaka Akamatsu, Senior Advisor, Asian Development Bank</td>
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</tbody>
</table>
| 09:20 – 10:50 | **Session 1: Round-table Discussion: Bond Pricing Methodologies in ASEAN+3 Markets Among Bond Pricing Agencies**  
- Factors to be incorporated for bond pricing  
- Pricing methodologies for different types of credit spread e.g. government-guaranteed State-Owned Enterprise (SOE) bond, short and long term corporate bond  
- Sharing methodologies for pricing bonds with exotically sophisticated features e.g. Basel III bond, securitized bonds  
- Practice on calculation credit spread and illiquidity spread  
- Is regional information platform possible?  
- Pricing by Modeling vs Transaction-based Pricing  
- Challenges in illiquid market under low interest rate environment  
**Panelists:**  
1. Mr. Mohd Shaharul Zain, Chief Business Officer, Bond Pricing Agency, Malaysia  
2. Mr. Wahyu Trenggono, Director, Indonesian Bond Pricing Agency  
3. Mr. Sudipto Lahiry, Business Manager - Fixed Income, Bloomberg  
4. Ms. Zhou ZHOU, Deputy Senior Manager, Chinabond Pricing Center, CCDC  
5. Mr. Surat Chircharasporn, Head of Bond Pricing and Product Development, The Thai Bond Market Association (ThaiBMA)  
**Moderator:** Mr. Satoru Yamadera, Principal Financial Sector Specialist, ADB |
| 10:50 – 11:10 | **Coffee break** |
### Session 2: Bond Pricing in ASEAN+3: Users’ view on Bond Pricing
- Underwriters’ view: case in Thailand by Mr. Prakob Phiencharoen, Executive Vice President, Bank of Ayudhya PLC.
- Investors’ view: case in ASEAN by Mr. Win Phromphaet, CFA, CIO, CIMB-Principal Asset Management Co., Ltd.
- International investors’ view on bond pricing in Asia by Mr. Vasu Suthiphongchai, Director, Fixed Income Fund Manager, Manulife Asset Management (Thailand)

Moderator: Mr. Surat Chiracharasporn, Head of Bond Pricing and Product Development, ThaiBMA

### Wrap-up Session: How can bond pricing agencies support bond market development in ASEAN+3?
- Regional information platform
- Comments from bond pricing agencies

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### 24th ASEAN+3 Bond Market Forum (ABMF)
**Sub-Forum 1 Meeting (Afternoon Session)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1: Opportunities of ASEAN+3 Fixed Income Funds to Invest in ASEAN Bond Market</th>
<th>Session 2: Good Practices in Developing Bond Market</th>
<th>Coffee Break</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Opening Remarks by Mr. Koji Ito, SF1 Chair</td>
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<tr>
<td>13:40</td>
<td>Session 1: Opportunities of ASEAN+3 Fixed Income Funds to Invest in ASEAN Bond Market by Mr. Smith Banomyong, Director and Chief Executive Officer, SCB Asset Management (SCBAM), Thailand</td>
<td>Session 2: Good Practices in Developing Bond Market by Mr. Noritaka Akamatsu, Senior Advisor, Asian Development Bank</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Opportunities and challenges</td>
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<td></td>
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<tr>
<td></td>
<td>- Supply and demand/investment appetite</td>
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<td></td>
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<tr>
<td></td>
<td>- Tax/regulatory concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>Coffee Break</td>
<td></td>
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<tr>
<td>15:20</td>
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<td></td>
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<tr>
<td>15:20</td>
<td>Session 3: Update on WG-CBCR by Mr. Eric Chng, Head, Relationship Management Asia (Corporate Trust), BNY Mellon</td>
<td></td>
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</tr>
<tr>
<td>15:50</td>
<td>Session 4: Update on WG-IP: Enhancement of AsianBondsOnline by ADB Secretariat</td>
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<tr>
<td>16:05</td>
<td>Session 5: Update on ASEAN+3 Multi-Currency Bond Issuance Framework by ADB Secretariat</td>
<td></td>
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</tr>
<tr>
<td>Time</td>
<td>Session/Event</td>
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<td>-------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>16:20 – 16:50</td>
<td><strong>Session 6: Wrap-up</strong> by ADB Secretariat</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>- Outcomes of the ASEAN+3 Deputies Meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Update on Bond Market Guide</td>
<td></td>
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<tr>
<td></td>
<td>- Next steps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:50 – 17:00</td>
<td><strong>Concluding Remarks</strong> by Mr. Koji Ito, SF1 Chair</td>
<td></td>
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<tr>
<td>17.30 onwards</td>
<td><strong>Welcome Dinner (Thai Cocktail style)</strong>, Grand Sukhumvit (C-floor)</td>
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<td></td>
<td>hosted by The Thai Bond Market Association (ThaiBMA)</td>
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</tr>
</tbody>
</table>
3rd Workshop on Bond Pricing and Evaluation in ASEAN+3
Round-table Discussion: Bond Pricing Methodologies in ASEAN+3 Markets Among Bond Pricing Agencies

Panelists:
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Moderator: Mr. Satoru Yamadera, Principal Financial Sector Specialist, ADB
Agenda

1. Malaysian Bond Market Overview
2. BPA Regulations in Malaysia
3. BPAM Pricing Methodology
Malaysia Bond Market Overview

As of Dec 2016, Malaysia total bond outstanding stands at MYR 1175 billion (approx USD 267 bil)

- Stable and growing bond market
- Sukuk is now dominating the MYR bond market at 56% of the total outstanding.

![Graph showing MYR Bond Outstanding Yr 2007-2016 (in bil/%)]

<table>
<thead>
<tr>
<th>Year</th>
<th>Conventional</th>
<th>Islamic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>358</td>
<td>199</td>
</tr>
<tr>
<td>2008</td>
<td>373</td>
<td>211</td>
</tr>
<tr>
<td>2009</td>
<td>401</td>
<td>250</td>
</tr>
<tr>
<td>2010</td>
<td>470</td>
<td>296</td>
</tr>
<tr>
<td>2011</td>
<td>494</td>
<td>352</td>
</tr>
<tr>
<td>2012</td>
<td>533</td>
<td>478</td>
</tr>
<tr>
<td>2013</td>
<td>522</td>
<td>516</td>
</tr>
<tr>
<td>2014</td>
<td>534</td>
<td>579</td>
</tr>
<tr>
<td>2015</td>
<td>518</td>
<td>610</td>
</tr>
<tr>
<td>2016</td>
<td>513</td>
<td>662</td>
</tr>
</tbody>
</table>

Since 2013, trading activities dwindled as investors shied away from local bond market amid global liquidity tightening initiated by the US Fed and plunge in global oil price. Malaysia reserve dipped below USD100bil & USDMYR weakened to 17-year low at 4.397. USDMYR further depreciate to 4.486 with record high foreign outflow.

Source: BPA Malaysia
Malaysia Bond Market Overview

- A volatile bond market for Malaysia in year 2016

In November 2016, Malaysia domestic debt securities record the highest foreign net sell at MYR 19.9 billion (approx USD 4.52 billion). With the unexpected outcome in the US Presidential Election, MYR depreciated against USD by 6.5% from 4.19 to 4.46. Selling was seen in MGS and Corporate yield curves when 3Y MGS yield spike to the highest at 3.967 (Nov) from 3.09 (Oct) & 3Y Corp (AAA) at 4.48 (Nov) from 3.93 (Oct).

Malaysia Bond Market Overview

- As of 30 December 2016, the index consisted of 1184 bonds with a total market capitalization of MYR 977.72 billion (approx USD 222.2 billion)

TR BPAM All Bond Index (MYR)

Most of 2015:
TR BPAM All Bond Index on a steady uptrend with no significant shocks up to end July.

Aug - Sept 2015:
Malaysia foreign reserves dipped below USD100Bil and USDMYR weakened to 17-year low at 4.397

1H2016:
Smooth uptrend as the Ringgit strengthens amidst general dovish environment

Nov-Dec 2016:
USDMYR weakened to 18-year low to 4.486
Agenda

1. Malaysian Bond Market Overview
2. BPA Regulations in Malaysia
3. BPAM Pricing Methodology

Bond Pricing Agency Regulations in Malaysia

- Stringent requirements for accreditation as a BPA

<table>
<thead>
<tr>
<th>Methodology and Process</th>
<th>Pricing performance</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Audited</td>
<td>• Using all publicly available information</td>
<td>• Fit and proper persons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shareholders</th>
<th>System</th>
<th>Professional indemnity insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No controlling party</td>
<td>• Adequate security and backup</td>
<td>• RM 10 million</td>
</tr>
</tbody>
</table>

- BPA guidelines issued in Year 2006 by the Securities Commission Malaysia
- BPA set-up based on Korean model
- Currently one (1) registered BPA in Malaysia
Guidelines on the use of BPA Prices

Mandatory guidelines to use BPA prices

<table>
<thead>
<tr>
<th>Unit Trust Funds</th>
<th>Exchange Traded Funds</th>
<th>Private Retirement Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 January 2007:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Unit Trust Funds investing in Unlisted bonds denominated in Ringgit Malaysia shall value bond portfolios using prices quoted by a Bond Pricing Agency (BPA) registered with the SC.”</td>
<td>11 June 2009:</td>
<td></td>
</tr>
<tr>
<td>(Schedule B : Valuation, SC-1 of the Guidelines on Unit Trust Funds)</td>
<td>“Exchange Traded Funds investing in Unlisted bonds denominated in Ringgit Malaysia shall value bond portfolios using prices quoted by a Bond Pricing Agency (BPA) registered with the SC.”</td>
<td>5 April 2012:</td>
</tr>
<tr>
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<td>(Schedule C: Valuation, SC-1 of the Guidelines on Exchange Traded Funds)</td>
<td>“Private Retirement Schemes investing in Unlisted bonds denominated in Ringgit Malaysia shall value bond portfolios using prices quoted by a Bond Pricing Agency (BPA) registered with the SC.”</td>
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BPAM’s Roles and Commitment

- Market standard & reference for MYR bonds
- On-going enhancement and development of new products to meet evolving needs
- Strict compliance, corporate governance & internal controls
- Strong track record on quality and relevance to market trades with on-going monitoring
- Active role in building cross-border networks in line with ABMF WGI-IP
## Agenda

1. Malaysian Bond Market Overview
2. BPA Regulations in Malaysia
3. BPAM Pricing Methodology

## BPAM Pricing Methodology

### Current industry practice and the assumptions

- Four common market practices are used in conducting bond pricing.
- BPAM employs the hybrid approach

<table>
<thead>
<tr>
<th>Approach Type</th>
<th>Pricing Method</th>
<th>Granularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTM Matrix / Curve Pricing</td>
<td>Quote Driven</td>
<td>Curve Pricing</td>
</tr>
<tr>
<td>Individual Quotation Approach</td>
<td>Quote Driven</td>
<td>Individual Bond</td>
</tr>
<tr>
<td>Model Approach (Mark to Model)</td>
<td>Theoretical</td>
<td>Individual Bond</td>
</tr>
<tr>
<td>Hybrid Approach</td>
<td>Hybrid</td>
<td>Individual Bond</td>
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- Four common market practices are used in conducting bond pricing.
- BPAM employs the hybrid approach.
BPAM Pricing Methodology

Current industry practice and the assumptions

Four common market practices are used in conducting bond pricing.

BPAM employs the hybrid approach

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<td>Individual Bond</td>
</tr>
</tbody>
</table>

BPAM Pricing Methodology

BPAM’s Pricing Methodology – An Overview

Bond Price = f (Benchmark rates + Credit Spread)

Derivation of benchmark rates

Secondary market

Quotations

Trades

Measuring the market price of risk

Segmentation cube

Primary issuance yield
Credit risk analysis
Liquidity risk (from historical trade / quote data)
Structural risk (terms and conditions of the bond)

Risk assessment

Individual Bonds

Individual bond valuation
A daily process is conducted to price all bonds

BPAM uses the prices of observed trades & quotations in the market to derive the prices of non-traded bonds, taking into account the differences between different issuers and structures. EVERY bond has its own individual spread relative to its risk status.

Snapshot of BPAM’s hybrid approach

BPAM’s Approach

Client feedback process
Market interaction
Financial mathematics
Rating updates
Accurate trade data via ETP
Live dealing quotes
Relative pricing
Credit risk analysis
YTM matrix/curve pricing
Accurate terms & conditions
New issues
Benchmark curves

BPAM Pricing Methodology
Current and Upcoming Challenges

- **Bond Market Guidelines and Compliance Requirements**

**Unrated Bonds**

- Effective January 2017, Securities Commission Malaysia removed the mandatory rating requirement for Corporate Bonds

  - Challenges:
    - Institutional funds will need to revise their current minimum rating requirements for their mandates
    - Institutions will need more sophisticated credit and quantitative processes

  - In line with this, BPAM expanded our pricing services to cover unrated bonds and sukuk starting 2 January 2015
  - As of 30 Dec 2016, BPAM prices 694 unrated bond stocks; comprising 109 issuers with a total outstanding of MYR60.88 bil

**IFRS 9**

- Implementation on 1st January 2018: The replacement of IAS 39

  - Challenges: How to calculate the Expected Credit Loss fixed income securities – Impairment Methodology?

  - BPAM is committed to provide key data source needed to calculate Expected Credit Losses – Liquidity Score, Evaluated Prices, Probability of Default, Index Performance, Implied Rating etc.

THANK YOU
The Official BPA in Indonesia
8 Years Experiences

Bangkok, January 2017

Roles in Fixed Income & Capital Market*

• As a **Catalist** in Price Discovery Mechanism in Indonesia Fixed Income Market

• As the **Official Source** of Indonesia Fixed Income Information for Pricing & Other Information

• As the **Main Reference** to the Indonesia Fixed Income investors and market participants

• As the leading **Change Agent** in the Indonesia Fixed Income & Sukuk market development

*According to OJK Rules V.C.3 regarding Securities Pricing Institution
Established as BPA in 2008

Recent Issues

• Infrastructure Projects & Tax Amnesty: New Securities Pricing Requests VS Limited Resources
• High Foreign holder of Indonesia Government Bond creates complexities in Pricing Process
• Upcoming introduction of Municipal Bond, Greenbond, etc.
• IBPA strive to implement methodologies that conform with both domestic and international Standard: PSAK, IFRS, Basel, etc.

• IBPA Pricing optimize the use of observable market data available from the market.

Challenges On Floaters Methodologies

• IBPA Pricing Methodology for Variable Rates Bond has been challenged by market participant due to the claim that it enable arbitrage among Bonds within same tenor range.

• IBPA is in search for a better methodologies for Floaters, while still emphasize the use market pricing based on rare observable inputs from the bond market and combine it with other factors such as: FX market data, etc.
Important Issues To be Highlight Regarding Methodologies

• Communication & Coordination between BPA and regulators are very important to address challenges in pricing properly
• A common general guideline or principles for pricing method is needed to improve the BPAs positioning against challenge
• Market peculiarities should be considered in the guideline/principles.
BLOOMBERG

Transparent and credible valuations

Bangkok, January 16, 2017
Sudipto Lahiry
slahiry3@bloomberg.net, Tel +6564992608
Bloomberg L.P

BLOOMBERG’S EDGE IN LOCAL BOND MARKETS

- Deep reference and pricing data sets
  - Global presence
  - Wealth of high quality real time market data
  - Integrated data and analytics
- Localised asset class specific relative value models
  - Transparent and defensible valuation of bonds
  - Deep coverage in local markets
- Forward looking risk models to assess credit health of companies
- Influential and market moving local news and commentaries
DATA COVERAGE

- Most Markets in Asia have trade reporting requirements for enhanced market transparency

Bloomberg

DATA COVERAGE

- Indicative and firm executable pricing from dealers worldwide

Bloomberg
BLOOMBERG EVALUATED PRICING - BVAL

Transparent and defensible pricing with historical snapshots

- Uses a wealth of traded, executable and indicative prices
- Sophisticated asset class specific relative value models
- Best in class 24/7 global customer support

Key features

- Multiple snapshots of prices
- A proprietary score for each price to gauge if evaluated price is modeled
- Pre and post Trade transparency
- Data rigorously tested for each input and output for greater consistency
- Premium clients can submit price challenges to our evaluators
BVAL METHODOLOGY

Two step process
- Direct Observations
- Observed comparables
- Final BVAL price is the result of the steps above appropriately weighted

Bloomberg
BVAL METHODOLOGY – STEP 1

Direct Observations
- Trade data from exchanges and trade repositories
- Real time quoted and executable prices
- Sophisticated algos apply filtering and decay factors

BVAL METHODOLOGY – STEP 2

Observed Comparables
- Illiquid securities depend more on comparables
- Bond is first normalised for coupon, age etc
- Prices off the par issuer curve
- Reference curves from similar industry and capital structure may be used
ANALYTICS POWERED BY BVAL

- Multi dimensional relative value analytics
- Portfolio valuation and risk management
- Modeled issuer and sector curves

Credit Analytics

- Forward looking issuer probabilities of default
- Based on market observations and financials
- Calibrated to deep default data sets
- Modeled CDS levels
- Public and private firms’ coverage
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THANK YOU
Insight into CCDC Pricing Data Service

Presented by Zhou Zhou
ChinaBond Pricing Center, CCDC

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1. Overview of China Bond Market
2. CCDC Pricing Data Service
3. Performance of Pricing Methodologies
4. Compare to the IOSCO
5. Data Delivery Channel
Overview of China Fixed-income Market 中国固定收益市场概况

Bond Market 债券市场
Non-standard Assets 非标资产
Preferred Stock 优先股

The Scale of China Bond Market 中国债券市场规模

Amounts Outstanding of China Bond Market

Data Source : CCDC, CSDC, SHCH
**Depository Balance Structure (Bond Type) 中国债券市场品种**

**Structure of Depository Balance by Bond Type (2016)**

Data Source: CCDC, CSDC, SHCH

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**Issuance of China Bond Market in 2016 中国债券发行品种统计**

**Issuance of China Bond Market by Bond Type (2016)**

Data Source: CCDC, CSDC, SHCH
Structure of Bond Investors Holdings

Structure of Bond Investors Holdings (2016)

Data Source: CCDC

Introduction of CCDC

Core Infrastructure Platform for the Bond Market
- CSD in the interbank bond market
- Register 72.5 trillion Yuan of financial assets, including bonds, bank wealth management products, and trust products, of which bonds accounted for 35 trillion Yuan

Platform for the Implementation of Monetary and Fiscal Policy
- Supported Open Market Operation of 80 trillion Yuan and PBOC bills issuance of 27 trillion Yuan
- Supported Treasury bond issuance of 17 trillion Yuan and local government financing of 4 trillion Yuan
Introduction of CCDC 中央结算公司介绍

**Platform for Bond Market Opening-up**
- Supported panda bonds issuance by ADB and so on
- 305 foreign institutions open accounts with CCDC
- Signed MOU with more than 10 international peers including DTCC and Euroclear
- Hosted the 18th ACG General Conference in 2014 and published Xi’an Initiative

**Key Benchmark Pricing Platform for the Financial Market**
- In 1999, CCDC launched the first Treasury bond yield curve in China
- Established a whole set of ChinaBond pricing system
- Over 90% of bonds held by domestic financial institutions are managed according to ChinaBond Pricing System

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1. Overview of China Bond Market

2. CCDC Pricing Data Service
   2.1 Overview of ChinaBond Pricing Data
   2.2 ChinaBond Yield Curves
   2.3 ChinaBond Valuations and Market Implied Credit Rating
   2.4 ChinaBond Indices
   2.5 ChinaBond VaR/CVaR

3. Performance of Pricing Methodologies

4. Compare to the IOSCO

5. Data Delivery Channel
### History of ChinaBond Pricing Data 发展历史

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>Launch the First RMB bond curve in domestic market</td>
</tr>
<tr>
<td>2002</td>
<td>Data started to be published by the systematic way</td>
</tr>
<tr>
<td>2006</td>
<td>Models and framework were determined</td>
</tr>
<tr>
<td>2007</td>
<td>More updates and applications</td>
</tr>
<tr>
<td>2010</td>
<td>Commercial operation began</td>
</tr>
<tr>
<td>2011</td>
<td>Launch bond VaR service</td>
</tr>
<tr>
<td>2012</td>
<td>Introduce new composite index and portfolio VaR</td>
</tr>
<tr>
<td>2013</td>
<td>Fully cover offshore RMB bond valuation; launch strategy index</td>
</tr>
<tr>
<td>2014</td>
<td>MOF released treasury yield provided by CCDC; 1st RQFII ETF listed in HK and US correspond to bond index</td>
</tr>
<tr>
<td>2015</td>
<td>Chindbond Pricing Center established; SDR interest rate basket adopted CCDC 3M Treasury yield</td>
</tr>
<tr>
<td>2016</td>
<td>PBOC released several yield curves provided by CCDC; Published Green Bond Index, Climate Aligned Bond Index</td>
</tr>
</tbody>
</table>

### ChinaBond Pricing Data 中债价格指标概况

- ChinaBond Pricing Data contains 6 categories of data. The published data volumes have reached 4 million daily.[1]

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChinaBond Yield Curves</td>
<td>1300+</td>
</tr>
<tr>
<td>ChinaBond Valuations</td>
<td>60000+</td>
</tr>
<tr>
<td>ChinaBond Indices</td>
<td>65</td>
</tr>
<tr>
<td>400+ sub indices</td>
<td></td>
</tr>
<tr>
<td>1200+ position indices</td>
<td></td>
</tr>
<tr>
<td>Chinabond Value at Risk</td>
<td>30000+</td>
</tr>
<tr>
<td>400+ accounts</td>
<td></td>
</tr>
<tr>
<td>ChinaBond Market Implied Credit Rate</td>
<td>20000+</td>
</tr>
<tr>
<td>My Data</td>
<td>9000+</td>
</tr>
</tbody>
</table>

[1] The step length of ChinaBond Yield can be accurate to 0.1y. CCDC provides curves of Yield to Maturity, curves of spot rate of 0.1y step length and curves of Forward Yield of standard maturities. At the meantime, the curves of Forward Yield of 0.1y step length can be queried and downloaded through the publishing channel.
Daily Working Procedure 工作流程

Analysis 分析  Calculation 计算  Quality Control 质量控制  Data Release 数据发布  Clients 用户使用

Market Information & Market Prices
Macro environment, Fundamentals, Prices, Industries, Financial status, etc.

Regular Meeting
Twice a day

Yield Curves  Bond Valuations  Bond Indices  Equity Assets Valuations  Bond VaR

Internal Multi-Verification System
Daily verification by pricing staff, quality control department observes data production weekly, monthly and annually

MOF  PBOC  Data Vendors
Bloomberg, Reuters, etc

CCDC Data Delivery
Data Stream
Clients’ Terminal

Mutual Funds
(Example)
Use ChinaBond Valuations to calculate Net Asset Value of fund

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   2.5 ChinaBond VaR/CVaR
3. Performance of Pricing Methodologies
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5. Data Delivery Channel
ChinaBond Yield Curves

ChinaBond Yield Curves

[Diagram showing various bond types and their associated data sources]

Data Source

[Diagram showing various data sources and their associated methods]

Market participants' evaluation
Brokers' quotation
Exchange markets' prices
CIBM's quotation
CIBM's settlements
Over the counter prices
Applications 中债曲线的应用

Market Research 市场研究
Since 2004, PBOC and MOF have used Chinabond yield curves to analysis the onshore RMB bond market trend.

Risk Measurement 风险计量
Since 2007, CBRC has recommended commercial banks to use Chinabond yield curves as benchmark in measuring market risk.

Bidding Reference 发行参考
MOF uses Chinabond treasury yield curve to calculate bidding range of government bonds and treasury bond with issuance term of 30 years and 50 years.

Application in Market Research 在市场研究中的应用

The PBOC Research Report finds that the 10Y-2Y Chinabond Treasury yield curve has 12 months lead time in forecasting economic growth. 央行调统司研究发现中债银行间固定利率国债10年-2年期的期限利差可以作为宏观经济波动的先行指标，并且具有12个月的领先性。
Latest Press Releases 新进展

- Since November 2014, Ministry of Finance’s official website has released key term treasury yield curve, which is provided by CCDC. 自2014年11月起，财政部网站发布由中央结算公司提供的关键期限国债收益率曲线

![Graph](image1)

![Graph](image2)
On December 1, 2015 (BJ Time), the Executive Board of the IMF decided that effective October 1, 2016 the RMB will be included in the SDR basket as a fifth currency. Moreover, the Board adopted the three-month benchmark yield for China Treasury bonds in the SDR interest rate basket.

IMF released a policy paper on Review of the Method of Valuation of the SDR. The report shows that “Staff considers that the three-month benchmark yield for Treasury bonds is the most suitable rate for inclusion in the SDR interest rate basket. This rate is observable daily from the China Central Depository and Clearing Co., Ltd. ……Moreover, developments in the CCDC three-month benchmark Treasury yield in recent years suggested that it is broadly responsive to changes in underlying credit conditions in the onshore market”.

Since June 2016, People’s Bank of China’s official website releases China Government Bond Yield Curve and other curves, which is provided by CCDC.
Latest Press Releases 新进展

- China Development Bank’s official website shows ChinaBond CBD Yield Curve and ChinaBond CBD total index 国家开发银行网站展示中债国开债收益率曲线和中债-国开行债券总指数

- Agricultural Development Bank of China’s official website shows ChinaBond ADBC Yield Curve and ChinaBond ADBC total index 国家开发银行网站展示中债国开债收益率曲线和中债-国开行债券总指数
Latest Press Releases 新进展

- The export-Import Bank of China’s official website shows ChinaBond EXIMCH Yield Curve 中国进出口银行网站展示中债进出口行债收益率曲线

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   2.5 ChinaBond VaR/CVaR

3. Performance of Pricing Methodologies

4. Compare to the IOSCO

5. Data Delivery Channel
The valuations cover all types of onshore RMB bonds, more than 20000 bonds are released daily. Since 2014, CCDC has launched preferred stock valuations, which means the valuation coverage has been expanded into equity asset.

**Bond Valuation Indicators**

- **Price Indicators**
  - Dirty Price
  - Clean Price
  - Accrued Interest
  - Reliability (for bonds with options)

- **Yield Indicators**
  - Valuated yield

- **Risk Indicators**
  - Modified duration
  - Convexity
  - Price value of a basic point
  - Spread duration
  - Spread convexity

- **Liquidity Indicators**
  - Absolute liquidity coefficient
  - Relative liquidity coefficient

- **Credit Analysis**
  - Market Implied Credit Rating
ChinaBond Market Implied Credit Rating 中债市场隐含评级

- **ChinaBond Market Implied Rating** is conducted based on rating company’s credit grade, market prices and issuers financial information, aim to give a thorough evaluation on objects’ credit review. 中债市场隐含评级是在外部评级的基础上，参考市场价格、发行人财务信息等因素抽取出市场对受评价对象的信用评价。

- ChinaBond Market Implied Rating was published since 2008, covered all RMB credit bonds, published 20,000 market implied ratings in daily basis. 中债市场隐含评级自2008年推出，现已覆盖所有在岸人民币信用类债券，每日发布市场隐含评级约20000个。

- As end of 2016, about 10734 bonds’ market implied credit rating is lower than the rating company’s credit grade, which is about 42% of credit bonds with ratings. 2016年11月30日存量债为例，当日有10734只债券市场隐含评级低于评级公司评级，约42%。

### ChinaBond Market Implied Rating matrix

<table>
<thead>
<tr>
<th>Rating</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA+</td>
<td>142</td>
</tr>
<tr>
<td>AAA</td>
<td>2618</td>
</tr>
<tr>
<td>AAA-</td>
<td>2404</td>
</tr>
<tr>
<td>AA+</td>
<td>27</td>
</tr>
<tr>
<td>AA</td>
<td>6231</td>
</tr>
<tr>
<td>AA-</td>
<td>24</td>
</tr>
<tr>
<td>A+</td>
<td>8</td>
</tr>
<tr>
<td>A1</td>
<td>2</td>
</tr>
<tr>
<td>A-</td>
<td>9</td>
</tr>
<tr>
<td>BBB+</td>
<td>4</td>
</tr>
<tr>
<td>BBB</td>
<td>4</td>
</tr>
<tr>
<td>BB</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
</tr>
<tr>
<td>CCC</td>
<td>24</td>
</tr>
<tr>
<td>CC</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: The above table is the market implied rating changes in June 2016, of which ChinaBond Market Implied Rating upgraded 43 bonds, 20 issuers involved, mostly commercial banks, downgraded 209 bonds, 52 issuers involved, mainly in coal and iron excess production industries.
ChinaBond Market Implied Credit Rating

- ChinaBond Market Implied Rating Subject to Normal Distribution: AA rated bonds take up the majority, 34.18%.
- Rating Company’s credit grade implied left skewed distribution: AAA bonds take up the majority, 39.51%.

Several companies also started to provide market implied credit rating:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Started to provide</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCDC</td>
<td>2008</td>
</tr>
<tr>
<td>Bond Pricing Agency Malaysia</td>
<td>2012</td>
</tr>
<tr>
<td>China Bond Rating Co., Ltd.</td>
<td>2012</td>
</tr>
<tr>
<td>China Securities Index Co., Ltd</td>
<td>2014</td>
</tr>
<tr>
<td>China Lianhe Credit Rating Co., Ltd</td>
<td>2015</td>
</tr>
<tr>
<td>Thomson Reuters</td>
<td>2015</td>
</tr>
</tbody>
</table>
**Default Bonds Valuation**

- Since 2015, there has occurred 20 defaults among China public issued bonds. The debt balance for defaulted issuers is 55.4 billion Yuan, about 0.3% of the China bond market.

<table>
<thead>
<tr>
<th>公司名称</th>
<th>公司性质</th>
<th>债券类型</th>
<th>债券余额</th>
<th>归还情况</th>
<th>债券余额（亿元）</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Live Tech Group</td>
<td>private</td>
<td>Corporate Debt</td>
<td>1</td>
<td>paid</td>
<td>4.8</td>
</tr>
<tr>
<td>Zhuhai Shengfa</td>
<td>Private</td>
<td>Corporate Debt, Mid Term Note</td>
<td>2</td>
<td>paid</td>
<td>11.8</td>
</tr>
<tr>
<td>China National Erzhong Group Co</td>
<td>Central government</td>
<td>Enterprise Bond</td>
<td>1</td>
<td>Paid</td>
<td>10</td>
</tr>
<tr>
<td>China Erzhong Group (Deyang) Heavy Industries Co, Ltd</td>
<td>Central government</td>
<td>Mid Term Note</td>
<td>1</td>
<td>Paid</td>
<td>8</td>
</tr>
<tr>
<td>Baoxing Tianwei Group Co. Ltd</td>
<td>Central government</td>
<td>Mid Term Note, PPN</td>
<td>4</td>
<td>Unpaid</td>
<td>45</td>
</tr>
<tr>
<td>Yingli Solar</td>
<td>Joint Venture</td>
<td>Mid Term Note(MTN)</td>
<td>2</td>
<td>Partially paid</td>
<td>24</td>
</tr>
<tr>
<td>Sumin Sonney Group</td>
<td>foreign</td>
<td>SCP, MTN, PPN</td>
<td>6</td>
<td>Unpaid</td>
<td>71</td>
</tr>
<tr>
<td>Schuhr Shenga Group</td>
<td>Private</td>
<td>Enterprise Bond</td>
<td>1</td>
<td>Unpaid</td>
<td>3</td>
</tr>
<tr>
<td>Yaling Investment Holding Group Co. LTD</td>
<td>Private</td>
<td>Commercial Paper</td>
<td>4</td>
<td>Paid</td>
<td>9</td>
</tr>
<tr>
<td>Zao Ming Ke Ming Co., Ltd</td>
<td>Private</td>
<td>Commercial Paper(CP)</td>
<td>1</td>
<td>Paid</td>
<td>4</td>
</tr>
<tr>
<td>Nanjing Yunhe Food Co., Ltd</td>
<td>Local government</td>
<td>SCP, CP, MTN</td>
<td>2</td>
<td>Paid</td>
<td>15</td>
</tr>
<tr>
<td>Dongbei Special Steel Group Co., Ltd</td>
<td>Local government</td>
<td>SCP, CP, MTN, PPN</td>
<td>10</td>
<td>Unpaid</td>
<td>71.7</td>
</tr>
<tr>
<td>China Coal Group Shanshi Huayou Energy Co., Ltd</td>
<td>Central government</td>
<td>CP, MTN, PPN</td>
<td>5</td>
<td>Paid</td>
<td>38.5</td>
</tr>
<tr>
<td>Inner Mongolia Naiyue Group Co. Ltd</td>
<td>Private</td>
<td>Enterprise Bond</td>
<td>1</td>
<td>Unpaid</td>
<td>8</td>
</tr>
<tr>
<td>Evergreen Group</td>
<td>Private</td>
<td>Enterprise Bond, CP</td>
<td>2</td>
<td>Unpaid</td>
<td>9.4</td>
</tr>
</tbody>
</table>

**Default Bonds Valuation**

- ChinaBond Valuation Measures for Credit Risk Affairs

- Significant Risk Event Announcement
- Risk Alert Notice
- Bond Default Notice
- Default Claim Action Or Bankruptcy Proceeding
- Adjusting in steps
- One step process
- One Step Process

- Choose the lower value between ChinaBond Market Implied Rating and Settlement Price
- Based on the newest information, update settlement price
Applications in Bond Valuations 中债估值的应用

2007
- Fund companies began to use ChinaBond yield curve and valuation to appraise fixed-income securities of China Interbank Market.

2008
- Listed banks started to use ChinaBond valuation as a measurement of bond fair value.
- Accounting firms began to adopt ChinaBond valuation as a standard in auditing.

2009
- ChinaBond valuation became the reference indicator to monitor abnormal trading of China Interbank Market.
- ChinaBond valuation became a standard in auditing.

2012
- "Operation Guide for Commercial Banks on Bond Fair Value Valuation" of CBRC, in which recommending ChinaBond valuation as credible reference of measuring bond fair value.

2013
- Applications of ChinaBond valuation extended to collateral management.

2014
- ChinaBond started to provide non-standard assets valuation.
- AMA of China recommends all fixed-income securities trading at Stock Exchange to use third-party valuation.

Innovations 中债曲线和估值的创新

Methodology Innovation 方法创新
- Data inputs must be cleaned: CCDC employs a number of procedures to eliminate abnormal prices.
- Market Implied Credit Ratings: CCDC’s bond valuations are based on market implied credit ratings instead of direct using rating companies’ ratings.

Regulating Innovation 监管创新
- Market regulators recommend financial institutions to use unified yield curve and bond valuations in order to compare with each other.
- For example, CBRC recommends commercial banks to use ChinaBond yield curves as benchmark of measuring market risk.

Application Innovation 应用创新
- MOF uses a unified ChinaBond treasury yield curve to calculate bidding range of local government bonds and treasury bond with issuance term of 50 years.
- Asset Management Association of China recommends mutual fund to calculate NAV based on ChinaBond valuation.
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3. Performance of Pricing Methodologies

4. Compare to the IOSCO

5. Data Delivery Channel

ChinaBond Index Overview

Every day CCDC publicly release 65 indices, 426 sub indices and also calculates position index for 1200+ accounts. Central结算公司每日报发布65支债券指数和426支派生子指数，并为1200余个托管账户计算持仓指数

Except Total Return Index, Full Price Index and Net Price Index, 14 other indicators are calculated:
除每日发布财富指数、全价指数和净价指数，另外还发布其他14个指数指标，包括平均市值法久期、平均到期收益率等

Composite Index 总指数
Constituent Index 成份指数
Strategy Index 策略指数
Custom Index 定制指数
Position Index 持仓指数
Investment Index 投资者分类指数
ChinaBond Index General Methodology 一般方法论

- **Pricing Rule** 价格源

  Taking the Chinabond valuation as a reference, the market maker price is used to be a priority source. If there is no market maker price, settlement price in the interbank market or closing price in the exchange stock market will be selected as price sources.

  以中债估值为参考，优先选取合理的最优双边报价中间价，若无则取合理的银行间市场加权平均结算价或交易所市场收盘价

- **Bond Rating** 评级

  Corporate bond rating and facility rating used by Chinabond Index are selected by rating companies in mainland China. When a bond has two distinct ratings, i.e. when it is rated differently by two or more rating companies, its rating should be determined on the principle of "lower of the new rating". It means, generally, the latest rating would be adopted; unless there are distinct ratings in the recent month, the lowest rating should be adopted.

  中债指数采用的债券主体评级和债项评级为中国境内评级公司的评级。当一支债券具有双评级时，即有两家及以上的评级公司对同一支债券给出不同评级，则采取“孰新孰低”的原则进行判定。所谓孰新孰低原则就是，当同一支债券具有多个不同评级时采用最新的评级，若相邻一个月内有多个评级则采取最低的信用评级。

ChinaBond Index and Bond Investment 中债指数与债券投资

As comparison benchmarks for investment performance:

Utilization of Bond Indices as comparison benchmarks for investment performance in China (in number of funds, by the end of September 2016)

以中债指数为业绩基准的基金产品情况（按只数，截至2016年9月末）

<table>
<thead>
<tr>
<th>Number of funds</th>
<th>Use bond index</th>
<th>ChinaBond</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Fund</td>
<td>480</td>
<td>341</td>
<td>71%</td>
</tr>
<tr>
<td>Hybrid Fund</td>
<td>1053</td>
<td>371</td>
<td>35%</td>
</tr>
<tr>
<td>Stock Fund</td>
<td>148</td>
<td>76</td>
<td>51%</td>
</tr>
<tr>
<td>Total</td>
<td>1681</td>
<td>788</td>
<td>47%</td>
</tr>
<tr>
<td>Total(exclude stock fund)</td>
<td>1553</td>
<td>712</td>
<td>46%</td>
</tr>
</tbody>
</table>

Utilization of Bond Indices as comparison benchmarks for investment performance in China (in fund size, by the end of September 2016)

以中债指数为业绩基准的基金产品情况（按规模，截至2016年9月末）

<table>
<thead>
<tr>
<th>100 million Yuan</th>
<th>Use bond index</th>
<th>ChinaBond</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Fund</td>
<td>8056</td>
<td>6346</td>
<td>79%</td>
</tr>
<tr>
<td>Hybrid Fund</td>
<td>13501</td>
<td>4961</td>
<td>37%</td>
</tr>
<tr>
<td>Stock Fund</td>
<td>1791</td>
<td>1058</td>
<td>59%</td>
</tr>
<tr>
<td>Total</td>
<td>23348</td>
<td>12365</td>
<td>53%</td>
</tr>
<tr>
<td>Total(exclude stock fund)</td>
<td>21557</td>
<td>11307</td>
<td>52%</td>
</tr>
</tbody>
</table>

Source: Wind
ChinaBond Index and Bond Investment 中债指数与债券投资

As underlying index for passive investment: 10 funds adopting ChinaBond Index as underlying index by the end of November 2016.

截至2016年11月，共有10支基金产品使用中债指数作为跟踪标的。

<table>
<thead>
<tr>
<th>Fund Name</th>
<th>Underlying Index</th>
<th>Domicile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Vectors ChinaAMC China Bond ETF</td>
<td>ChinaBond China High Quality Bond Index</td>
<td>America</td>
</tr>
<tr>
<td>CSOP China 5-Year Treasury Bond ETF</td>
<td>ChinaBond 5-Year Treasury Bond Index</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>E Fund ChinaBond New Composite Index Fund</td>
<td>ChinaBond New Composite Index</td>
<td>Mainland China</td>
</tr>
<tr>
<td>E Fund ChinaBond 3-5-Year Treasury Bond Index Fund</td>
<td>ChinaBond 3-5-Year Treasury Bond Index</td>
<td>Mainland China</td>
</tr>
<tr>
<td>E Fund ChinaBond 7-10 Year CDB Bond Index Fund</td>
<td>ChinaBond 7-10 Year CDB Bond Index</td>
<td>Mainland China</td>
</tr>
<tr>
<td>China Southern ChinaBond 10 Year Treasury Index Fund</td>
<td>ChinaBond 10-Year Treasury Bond Index</td>
<td>Mainland China</td>
</tr>
<tr>
<td>China Southern ChinaBond MTN Index Fund</td>
<td>ChinaBond New Medium Term Note Index</td>
<td>Mainland China</td>
</tr>
<tr>
<td>Guangfa ChinaBond 7-10 Year CDB Bond Index Fund</td>
<td>ChinaBond 7-10 Year CDB Bond Index</td>
<td>Mainland China</td>
</tr>
<tr>
<td>TRUE RMB China 5-Year Treasury Bond ETN</td>
<td>ChinaBond 5-Year Treasury Bond Index</td>
<td>Korea</td>
</tr>
<tr>
<td>Pingan Asset Management Products(Private)</td>
<td>Ping An ChinaBond Investment Grade Bond Index</td>
<td>Mainland China</td>
</tr>
</tbody>
</table>

ChinaBond Green Bond Series Index 中债绿色债券指数系列

Adopted four criteria:
2. Green Bond Issuance Guidelines by NDRC
3. Green Bond Principles by ICMA
4. Climate Bonds Standard by CBI

ChinaBond China Green Bond Index

ChinaBond China Green Bond Select Index
- First green bond indices in China, Launched on April 15th 2016
- Cooperated with CECEP Consulting
- 795/467 Constituents by 371/197 issuers

ChinaBond China Climate-Aligned Bond Index
- First climate-aligned bond index in the world. Launched on September 2nd 2016
- Integrated Climate Bonds Taxonomy with China Green Bond Endorsed Project Catalogue Cooperated with CECEP Consulting and Climate Bond
- 210 Constituents by 82 issuers
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3. Performance of Pricing Methodologies

4. Compare to the IOSCO

5. Data Delivery Channel

Chinabond Var/CVaR

Definition

◆ VaR---Value at Risk
◆ CVaR---Conditional Value at Risk
◆ Chinabond Var/CVaR consist of bonds’ VaR/CVaR and bond portfolios’ VaR/CVaR
ChinaBond VaR/CVaR

**Principles**
- Parameters of Confidence Level and Time Horizon
  - Confidence level: 99%, 95%
  - Time horizon: 1 day, 5 days, 10 days
- Method
  - Historical simulation method
- Market Risk Factors
  - Based on the yield to maturity in the ChinaBond Valuation models.
- Data Length
  - 250 days

**Scale**
- The number of bonds' VaR/CVaR is more than 25,000.
- The number of bond portfolios' VaR/CVaR is more than 400.

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Performance of Pricing Methodologies

Hermite Interpolating Model

- The same model with treasury yield curve published by United States Department of Treasury
- Has a relatively better adaptability in China bond market
- Advantages: Smoothness, Flexibility, Stability (Comparison with NS, NSS and NSM Model, Empirical analysis of the China bond market data in December of 2008 and 2012)

Flexibility: Average absolute errors between appraised value and real price under each model in Dec 2012

<table>
<thead>
<tr>
<th>Model</th>
<th>1 year</th>
<th>5 years</th>
<th>10 years</th>
<th>15 years</th>
<th>30 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS</td>
<td>0.0001035</td>
<td>0.0000563</td>
<td>0.0000426</td>
<td>0.0000240</td>
<td></td>
</tr>
<tr>
<td>NSS</td>
<td>0.0001478</td>
<td>0.0000558</td>
<td>0.0002363</td>
<td>0.0000282</td>
<td></td>
</tr>
<tr>
<td>NSM</td>
<td>0.0003036</td>
<td>0.0000527</td>
<td>0.0002264</td>
<td>0.0000114</td>
<td></td>
</tr>
<tr>
<td>SPL</td>
<td>0.0000973</td>
<td>0.0000579</td>
<td>0.0001133</td>
<td>0.0000284</td>
<td></td>
</tr>
<tr>
<td>Hermite</td>
<td>0.0001000</td>
<td>0.0001000</td>
<td>0.0000350</td>
<td>0.0000000</td>
<td></td>
</tr>
</tbody>
</table>

Stability: the mean value of the interest rate changes from the previous day in all terms in Dec 2012

Performance of Pricing Methodologies

- The yield curve rate and the primary market issuing interest rate have a good consistency.
- In terms of deviation, about 60% of issuances are below 5BP.
Performance of Pricing Methodologies

1. The deviation between ChinaBond valuation and the market price is stable.
2. In 2015, about 50% of the bond deviated price is controlled in the range from -0.2 Yuan to 0.2 Yuan. About 99% is controlled in the range from -0.5 Yuan to 0.5 Yuan.

Deviation between ChinaBond valuation and secondary market price between 15:30-16:30 in 2015

Note:
1. Deviation value = the net of ChinaBond valuation-the medium price of bilateral quote;
2. The different color regions from the dark region to shallow region show 50%、60%、70%、80%、90% of core region in boxplot, representing 50%、60%、70%、80%、90% of bond samples in that day respectively.
**IOSCO Principles**

1. Overall Responsibility of the Administrator
2. Oversight of Third Parties
3. Conflicts of Interest for Administrators
4. Control Framework for Administrators
5. Internal Oversight
6. Benchmark Design
7. Data Sufficiency
8. Hierarchy of Data Inputs
9. Transparency of Benchmark Determinations
10. Periodic Review
11. Content of the Methodology
12. Changes to the Methodology
13. Transition
14. Submitter Code of Conduct
15. Internal Controls over Data Collection
16. Complaints Procedures
17. Audits
18. Audit Trail
19. Cooperation with Regulatory Authorities

**Chinabond Pricing Compare to the IOSCO**

- **Consistent in neutrality, transparency and objectivity.**

**Core spirit of IOSCO Principles**
Chinabond Pricing Compare to the IOSCO-Neutrality

- **Identity**
  - Not involved in trading

- **Partners**
  - Clear responsibilities through contracts with partners, strict behavior constraint

- **Clients**
  - Firewall between valuation team and clients
  - Quality control department independent from valuation department to collect and handle complaints from clients

- **Employees**
  - Unified charging rule

Principle: Neutrality

Chinabond Pricing Compare to the IOSCO-Objectivity

- **1. Data Input**
  - Standardized data
  - Data cleaning
  - Data input hierarchy
  - Periodic review of data quality

- **2. Process**
  - Strict operational procedure
  - Mark-to-market rules
  - Consistent examination by system

- **3. Data Output**
  - Standard format consistent with international convention
  - Periodic inspect of data transmit quality

Principle: Objectivity
**Chinabond Pricing Compare to the IOSCO-Transparency**

**Principle: Transparency**

- **Contents**
  - Product design
  - Methodology
  - Process rule
  - Quality report
  - Data input report
  - Controversial valuation explanation

- **Frequency**
  - Daily
  - Monthly
  - Quarterly
  - Yearly

- **Channel**
  - Website
  - Online meeting
  - Clients meeting
  - WeChat
  - Microblog
  - QQ group

**High Transparency**
**Principle: Transparency**

**Quality Control System**

- **External Oversight**
  - ChinaBond Indices Experts Committee: 40 experts from market and authorities
  - Regulatory Authorities
  - Market Participants

- **Internal Control**
  - Audit Department of CCDC
  - Standard Monitor Group: Significant change in rules and methodology
  - Quality Control Department: Daily examination

---

1. Overview of China Bond Market
2. CCDC Pricing Data Service
3. Performance of Pricing Methodologies
4. Compare to the IOSCO
5. Data Delivery Channel
**CCDC Data Delivery Channel 发布渠道**

- **ChinaBond Website**
  - Key terms of yield curve, Index data query, market statistics

- **Client Terminal**
  - Public data & Confidential data such as account index

- **Data Download Stream**
  - Excel/DBF/XML file to download

- **Data Vendors**
  - e.g. Bloomberg

---

**CCDC’s Official Website 中国债券信息网**

- **CCDC’s Official Website**
  - Provides market data and bond market analysis report in both Chinese and English.

- **中国债券信息网**
  - 主要提供中英文的数据查询及市场分析报告服务。

- **Visit this website to inquire data of ChinaBond Yield Curve, ChinaBond Indices and etc.**

- **直接登录网站查询中债收益率曲线、中债指数及市场行情等数据，也可以获取《中债收益率曲线和指数日评》、《中债指数统计与分析月报》、《中债债券市场分析月报》及《中债债券市场分析年报》等中英文市场分析报告。中国债券信息网中文网址:**
  - www.chinabond.com.cn; 英文网址:
  - www.chinabond.cn.
**Authorized Data Vendors** 授权信息商

- ChinaBond pricing data is available to access by 19 authorized data vendors, such as Reuters, Bloomberg.
- 中债价格指标数据可通过路透、彭博等19家授权信息商获取。

- Overseas central banks, the RMB clearing banks, RMB cross-border trade settlement banks, International financial institutions, and Sovereign wealth fund should email us your bank name and Bloomberg ID.
- 境外央行等机构需将自己的英文名称和彭博码（若使用彭博访问）邮件发送至我司。彭博码包括Firm ID, UU ID和CUST ID

**CCDC’s Client Terminal** 中债综合业务平台

- CCDC’s Client Terminal is aimed to provide custody and clearing data to customers, which is the main data delivery channel of CCDC.
- 中债综合业务平台是中央结算公司主打的数据传输通道。

- The data formats are available in EXCEL, DBF, XML and CSV. 中债综合业务平台也可提供数据主动推送服务。

- The installation program is available at CCDC’s official website; CCDC will provide Chinabond Key, user names, passwords and other security certifications. Download link: www.chinabond.com.cn/Channel/11255992
- 需从中央结算公司官方网站下载安装平台，登录平台所需的中债KEY及用户名、密码等安全认证介质需由中央结算公司提供。
**CCDC’s Data Stream** 中债数据下载通道

- This platform provides clients with data download service. The data format is available in EXCEL, DBF or XML.

  该平台可向用户提供数据下载服务并提供EXCEL、DBF和XML三种文件格式

- Apply for this service through email. Installation program is available at CCDC’s official website, i.e. www.chinabond.com.cn/Info/189908980

  向中央结算公司申请使用该数据平台，需从中央结算公司官方网站下载安装中债数据下载通道，下载地址：www.chinabond.com.cn/Info/189908980

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**How to Subscribe - Bloomberg**

- ChinaBond Home Page: CDCP<GO>

---
How to Subscribe - Bloomberg

- Introduction to ChinaBond Pricing

![ChinaBond Valuation: PCS<GO>, Add CIOP, CSOP, CZOP](image)

- ChinaBond Valuation: PCS<GO>, Add CIOP, CSOP, CZOP
How to Subscribe - Bloomberg

- ChinaBond Index:

How to Subscribe - Reuters

- ChinaBond Home Page: CCDC/MENU
How to Subscribe – ChinaBond

Apply Steps for ChinaBond Data Download Channel:

- Clients: Install JAVA 6 Software → Fill in a Chart to Apply ID → Stick ID to JAVA
- CCDC: Approve → Approve

Apply Steps for CIOP Online:

- Clients: Install CIOP Online Software → Fill in a Chart to Apply ID & Ekey
- CCDC: Approve

How to Subscribe – ChinaBond

- ChinaBond Data Download Channel & CIOP Online in Chinese
- A New Platform can support English and Chinese ChinaBond Pricing Data
Thanks for your Time

ZHOUZHOU
Deputy Senior Manager, ChinaBond Pricing Center, CCDC
Tel: 0086-10-88170642
Email: zhouzhou@chinabond.com.cn
Round-table Discussion: Bond Pricing Methodologies in Thai Bond Market

Mr. Surat Chiracharasporn,
Head of Bond Pricing & Product Development,
ThaiBMA

Presentation Outline

• About ThaiBMA
• ThaiBMA’s Yield Curves *(Quotation-based)*
  o Bond Quotation
  o Yield Curves Construction
• ThaiBMA’s Mark-to-Market Price
  o Bond Pricing Methodology
  o Pricing Model for Corporate Bond
  o Framework for Mark-to-Market
Evolution of ThaiBMA

- Sep. 1994
  - Bond Dealers’ Club

- Apr. 1998
  - Thai Bond Dealing Centre

- Sep 2005
  - Thai Bond Market Association

ThaiBMA’s Role & Functions

- **Bond Market SRO**
  - Surveillance
  - Regulation/inspection
  - Trader license
  - Convention
  - Enforcement

- **Bond Information Center**
  - Center of Bond market information & dissemination
  - Product Development
  - Bond Literacy

- **Trading Association**
  - Members’ Collective Voice to Authorities
  - Market Development
  - HR Development for Bond Market

- **Bond Pricing Agency**
  - Pricing model for all bonds
  - Product development
  - Yield curve
  - Index
  - Credit Spread
  - MTM prices
  - Etc.
ThaiBMA’s Pricing Services

- Yield Curves
- Mark-to-Market Price of Bonds

“Market Reference”

ThaiBMA as a BPA

Bond Registration

Mark-to-Market Process

- Mark-to-Market Prices (≈ 3,400 of Debt Instruments)
- Bond Index Calculation
- Price Reference for trading
- NAV Mark-to-Market for fixed income fund
- Portfolio Valuation

THE THAI BOND MARKET ASSOCIATION
## Bond Quotation Summary

<table>
<thead>
<tr>
<th>Bond Type</th>
<th>Practice</th>
<th>Participants</th>
<th>Freq.</th>
<th>Required # of Contributors</th>
<th>Outlier Elimination</th>
<th>Quoted By</th>
<th>Quoted Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov’t &amp; BOT</td>
<td>Duty</td>
<td>PD (MoF)</td>
<td>Daily</td>
<td>3</td>
<td>15% Min. &amp; 15% Max.</td>
<td>Issue</td>
<td>Yield</td>
</tr>
<tr>
<td>SOE (G)</td>
<td>Voluntary</td>
<td>PD (MoF)</td>
<td>Weekly</td>
<td>3</td>
<td>1 SD</td>
<td>Issuer &amp; Tenor</td>
<td>Spread</td>
</tr>
<tr>
<td>SOE (NG)</td>
<td>Voluntary</td>
<td>Active Dealers</td>
<td>Semi-Monthly</td>
<td>3</td>
<td>Spread threshold</td>
<td>Issue</td>
<td>Yield</td>
</tr>
<tr>
<td>BE</td>
<td>Voluntary</td>
<td>Active Dealers</td>
<td>Semi-Monthly</td>
<td>3</td>
<td>1 SD</td>
<td>Issuer &amp; Tenor</td>
<td>Spread</td>
</tr>
<tr>
<td>Corp.</td>
<td>Voluntary</td>
<td>Active Dealers</td>
<td>Semi-Monthly</td>
<td>3</td>
<td>Spread threshold</td>
<td>Issue</td>
<td>Yield</td>
</tr>
<tr>
<td>STN</td>
<td>Voluntary</td>
<td>Active Dealers/Issuer</td>
<td>Semi-Monthly</td>
<td>3 / 1</td>
<td>1 SD</td>
<td>Issue</td>
<td>Price</td>
</tr>
</tbody>
</table>

Note: 1/ SOE is a bond issued by state-owned enterprise. (G) for guarantee and (NG) for Non-guarantee.  
2/ BE is Bill of Exchange which is a short-term bond whereas Corp. is a long-term corporate bond.  
3/ STN is structured note e.g. equity-linked note.
Yield Curve Construction Process

PDs quote yields to ThaiBMA before 4 PM

Outlier Elimination:
Removed 15% top/bottom (based on number of PDs)

Calculate Avg. Yield:
Based on Arithmetic Average

Linear Interpolation

Publish Yield Curve at 4:15PM

ThaiBMA Government Bond Yield Curve

Based on Average Bidding Yields quoted by Primary Dealers (PDs)

The outlier yield quoted by PD’s would be removed before the average calculation

Published on every working day at 4:15 p.m.

Challenge: Fewer numbers of quoted bonds → Less accurate fitted yield curve
Zero Coupon Government Yield Curve

- Important reference curve for fixed-income market
- Used by various market participants for pricing, analysis and risk management
- Because there is no long-term zero-coupon government bond in the market, some techniques would be used
- Generalized Bootstrapping Method

ThaiBMA Yield Curves
Yield Curves Construction Summary

<table>
<thead>
<tr>
<th>Type of YC</th>
<th>Source of Data</th>
<th>Primary YC</th>
<th>Bond Type</th>
<th>Published Time</th>
<th>Interpolation/Methodology</th>
<th>TTM Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov't Bond</td>
<td>- TTM</td>
<td></td>
<td></td>
<td>16:15</td>
<td>Linear Interpolation</td>
<td>1 mth–50 yrs.</td>
</tr>
<tr>
<td></td>
<td>- Duration</td>
<td></td>
<td></td>
<td>16:15</td>
<td>Linear Interpolation</td>
<td>1 mth–50 yrs.</td>
</tr>
<tr>
<td>Alternative Zero</td>
<td></td>
<td></td>
<td></td>
<td>16:15</td>
<td>Cubic Spline/Nelson-Siegel</td>
<td>1 day–30 yrs.</td>
</tr>
<tr>
<td>Par Bond</td>
<td>- Zero Yield Curve</td>
<td></td>
<td></td>
<td>16:15</td>
<td>-</td>
<td>1 mth–50 yrs.</td>
</tr>
<tr>
<td>Implied 6mth Forwards</td>
<td>- Zero Yield Curve</td>
<td></td>
<td></td>
<td>16:15</td>
<td>Linear Interpolation</td>
<td>0.5–3 yrs.</td>
</tr>
<tr>
<td>Corporate Bond</td>
<td>- Zero Yield Curve + Credit Spread Curve</td>
<td></td>
<td>Long-term Corporate Bond</td>
<td>17:15</td>
<td>Zero Yield Curve + Credit Spread (Linear)</td>
<td>1 mth–50 yrs.</td>
</tr>
</tbody>
</table>
ThaiBMA MTM Price

Prioritization of Market Yield

Mark-to-Market Yield
## Methodology Summary of MTM Price

<table>
<thead>
<tr>
<th>Bond Type</th>
<th>Availability</th>
<th>Priority 1</th>
<th>Priority 2</th>
<th>Quote Freq.</th>
<th>Settlement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov’t (Quoted)</td>
<td>Trade</td>
<td>Quote</td>
<td>Daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gov’t (Non-Quoted)</td>
<td>Trade</td>
<td>Synthetic Quote</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRN (BOT/LBF)</td>
<td>Trade</td>
<td>Quote</td>
<td>Daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRN (QL)</td>
<td>Trade</td>
<td>Quote</td>
<td>Weekly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOE (NG)</td>
<td>Trade</td>
<td>Quote</td>
<td>Semi-Monthly</td>
<td>Model Spread</td>
<td></td>
</tr>
<tr>
<td>Corp.</td>
<td>Trade</td>
<td>Quote</td>
<td>Semi-Monthly</td>
<td>Model Spread</td>
<td></td>
</tr>
<tr>
<td>BE/Short-Term</td>
<td>Trade</td>
<td>Quote</td>
<td>Semi-Monthly</td>
<td>Model Spread</td>
<td></td>
</tr>
<tr>
<td>GTF</td>
<td>Trade</td>
<td>Quote</td>
<td>Semi-Monthly</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mark-to-Market Process (Gov’t Bond)

1. **Trade Transactions**
2. **Mark to Market Priority**
3. **Executed Yield**
4. **Quoted Yield**
5. **Mark-to-Market Yield**

- **Trade Info. (Daily Report)**
  - Counterparty
  - Trade Frequency
  - Related trading information from other issues

• Obtain daily quotation from 13 Primary Dealers

**THE THAI BOND MARKET ASSOCIATION**
**Model Yield for Corporate Bond**

Corporate Bonds are neither actively traded nor quoted by dealers, Model Yield is necessary

- The spread would be revised when there is
  - Transaction
  - Quotation
  - Mid and End of Month

**Model Yield**

- Update every working day

**Zero Coupon Curve**

**Corporate Spread** (Spread Over Zero Curve)

**Mark-to-Market System**

---

**Pricing Model (Static Spread)**

<table>
<thead>
<tr>
<th>Bond Type</th>
<th>Pricing at 1st Date</th>
<th>Pricing After 1st Date</th>
<th>Reset Spread Date</th>
<th>Action for Non-Quoted</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOEG</td>
<td>Interpol. Gov’t YC + Quoted Spread</td>
<td>Today Zero YC + SS₀</td>
<td>Traded Date/Quoted Date 7ᵗʰ, 15ᵗʰ, 22ⁿᵈ, EOM</td>
<td>-</td>
</tr>
<tr>
<td>SOENG</td>
<td>Pricing at Par (YTM = Coupon)</td>
<td>Today Zero YC + SS₀</td>
<td>Traded Date/Quoted Date (15ᵗʰ, EOM)</td>
<td>Spread (SS) Adjustment by Peer/Rating Comparison</td>
</tr>
<tr>
<td>LT Corp.</td>
<td>Pricing at Par (YTM = Coupon)</td>
<td>Today Zero YC + SS₀</td>
<td>Traded Date/Quoted Date (15ᵗʰ, EOM)</td>
<td>Spread (SS) Adjustment by Peer/Rating Comparison</td>
</tr>
<tr>
<td>ST Corp. + BE</td>
<td>1. Pricing at Cost 2. Gov’t YC + Spread Matrix</td>
<td>Today Zero YC + SS₀</td>
<td>Traded Date/Quoted Date (15ᵗʰ, EOM)</td>
<td>Spread (SS) Adjustment by Peer/Rating Comparison</td>
</tr>
</tbody>
</table>

---

*THE THAI BOND MARKET ASSOCIATION*
Static Spread of Bond

What can SS represent?

Credit Risk → Credit Spread
Liquidity Risk → Liquidity Spread

Classifiable by Credit Rating
Residual term (Total Spread – Credit Spread)

Spread Adjustment with Rating (Model)

THE THAI BOND MARKET ASSOCIATION
Mark-to-Market Price for Corp. Bond

Daily Mark-to-Market Process for Corp. Bond

1. Ordinary Cases

In a normal situation, bond prices are calculated by using current risk-free yield plus current spread.

Current spreads are derived from traded and quoted yields in the market.

2. Special Cases

- Credit Rating Upgrade
- Credit Rating Downgrade
- Unexpected Event Affecting Bond Price → Bond Default

⇒ Quoted from active dealers
⇒ Comparative Credit Spread

Survey at least 3 dealers

Upgrade/Downgrade of Credit Rating

Survey at least 3 dealers

Adjust yield according to average surveyed rates

Corporate Bond MTM for Special Cases

Default Bond

“Reference Value” surveyed from at least 5 dealers (Dealer Poll)

If no dealer poll or not valid

“Expected Recovery Rate” at the beginning of year

Publish ceiling price

THE THAI BOND MARKET ASSOCIATION
Markdown Procedure

Sources of information

Various sources of official information related credit status, material event affect, event of default, etc.

- SEC
- SET
- CRA’s Issuers
- Investors

ThaiBMA’s Markdown Process

THE THAI BOND MARKET ASSOCIATION

Thank You

THE THAI BOND MARKET ASSOCIATION
SESSION 2

Bond Pricing in ASEAN+3: Users’ view on Bond Pricing

- Underwriters’ view: case in Thailand by Mr. Prakob Phiencharoen, Executive Vice President, Bank of Ayudhya PLC.
- Investors’ view: case in ASEAN by Mr. Win Phromphaet, CFA, CIO, CIMB-Principal Asset Management Co., Ltd.
- International investors’ view on bond pricing in Asia by Mr. Vasu Suthiphongchai, Director, Fixed Income Fund Manager, Manulife Asset Management (Thailand)

Moderator: Mr. Surat Chiracharaspon, Head of Bond Pricing and Product Development, ThaiBMA

(NO PRESENTATION Slides)
24th ABMF Meeting

Sub-Forum 1 (SF1)
(Afternoon Session)
SESSION 1

Opportunities of ASEAN+3 Fixed Income Funds to Invest in ASEAN Bond Market
by Mr. Smith Banomyong, Director and Chief Executive Officer, SCB Asset Management (SCBAM), Thailand
SESSION 2

Market Structure and Transparency
by Mr. Noritaka Akamatsu, Senior Advisor,
Asian Development Bank
Good Practices in Developing Bond Market
– In support of frontier markets of BCLM –

Bangkok, Thailand
16 Jan. 2017

Noritaka Akamatsu
Asian Development Bank

Introduction

- ASEAN6+2 achieved remarkable outcomes in developing their domestic debt markets. $10 tril. capitalization
- Thailand and Indonesia made concerted efforts, in response to the financial crisis in 1997. The two countries have developed premier public debt management offices.
- Korea and Malaysia developed diverse markets, while PRC quickly built a dominantly large market.
- Most have sound market infrastructure in line with the level of development of their markets.
- However, the development is uneven across ASEAN+3. New members of ASEAN except Viet Nam (i.e., BCLM) need to start tackling the challenge.
- There is more room for corporate bond market to grow. But the regulatory environment is becoming challenging.
Government bond market
– Preconditions and challenges –

- Government deficits / borrowing
  - Large public investment needs in infrastructure
  - Cases of issuance/borrowing without deficits exist but face political and fund management challenges.
- Macroeconomic stability, low inflation
- Adequate financial sector development
  - Liberalized financial system, particularly interest rate
  - Competition among intermediaries (financial conglomerates, and foreign participation)
  - Solvent / sound financial system
- Commitment of the government
  - A public debt management objective
- Macroeconomic challenges: Crowding out, inflation, inter-generational equity

(Brunei), Cambodia, Lao PDR and Myanmar

- Public finance of Cambodia, Lao PDR and Myanmar (CLM) have relied on concessional financing from bilateral and multilateral sources.
- But they have joined Lower Middle Income Countries. Public debt is sustainable, and institutions are being strengthened.
- CLM governments now need to prepare for the graduation from concessional financing and face market-based cost of finance in external borrowing.
- CLM governments will need to develop domestic government bond market and avoid currency mismatch risks in funding public investments.
- Brunei has been in a different category because of its high income and little need to borrow. But it’s now changing.
Building blocks for government bond market

- Public finance, public debt and cash management
- Money markets and monetary policy operations
- Bond issuance and primary market (including a PD system)
- Investor base (including retail as well as institutions)
- Intermediaries and secondary markets (including repo market)
- Securities custody and settlement infrastructure (toward real time DVP)
- Accounting and taxation framework conductive to bond market development
- Linkages of government bond markets to subnational and corporate bond markets

The nature of the task

- Not a single institution but a place of interaction among participants, supported by a set of market infrastructure / institutions.
- Need to manage a number of inter-dependent tasks (chicken-and-egg problems), each of which is technically challenging.
- No single party can dictate the development process. But it requires a strong policy commitment and leadership by MOF and the central bank.
  - The securities and contractual savings authorities also have important roles to play.
  - Other institutions should also actively participates including exchanges, central depositories, clearing houses as well as major market participants.
- Inter-agency committee structures led by MOF and/or the central bank were useful to coordinate implementation of the inter-dependent tasks.
Sequencing, roadmapping and institutional arrangements
– Regional and international experiences –

- Identifying priority reforms in the building blocks and examining their interdependence to develop a roadmap
- Establish an inter-agency bond market committee (under the leadership of MOF and/or the central bank)
- Develop an action plan to guide and coordinate the implementation of the roadmap
- Assigning an appropriate task leader to lead each task
- Periodically review the action plan (and the roadmap) to ensure the relevance of actions and the effectiveness of coordination.
- Good examples are found in the region.
  - Thailand, Indonesia, Viet Nam
  - Korea, Malaysia, Philippines

The Case of Thailand – 1

- The Ministry of Finance (MOF) established a Domestic Bond Market Committee (DBMC) in 1998/9.
- The DBMC invited participation of the Bank of Thailand (BOT), the Securities and Exchange Commission (SEC), the Thai Bond Dealing Center (TBDC), the Thai Securities Depository (TSD) and major market intermediaries.
- The Committee established Task Forces to cover nine areas, each led by a member institution of the DBMC to address specific issues identified.
The Case of Thailand – 2
Task forces and leaders

<table>
<thead>
<tr>
<th>Task Forces</th>
<th>Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Primary Mkt. &amp; Cash Mgmt.</td>
<td>Comptroller General’s Dept. (MOF)</td>
</tr>
<tr>
<td>2. 2ndry Market</td>
<td>BOT and SEC</td>
</tr>
<tr>
<td>3. DVP and Settlement</td>
<td>BOT (and TSD)</td>
</tr>
<tr>
<td>4. Tax and Impediments</td>
<td>Revenue Dept. (MOF)</td>
</tr>
<tr>
<td>5. Mkt Information Systems</td>
<td>TBDC</td>
</tr>
<tr>
<td>6. Standardization of Pricing &amp; other Mkt Conventions</td>
<td>TBDC</td>
</tr>
<tr>
<td>7. Repo and Bond Lending</td>
<td>SEC and TBDC</td>
</tr>
<tr>
<td>8. Fiscal &amp; Debt Mgmt</td>
<td>SEC</td>
</tr>
<tr>
<td>9. Derivatives</td>
<td>PDMO (MOF)</td>
</tr>
</tbody>
</table>

Case of Indonesia

Established by Ministerial Decree, December 2004

- Steering Committee and Secretariat
  - Chaired by Bapepam Chairman with MOF Treasurer as Deputy and staffed with senior officials of MOF, Bank Indonesia and Bapepam

- Working Group for Coordination of Government Debt Management
  - 11 senior officials of MOF and Bank Indonesia

- Working Group for Development of Bond Market
  - 11 senior officials of MOF, Bank Indonesia and Bapepam
Links with subnational and corporate bond markets – 1

- Subnational borrowing is made possible on fiscal decentralization
- Debt and cash (treasury) management capacity of local governments
- Varying levels of central control of subnational borrowing with limits, approvals and market disciplines.
- Contingent liabilities management
- Tax treatment of returns from subnational debt
- SOEs are a primary group of corporate bond issuers.
- Disclosure and credit rating for issuance are critical, unlike government bonds.
- Neither is expected to be liquid.
  - Difficult to develop viable market infrastructure dedicated to them. They rather benefit from that for government bonds.

Links with subnational and corporate bond market – 2

- Basel III favors government and PSE bonds.
- Corporate bond market is typically dominated by PSEs / utilities, banks and property developers. But bank bonds are not eligible as HQLA unless the issuing bank is a PSE
- Corporate bonds must also be very highly rated to be HQLA of banks.
- Developing contractual savings institutions and investor base beyond banks is ever more important.
Thank you
SESSION 3

Update on WG-CBCR
by Mr. Eric Chng, Head, Relationship Management Asia (Corporate Trust), BNY Mellon
SESSION 4

Update on WG-IP: Enhancement of AsianBondsOnline by ADB Secretariat
ASIANBONDSONLINE
Website Enhancements

Donghyun Park
Principal Economist
Economic Research and Regional Cooperation Department

Importance of AsiaBondsOnlie

• ABO as the key market information source to support bond market developments of ASEAN+3.
• ABO is one of important ABMI outputs widely recognized not only by ASEAN+3 but also by other regions.
• ABO enhancement is a step to consider a regional information platform suggested in the Mid-term ABMI Road Map.
• ASEAN+3 governments will support ABO continuously (by Investment Climate Facilitation Fund of Japan)
ENHANCED ASIANBONDSONLINE WEBSITE

- New Layout for Front Page
- New Section:
  - Bond Pricing Data
    - Front Page
    - Regional Data Page
    - Market Data Page
      - People’s Republic of China, Indonesia, Malaysia, Philippines, Thailand
  - What’s New
    - Latest News
    - ADB Research
    - Latest Data Update
    - Upcoming Events
  - Related Links included
    - ABMI
    - ABMF
ASIANBONDSONLINE

• New Layout for Front Page

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• Bond Pricing Data
  – Front Page
  – Regional Data Page
  – Market Data Pages
    • People’s Republic of China
    • Indonesia
    • Malaysia
    • Philippines
    • Thailand
What's New
- Latest News
- ADB Research
- Latest Data Update
- Upcoming Events

Related Links Included
- ABMI
- ABMF

Related Sites:
Asia Development Bank (ADB) | Asia Regional Integration Center (ARIC)
Asia Bond Markets Initiative (ABMI) | ASEAN+3 Bond Market Forum (ABMF)
Next Stage Enhancement Plan

- Website Design Revamp
  - Mobile friendly design
  - Dynamic interface
  - Improve user experience for downloading data and reports

- Market Indicators:
  - Provide additional indicators (ie, dimsum bonds, fcy bond issuance, domestic financing profile, among others)
  - Add advanced market indicators (ie, interest rates of advanced markets)

- Frequent review and update of ABO non-data contents such as regulatory frameworks, official documents, reference website links, and other related market information.
  - It is necessary to consider more frequent updates of information between revisions of ASEAN+3 bond market guides.
  - Synchronization and cross-reference with local data source is desirable to reflect changes in relevant information in timely manner.
  - Closer collaboration with market authorities and industry associations is necessary.

- We welcome and appreciate your valuable feedback on ABO.
SESSION 5

Update on ASEAN+3 Multi-Currency Bond Issuance Framework by ADB Secretariat
Outline of Explanation

1. ABMI: Asian Bond Markets Initiative
2. ABMF (ASEAN+3 Bond Market Forum)
3. AMBIF (ASEAN+3 Multi-Currency Bond Issuance Framework)
4. What is ADRB?
5. Comparative Analysis 2012/2016
6. AMBIF Supports Market Developments
7. ABMF Milestones and Next Steps
9. New Findings and Conclusion
1. ABMI: Asian Bond Markets Initiative

1.1 Asian Bond Markets Initiatives (ABMI)

Chairman's Press Release on the Asian Bond Markets Initiative, 7 August 2003

- ABMI aims to develop efficient and liquid bond markets in Asia, which would enable **better utilization of Asian savings for Asian investments**.
- The ABMI would also contribute to the mitigation of currency and maturity mismatches in financing.
  - **ABMI contributes to financial stability by creating multiple channels of financing**
1.2 ABMI same as, e.g., Arab Debt Market Development Initiative (ADMDI)

- The Arab Debt Market Development Initiative (ADMDI) is a joint project of the AMF (Arab Monetary Fund) and the IMF aimed at improving the efficiency and enhance the functioning of the public and corporate debt market in countries that are members of the AMF.
- Many benefits are expected to derive from the ADMDI project, including the identification of a set of supply side policies that will develop and enhance liquid bond markets, improve the cost of financing of the public and private sector while reducing risk.
- Overall, such policies should contribute to an overall strengthening of the domestic financial system, with enhanced access to capital markets for both the public and private sectors.
- Building on country-specific experience, ADMDI aims to identify a framework that will facilitate the development of domestic debt markets in AMF member countries.


1.3 What is ASEAN+3?

**ASEAN (Association of South-East Asian Nations) + 3**

ASEAN: Brunei Darussalam (BN); Republic of Indonesia (ID); Kingdom of Cambodia (KH), Lao People’s Democratic Republic (LA); Republic of the Union of Myanmar (MM); Malaysia (MY); Republic of the Philippines (PH); Republic of Singapore (SG); Kingdom of Thailand (TH); and Socialist Republic of Vietnam (VN) + the People’s Republic of China (CN); Hong Kong, China (HK); Japan (JP); Republic of Korea (KR).

- Regional cooperation framework established based on the lesson learned from the Asian financial crisis
  - ASEAN 10 countries + China, Japan, and Korea 13 countries (plus Hong Kong = 14 economies)

Source: [Wikipedia and others](http://www.amf.org.ae/en/page/about-admdi)
1.4 ASEAN+3 Represents a Mix of Established/Developed and Developing/Frontier Markets

<table>
<thead>
<tr>
<th>Developed Countries by HDI*</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South Korea</td>
</tr>
<tr>
<td></td>
<td>Singapore</td>
</tr>
<tr>
<td></td>
<td>Hong Kong, China</td>
</tr>
<tr>
<td></td>
<td>Brunei</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Developing Countries by IBRD (Except for LDCs)</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indonesia</td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
</tr>
<tr>
<td></td>
<td>Philippines</td>
</tr>
<tr>
<td></td>
<td>Thailand</td>
</tr>
<tr>
<td></td>
<td>Vietnam</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Least Developed Countries by UN</th>
<th>Cambodia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lao, PDR</td>
</tr>
<tr>
<td></td>
<td>Myanmar</td>
</tr>
</tbody>
</table>

*: Human Development Index (HDI)

1.4-2 Size of LCY Bond Market

While the size of the individual bond markets (ex China and Japan) does not appear to be significant, the significance of most bond markets becomes obvious once measured as percentage of GDP.

Sources:
1.5 Institutional Framework of ABMI

At ABMI, various discussions are held at the Task Force meeting, which is a working level meeting of the countries concerned, and which will eventually be reported to the Finance Ministers and Central Bank Governors Meeting, the supreme decision-making body.

1.6 Major Achievements of ABMI

- CSD-RTGS Linkages as RSI
- Infra bond finance
- Broadening the investor base
- Research on:
  - Infra bond finance
  - Broadening the investor base
  - CSD-RTGS Linkages as RSI

Harmonization and standardization of markets

CMIM
Regional safety net

Finance Ministers and Central Bank Governors Meeting

Deputy Ministers and Deputy Governors Meeting

ABMI
Asian Bond Market Initiative

ASEAN+3 Macroeconomic Research Office

Credit Guarantee and Investment Facility (CGIF)

Infrastructure Finance

TF 1 (Supply)
TF 2 (Demand)
TF 3 (Regulation)
TF 4 (Infra.)

ASEAN+3 Bond Market Forum (ABMF)

Sub-forum 1 AMIF
Sub-forum 2 ISO STP

Cross-border settlement Infrastructure Forum (CSIF)
1.7 ABMI Evolution

2003 Asian Bond Markets Initiative (ABMI) started

2007 Global Financial Crisis
Bond markets as a spare tire of banking systems

Addressing the problem of double mismatch of currency and interest rate

2010 ABMF
Linking the segmented markets for a more resilient regional market

2015 AMBIF started
Inter-operable professional market infrastructures

2010 CMIM (Chiang Mai Initiative Multilateralization) ($120 Billion)
2011 AMRO (ASEAN+3 Macro Economic Research Office)
- <Macroeconomic stability>

Regional Safety Net

More integrated financial markets
ASEAN financial integration + PRC, JPN, KOR
CSD-RTGS Linkages
AMBIF+
More advanced financial infrastructures

Stronger economic linkages and synchronization of markets

1997 Asian Currency Crisis

Promoting development of domestic markets
2004 AsianBondsOnline
2010 CGIF

2. ABMF (ASEAN+3 Bond Market Forum)
2.1 ABMF - As a Common Platform for P-P

- ABMF is a forum to hold discussions between public and private sectors on a range of subjects.
- In addition to financial institutions, securities settlement institutions and global banks nominated by national authorities, public institutions such as central banks, SROs and securities market supervisory authorities are participating as members and observers.
- Members discuss technical and institutional issues through activities of sub-forums and working groups.
- ABMF meetings are held about three times a year, and the results are reported to the ABMI Task Force.

2.2 Barriers identified by GoE Report 2010

Timely information, uniform disclosure, price transparency, market statistics, information on corporate actions and legal information such as bankruptcy and insolvency laws -> ASEAN+3 Bond Market Guide

Source: GOE Report 2010 modified by ADB consultant
2.3 ABMF SF1 Phase 1 Report: ASEAN+3 Bond Market Guide

- The ASEAN+3 Bond Market Guide is the first comprehensive report on bond markets in the ASEAN+3 region. The Guide is a product of the collaborative efforts of ASEAN+3 Bond Market Forum (ABMF) members and is the first report endorsed by ASEAN+3 officials. The Guide is composed of two volumes.
- **Volume 1** provides a comparative analysis on market infrastructures including legal and operational systems, regulations and market practices in the region, together with individual market guides of 11 economies, namely the People's Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Lao People’s Democratic Republic; Malaysia; Philippines; Singapore; Thailand; and Viet Nam.
- **Volume 2** provides detailed information on bond transaction flows including technical information on matching, settlement cycle, numbering and coding, and others. The Guide is expected to benefit the bond markets in the region by enhancing investors' understanding on the markets.

Published: April 2012

- The first guide endorsed by ASEAN+3 officials
- Comprehensive market information on 1,532 pages
- Product of the collaborative efforts of ABMF members
- Benefits bond markets in the region by enhancing investors’ understanding of the markets
- Base material for ABMF activity in Phase 2 (2012-2014)

Download:

Transition ABMF SF1 Phase 1 to Phase 2

- ABMF Phase 1 became the 'stock taking' exercise of the region’s markets’ features. The ASEAN+3 Bond Market Guide (2012) became an indispensable reference.
- The fact that markets were at different stages of development was comprehensively proven, through the work on the Bond Market Guide 2012.
- However, the Comparative Analysis – intended to show similarities or distinctions - clearly illustrated that many market features were not as drastically different across the region as expected, and that, in fact, quite a number of market features were similar when narrowing the field to the professional market segments.
- SF1 was tasked with further studying these similarities, and to explore to what extent markets may be connected or even harmonised on the basis of market features that were already common or similar.
- A harmonization of the markets – i.e. the application of the same rules and processes across all or major market features – had to be dropped after further detailed study of the features. The typical key mandate of regulatory authorities – the protection of general investors – was considered untouchable in this context, and a given market’s legal tradition and/or regulatory framework may prescribe individual market features in a particular manner not conducive towards such harmonisation.
- Instead, it was decided to define common factors that multiple or many markets could fulfil, which brought the focus back on the professional market segments, since expectations and qualification of professional investors were deemed to be more easily comparable, and compatible (see also 3.4).
- This lead to the focus on a proposal for a common professional market bond issuance concept and its required features, in the form of AMBIF.
Transition ABMF SF1 **Phase 2 to Phase 3**

- The SF1 Phase 2 Report stipulated the idea of a common professional market bond issuance concept and what would – in principle – be needed to make this a reality. It also comprehensively reviewed the individual professional markets’ features to prove that such commonality existed and could be utilised.
- This lead to the understanding that among the market features, a number of key features, referred to as ‘elements’ to reflect their fundamental nature, needed to be determined, which each potential market should have to be eligible to participate in such a common professional market bond issuance concept.
- Owing to the different stages of development of the markets, these elements needed to be realistically ‘accessible’ to all 14 markets eventually, and specific enough to offer enough added value to issuers and other stakeholders.
- This lead to the further definition of the so-called **AMBIF Elements** (see 3.8), but also the need to explain how AMBIF would work in each potential participating market, and why it would be possible. This resulted in the **AMBIF Implementation Guidelines** – substantial market reviews against the **AMBIF Elements** – for each of the 6 initial participating markets, which were subsumed into the SF1 Phase 3 Report.
2.5 ABMF SF1 Phase 3 Report

Implementation of the ASEAN+3 Multi-Currency Bond Issuance Framework

Published: August 2015

- AMBIF explained
  - Details of ‘AMBIF Elements’ (see 3.8)
  - Review of additional AMBIF relevant features
- Comparative view of participating 6 markets
- Recommendations and Next Steps
- Appendix
  - Single Submission Form (SSF)
  - FAQs
  - AMBIF Implementation Guidelines for 6 Participating Markets

Further Explanation:
https://asianbondsonline.adb.org/regional/abmf.php
Download:

2.6 ABMF SF1 - ASEAN+3 Bond Market Guides 2016

The ASEAN+3 Bond Market Guide 2016 is a comprehensive report on individual bond markets in East Asia.
The Guide is a product of the collaborative efforts of ASEAN+3 Bond Market Forum (ABMF) members.
Download the available Bond Market Guides for the following markets from
https://asianbondsonline.adb.org/.

As of end of November, the following 5 Bond Market Guides are available:

- Hong Kong, China (2016/11)
- Japan (2016/05)
- Malaysia (2016/08)
- Singapore (2016/09)
- Thailand (2016/05)

14 Market Guides will be available by the end of March 2017
2.7 List of Output (SF-1 Reports) in ADB/ABMF Project

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
</tr>
<tr>
<td>ASEAN+3 Bond Market Guide(s) 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Markets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>11 Markets</td>
<td>N/A</td>
</tr>
<tr>
<td>2014</td>
<td>(For 6 Markets: HK, JP, MY, PH, SG and TH)</td>
<td>14 Markets</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016 – 2017</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **(D)** [https://asianbondsonline.adb.org/](https://asianbondsonline.adb.org/) (as of end of November, 2016, Hong Kong, Japan, Malaysia, Singapore and Thailand BMGs are available)

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Transition ABMF SF1 **Phase 3** to **Phase 4**

- ABMF Phase 3 had seen one pilot issue (in Sept 2015) on the back of the publication of the AMBIF Implementation Guidelines (as part of the SF1 Phase 3 Report), in this case for Thailand.
- Lessons from the pilot issue lead to additional market features’ or rather impediments that needed addressing to ensure further AMBIF issuances or, for that matter, any additional issuances by foreign or cross-border issuers. The impediments were also continuously cited by other prospective issuers, as well as investors and market participants.
- Significantly, many of these specific impediments appeared to generally affect a bond market’s issuance volume, willingness to invest and participate. Market feedback that had been recorded throughout market visits, and in the 2012 and 2016 Bond Market Guides, indicated that some of the impediments had not improved [much] since the 2010 GoE Report.
- This turned the attention of ABMF on the need to address these specific impediments, or providing recommendations on how to address these impediments to policy makers (see 7.2).
- However, this also prompted the need to refresh the ASEAN+3 Bond Market Guides to correct the perceptions of many market participants that still existed and to prominently display the progress and developments which the markets have achieved since 2012 (see 8 and 9).
3. AMBIF (ASEAN+3 Multi-Currency Bond Issuance Framework)

3.1 Vision of AMBIF

- In summary, AMBIF is intended to allow regional issuers to issue local currency bonds in any participating ASEAN+3 economy on the basis of an expedited regulatory process and by making use of standardised disclosure documentation (SSF: Single Submission Form) in English.
- AMBIF is a conduit towards the creation of a region-wide open professional bond market zone, and while this goal may still be some way off, the example of the ASEAN Economic Community (AEC) 2015 open market may become a suitable platform for this vision.

**Conclusion:** AMBIF =
- Framework to connect the regional domestic bond markets = Nexus
- Strategic approach: Starting from where possible
- AMBIF is yet another conduit for market development across diverse group of markets
3.2 Recognition and Identification of Professional Market Segment as a Common Feature of AMBIF

(Basic Understanding and Background)

- Asian bond markets have developed considerably in the last 15 years. The total size of the local currency-denominated bond markets in ASEAN, China and South Korea has grown to nearly the same size as yen bonds.
- However, due to restrictions such as the size of the economy and currency regulations, etc., many of them are still regarded as surrounding markets.
- It is impossible to unify those bond markets, but we will be able to pursue economies of scale by extracting common features (procedures and market practices) in each market and trying to achieve commonality.

- AMBIF aims to harmonise bond issuance procedures that vary from country/market to country/market.
- Specifically, ABMF will make it possible for regional issuers to issue professional (AMBIF) bonds, registration of bonds and program listing procedures in each country using the same document/format (SSF).
- By limiting market participants to professionals (primarily financial institutions as professional investors), AMBIF has made it possible to minimize institutional differences among countries / markets.
- ABMF is also aiming to disseminate AMBIF bonds market rules and practices that are basically consistent with the international (Eurobond) market to the domestic professional (AMBIF) bond markets of each country.
- By doing so, ABMF is intending to promote commonality and standardization of transactions.

3.3 AMBIF as a Regional Nexus

- Due to different degrees of domestic markets’ development in the region, it is not practical to achieve a fully standardized bond issuance framework.
- But, Common Features / **AMBIF Elements** (see 3.8) may allow connecting the domestic professional bond markets across the region.
3.4 Specify the Professional/QIB Market by Economy

General Investors Market, including Retail Sector  Professional Market or QIB* Market

*QIB: Qualified Institutional Buyer

Each Jurisdiction's Bond Market

Source: ADB Consultant for SF1.

3.5 Then, How to Connect Domestic Professional Markets in the Region? (Identifying Professional Market Segments / Features / Elements)

Conditions (elements) allowing Professional Markets to connect to each other

Source: ADB Consultant for SF1.
3.6 An Image of AMBIF - What AMBIF can Achieve?

AMBIF is designed to capture the common features and elements by focusing on the professional markets in the region.

Issuers can tap in all markets with harmonized documents for submission (SSF).

Professional Investors in the region can invest in all markets without knowing their regulations closely.

Market practice and issue process will be harmonized and standardized within the professional markets in the region.

3.7 “Market Function Principle” Based Approach by Disclosure

<table>
<thead>
<tr>
<th>Key Factor</th>
<th>Full Disclosure requires Market</th>
<th>Limited Disclosure Market (Our Target Mkt)</th>
<th>No Disclosure requires Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure</td>
<td>Full Disclosure Registrations (SRs)</td>
<td>Limited Disclosure Exemption (SSF)</td>
<td>Full Exemption</td>
</tr>
<tr>
<td>Investor</td>
<td>General Investors main</td>
<td>Professional Investors</td>
<td>100% Professional</td>
</tr>
<tr>
<td>Market Liquidity</td>
<td>○</td>
<td>○ Tradable among Professionals</td>
<td>X Non-tradable Possessed until maturity</td>
</tr>
<tr>
<td>Selling Restrictions</td>
<td>Nothing</td>
<td>Yes: to Non-professional investors</td>
<td>Yes: to Non-professional investors</td>
</tr>
<tr>
<td>Documents</td>
<td>Prospectus</td>
<td>Info. Memo Offering Circular (SSF)</td>
<td>-</td>
</tr>
</tbody>
</table>
### 3.8 AMBIF Elements (AMBIF Core Components)

<table>
<thead>
<tr>
<th>AMBIF Elements</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Domestic Settlement</td>
<td>Bonds and notes are settled at a national CSD in ASEAN+3 markets.</td>
</tr>
<tr>
<td>2. Harmonized Documents for Submission (SSF)</td>
<td>A common approach is of submitting information as input for regulatory process(es) where approval or consent is required. Appropriate disclosure information along with an ADRB recommendation needs to be included.</td>
</tr>
<tr>
<td>3. Registration or profile listing at ASEAN+3 (Place of continuous disclosure)</td>
<td>Information on bonds, notes, and issuers needs to be disclosed continuously in ASEAN+3 markets. Registration or a listing authority function is required to ensure continuous and quality disclosure.</td>
</tr>
<tr>
<td>4. Currency</td>
<td>The denomination of an issue is generally expected to be in the domestic currency of each ASEAN+3 market.</td>
</tr>
<tr>
<td>5. Scope of Issuer</td>
<td>Resident of ASEAN+3</td>
</tr>
<tr>
<td>6. Scope of Investors</td>
<td>Professional investors defined in accordance with applicable laws and regulations, or market practice, in each ASEAN+3 market</td>
</tr>
</tbody>
</table>

#### 4. What is ADRB?

ADRB, the AMBIF Documentation Recommendation Board
4. What is ADRB?

- **ADRB, the AMBIF Documentation Recommendation Board**, is an initiative of market practitioners, industry experts, and researchers. ADRB was established in the context of ABMF’s work on AMBIF in order to advise ABMF on professional bond market practices, including issuance documentation and disclosure practices.

- ADRB members and observers include debt capital market advisers, law and accounting firms, securities market intermediaries, research institutions, and bond and capital market associations. Participation is on a voluntary basis and participants are expected to proactively share their experience with members and observers.

- The objective of ADRB is to provide expert input, from time to time, to the ABMF meetings and other such gatherings, on ABMF- and AMBIF-related subjects from the consolidated perspective of a number of specialist industry participants, and to discuss and put forward recommendations for the practical application of specific market practices in the work of ABMF.

- ADRB has provided recommendations for the concept and contents of the SSF, as well as a list and grouping of supplementary documentation expected to be submitted for regulatory processes in participating AMBIF markets.

For details, see pages 56-74, “Frequently Asked Questions on AMBIF and the SSF” in Appendix 2 of the SF1 Phase 3 Report.

[https://asianbondsonline.adb.org/documents/abmf_ambif_implementation_guide_sf1.pdf](https://asianbondsonline.adb.org/documents/abmf_ambif_implementation_guide_sf1.pdf)

5. Comparative Analysis 2012/2016

(2016: Trial Excerpted Version)
5.1 Comparative Analysis (2012)
Details of SF1 Contents of Findings

1. Legal Tradition in the Domestic Capital Markets
2. Governing Law for Domestic Bond Issuance
3. Competent Authority (Regulator) and Self-Regulatory Organizations of Domestic Bond Markets
4. Role of the Self-Regulatory Organizations in Domestic Bond Markets
5. Definition of Securities (Bonds)
6. Event of Default and Payment Default
7. Existence of the Meeting of Bondholders System
8. The System of Commissioned Company, Bond Representative and Trustee
9. Bankruptcy Procedures
10. Form of Bonds (Settlement Method) and Status (Bearer/Registered)
11. Exchangeability of Scripless Bonds to Physical Bonds
12. Transfer of Securities (or Property Rights) and Finality of Settlement of Scripless Bonds
13. Legal Basis and Definition of “Settlement and Clearing”
14. Registration and Issuing Approval Procedures of Bonds
15. Necessity of Disclosure of Ultimate Beneficial Owner
16. Foreign Exchange and Currency-Related Restrictions
17. Omnibus Securities Account and Nominee Concept
18. Main Trading Places (Over the Counter or Exchange) and Existence of Exchange trading
19. Listing of Bonds and Obligation for Market Listing (Domestic Market)
20. Necessity of Credit Rating for the Issuing of Bonds
21. Documentation Language
22. Concept/Definition of Professional or Institutional investors
23. Definition of Public Offering (and Private Placement or Exempt Regime)
24. Existence of Professional Investors-Only Market
25. Market Capitalization – Size of the Local Currency Bond Market (as of March 2011)
26. Size of Foreign Currency Bond Market (as of March 2011)
27. Islamic Finance related Issues


5.2 Importance of Comparing Market Features

• It is very important for policy makers, market regulators and market participants in each jurisdiction to know the features of their own markets and those of other markets through the viewpoint of the comparative analysis.
• At the same time, it is also important to learn from the changes in features/characteristics of other markets and their market regulations.
• Bond Market Guide 2012 and Comparative Analysis in 2012 have already played an important role, but furthermore, Bond Market Guides 2016 and the Revised Comparative Analysis will play the role of an essential conduit function once again for all markets.
• This method can be applied to other regions’ markets.
5.3 (01) Legal Tradition (2016 revised version)

The legal tradition influences a bond market; but e.g. NOT necessarily the number of laws in existence.

More significant is the practical ease with which proposed or committed changes can be implemented in the existing legislative and regulatory framework.

5.4 (22) Existence of a Clear Definition of Professional Investor (2016)

<table>
<thead>
<tr>
<th>Jurisdiction/ Economy</th>
<th>Existence of Professional Investors Only Market</th>
<th>Existence of Exempt Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>Yes, exists, The Indonesia Stock Exchange has a professional investors only market.</td>
<td>No, the market is open to all.</td>
</tr>
<tr>
<td>Japan</td>
<td>Yes, exists. The Japan Stock Exchange has a professional investors only market.</td>
<td>No, the market is open to all.</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>The KOSPI and KOSDAQ have professional investors only markets.</td>
<td>No, the market is open to all.</td>
</tr>
<tr>
<td>Malaysia</td>
<td>No, does not exist.</td>
<td>No, the market is open to all.</td>
</tr>
<tr>
<td>Philippines</td>
<td>Yes, exists, The Philippine Stock Exchange has a professional investors only market.</td>
<td>No, the market is open to all.</td>
</tr>
<tr>
<td>Singapore</td>
<td>Yes, exists, The Singapore Exchange has a professional investors only market.</td>
<td>No, the market is open to all.</td>
</tr>
<tr>
<td>Thailand</td>
<td>Yes, exists, The Thai Stock Exchange has a professional investors only market.</td>
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</tr>
</tbody>
</table>

Table – from the Comparative Analysis part of the ASEAN+3 Bond Market Guide 2012 (Partly adjusted)  
Source: ADB Consultants, based on research materials and market visit and members feedback information

6. AMBIF Supports Market Developments

Approach taken in AMBIF can be introduced in other Markets
6. AMBIF Supports Market Developments

- AMBIF supports market developments at/from a very early stage of market creation in the region.
- AMBIF sets out necessary conditions/principles to develop a professional market in the region.
- Approach taken in AMBIF can be introduced in other markets.

7. ABMF Milestones and Next Steps

Future Areas of Focus
7.1 ABMF Milestones and Next Steps

- **ABMF Sub Forum-1**
  - AMBIF as a regional common professional bonds and notes issuance framework

- **ABMF Sub Forum-2**
  - Harmonization of message flows and standardization of message items

- **Regional (ASEAN) Market Harmonization & Integration**
  - Private sector focus
  - Trade, Front office side
  - Back office

- **Harmonization and Concession of the related Regulation and Taxation for AMBIF**

- **Common infrastructure to support regional solution**

- **ASEAN Financial Services Markets Integration**
  - ASEAN Financial Integration Framework (AFIF), ASEAN Banking Integration Framework (ABIF)
  - Qualified ASEAN Banks (QAB)+ PRC, JP, KR (+α)

7.2 Proposed Future Areas of Focus

Proposed future areas of focus of ABMI Task Force 3 (ABMF):

- Promote greater bond issuance and increase the number of participating member countries/markets under AMBIF.
  - Establish “**AMBIF Information Platform**” to support professional bond issuance

- Identify business cases and regulatory and tax hurdles for “**cross-border bond issuance, collateral, repurchase agreement (repo), and securities lending businesses**” within the region.

- Support adoption and implementation of **international standards (including ISO20022)** and promote standardization of regulatory and tax procedures for cross-border bond transactions.
7.3 New Working Groups (WG) in ABMF (Phase 3/4)

- **ABMI**
  - Asian Bond Markets Initiative

- **ABMF**
  - TF 1 (Supply)
  - TF 2 (Demand)
  - TF 3 (Regulation)
  - TF 4 (Infrastructure)

- **SF1**
  - Support AMBIF
  - Expand participating markets
  - Revision of **SSF** and **Impl GLs**

- **SF2**
  - Standardization
  - Support identification of transaction flows and technical specification of cross-border transactions

- **WG-IP**
  - AMBIF Information Platform

- **WG-CBCR**
  - Cross-border Collateral and Repo Business

7.4 Steps Towards More Integrated Markets

- **ASEAN+3 Bond Market Guide 2016**
- **Identification of transaction flows**
  - Identification of differentials which can be barriers for cross-border transactions

- **Mitigate the differences in taxations and regulations**
  - AMBIF
  - Implementation of Intra-Regional (International) Standards

- **Tax rate and procedures**
  - Streamlining
  - Information exchange on origin of investors

- **Regulations**
  - Substituted Compliance
  - Expedited Review Framework
  - Proxy approach

Regionally More-Integrated Markets

As of end of November 2016

8.1 Bond Market Guide 2016 Revising Status (end of Nov)

https://asianbondsonline.adb.org/
8.2 Bond Market Guide 2016 – Available Markets

As of end of November 2016, Hong Kong, Japan, Malaysia, Singapore and Thailand BMGs 2016 are available. (PDF Version Published)

https://asianbondsonline.adb.org/

- Hong Kong
  https://asianbondsonline.adb.org/documents/abmf_hkg_bond_market_guide_5th.pdf?src=spotlight
- Japan
- Malaysia
- Singapore
- Thailand

14 Market Guides will be available by the end of March 2017

9. New Findings and Conclusion

Findings to follow are often direct result of policy dialogue during e.g. BMG 2016 discussions
9.1-1 New Findings (October 2016)

- Cambodia 2016:
  - 'Qualified Investor' concept introduced (8/2016) as separate regulation; which defines Institutional Investors and HNWI
- People’s Republic of China since 2012:
  - The first Chinese renminbi-denominated direct private placement note issue of a foreign corporate issuer in the Interbank Bond Market (IBBM) (Daimler AG, April 2015)
  - Major step toward giving foreigners free access to IBBM from 17 February 2016
  - QFIs now have less stringent qualifying criteria and streamlined approval process
  - SAFE changed overseas investor capital out-flow rules
- Hong Kong, China since 2012:
  - Continuous Disclosure Requirements in the Hong Kong Bond Market
  - Implementation of ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) with effect from August 2015
- Indonesia since 2012:
  - OJK introduced Shelf Registration concept for the public offering of debt securities and/or sukuk
  - OJK introduced Regulation Concerning Guideline of Repurchase Agreement Transaction for Financial Services Institutions
  - As part of its continuing remit for foreign exchange and monetary policy regulations, Bank Indonesia prescribed that banks may no longer purchase IDR bonds issued by nonresidents
  - Bank Indonesia developing next generation version of BI-SSSS (Scripless Securities Settlement System)
  - In June 2016, MOF provided tax incentives to investors in conventional and Islamic foreign currency-denominated government bonds by removing the withholding tax on interest payments. The incentives are applicable retroactively from January 2016
- Japan since 2012:
  - Implementation of ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) with effect from August 2015
  - ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) pilot issuance listed on TOKYO PRO-BOND Market (TPBM) in September 2015
- Republic of Korea since 2012:
  - “Regulation on Issuance, Public Disclosure, etc. of Securities” was revised on 30 December 2014: extended to securities that are issued by foreign entities and bear the characteristics of foreign currency denominated bonds, etc.
  - “Qualified Institutional Buyers (QIB) system for SMEs” was introduced in May 2012
  - Deregulation for a QIB-centered Private Placement Market creation:
    - In October 2015, FSC announced the “Measures to boost competitiveness of financial investment business,” which encapsulates its plans aimed at deregulation to create an environment conducive to revitalizing a QIB-centered private placement market.
    - Relevant regulations operating the new system were amended on 1 August 2016
  - Establishment of the KOFIA QIB-eligible Securities Market:
    - KOFIA launched a QIB-eligible securities registration and disclosure platform (English available for foreign issuers) effective 1 August, 2016
- Lao PDR since 2012:
  - Establishment of the Lao Securities Commission (LSC) (2013) after establishment process as LSC Office since 2009 under the guidance of Bank of Lao PDR
  - Promulgation of the Law on Securities (2013) and subsequent regulations, augmenting and in relevant parts replacing the Decree on Securities and Securities Exchange No. 255/PM (2010)
  - Regulation on Issuance of Corporate Bonds (2014) introduced public offers and private placements, although both issuance types include similar regulatory processes
  - LSX introduced Bond Listing Regulations (2015)
  - LSX developing a bond trading platform for both corporate and government bonds, expected to be launched by the 3rd QTR of 2016
- Malaysia since 2012:
  - Introduction of the Lodge and Launch Framework:
    - Effective 15 June 2015, the SC introduced a new regulatory framework with a particular focus on the professional bond market. The Lodge and Launch Framework allows issuers to issue bonds, notes and sukuk aimed at Sophisticated Investors once they have lodged the required documents and information with the SC
  - Removal of credit rating requirements:
    - The need for mandatory rating of corporate bonds and sukuk will be removed effective 1 January 2017

9.1-2 New Findings (October 2016)

- Republic of Korea since 2012:
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9.1-3 New Findings (October 2016)

- Philippines since 2012:
  - Bureau of Internal Revenue (BIR) rulings part of developments leading to discontinuation of private placements (corporate notes) and repo market (2012 onwards):
    - Corporate notes (private placements) also subject to creditable WHT of 20% (was 2%)
    - Corporate note issuances ceased or converted to longer-term, public offers
    - Concurrently, SEC stopped using the term ‘private placement’ in its revised Implementation Rules and Regulations (IRR) for the Securities Regulation Code (SRC)
    - Consequently, corporate bonds and notes are typically offered using either “public offers” or “an offer under the Exempt Transactions provisions in the SRC, or offers to Qualified Buyers (QB)”, instead of PP.
    - Treatment of repo transactions ruled as disposal and, hence, counter to expected repo principle
    - But, BSP is working to revive the repo market
    - Many practical changes in 2015 SRC Implementation Rules and Regulations (IRR)
    - PDEx’ QB Board to be activated after rule change considerations
    - Implementation of ASEAN+3 Multi-Currency Bond Issuance Framework with effect from August 2015

- Singapore since 2012:
  - Enhancements and Extension of Qualifying Debt Securities Scheme:
    - Qualifying income derived by investors from debt securities may be tax exempt or enjoy a concessionary tax rate if debt securities qualify under the QDS or QDS Plus schemes, respectively, which have been extended to 2018
  - Implementation of ASEAN+3 Multi-Currency Bond Issuance Framework with effect from August 2015
  - MAS introduced Seasoning Framework and Exempt Bond Issuer Framework in May 2016 to increase retail investor participation in the bond market

9.1-4 New Findings (October 2016)

- Thailand since 2012:
  - PP-AI Regime introduction and enhancement (2012-2016)
    - Definition of Accredited Investors (AI, professional investor concept) and of provisions for private placements (PP) aimed at such investors – hence, PP-AI regime
    - Some private placements are not required by regulations to carry a credit rating
    - PP-AI regime further enhanced by the acceptance of English documentation and disclosure items for issuance approvals sought from the regulatory authorities, including use of the Single Submission Form (SSF) in 2015.
  - Implementation of AMBIF with effect from August 2015.
  - SEC to introduce MTN program issuance regulations (still in 2016)

- Viet Nam since 2012:
  - Existing Decree 90 under review for definition of “non-public offering of securities” and “private placement”
  - Currently, in Clause 1, Article 1, Decree 90 provides for the private placement of bonds; Clause 4, Article 2 then describes private placement as the issuance of bonds to less than one hundred investors, excluding institutional investors. These descriptions are considered not clear enough, would not be able to support a professional market segment.
9.2 Continuous Dialogue induced Positive Interaction

- Findings stated above (positive regulatory revision etc.) are often direct result of policy dialogue, e.g., BMG 2016 discussions.
- Often, developing/frontier markets positive regulatory changes are a direct result of policy dialogue/ABMF discussion.
- Dialogue lead to regulators deciding on and implementing solutions best suitable for their market, by themselves.
- **Conclusion – Continuous Dialogue induced Positive Interaction and Voluntary Regulatory Changes.**
SESSION 6

Wrap-up by ADB Secretariat
Update on the
ASEAN+3 Bond Market Guides (2016)

Prof. Shigehito Inukai
ADB Consultant for ABMF SF-1 / Waseda Univ.
Matthias Schmidt, ADB Consultant

9 January 2017

Bond Market Guides 2016

As of 9 January 2017
As of end of November 2016, Hong Kong, Japan, Malaysia, Singapore and Thailand BMGs 2016 had been published as PDF versions.


We are hopeful that all 14 Market Guides will be available by the end of Q1 or in Q2 2017.
Important Considerations

• We request that all ABMF members approached by SF1 conduct or finalise the review of their market’s BMG at the earliest opportunity.
• We would need to discuss and decide whether the BMGs in progress will continue to be called ‘Bond Market Guides 2016’ or ‘Bond Market Guides 2017’, since publication will now stretch across years.
• For those markets finalising their BMGs in Q1 or Q2, 2017, maybe opportunities present themselves during which a completion of the BMG should be targeted, and could be presented to the public.
• To what extent do we (SF1 and members) want to consider utilising BMG content for domestic sources, e.g. websites or information material (i.e. synching validating information across market sources).

Thank You!

Prof. Shigehito Inukai
ADB Consultant,
Waseda University
1-21-1 Nishiwaseda, Shinjuku-ku
Tokyo 169-0051
Office +81 3 5286 1994
Mobile +81 80 3360 7551
shige.inukai@me.com

Matthias Schmidt
ADB Consultant
Mobile +61 423 708910
maccschmidt@me.com