The ASEAN+3 Bond Market Forum (ABMF) was established in May 2010 by the finance ministers of the Association of Southeast Asian Nations (ASEAN) plus the People’s Republic of China, Japan, and the Republic of Korea—collectively known as ASEAN+3—under the Asian Bond Markets Initiative (ABMI). The Forum is the only regional platform of which actions and recommendations are reported to the ASEAN+3 policy discussion. It functions to integrate the ASEAN+3 markets through standardization and harmonization of regulations and market practices as well as market infrastructures relating to cross-border bond transactions.

Since its establishment, the ABMF has produced various outputs and created impacts. In 2012, the ABMF released the ASEAN+3 Bond Market Guide, the first officially recognized publication of bond market regulations and settlement procedures in ASEAN+3 economies. The market guide helped narrow information gaps and increase market transparency, which was often regarded as the biggest barrier to market entry. In 2014, to provide policy recommendations to standardize securities transaction flows in the region, ABMF published the Sub-Forum 1 (SF1) Phase 2 Report: Proposal on ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) as a regionally standardized bond issuance framework, and the Sub-Forum 2 (SF2) Phase 2 Report: ASEAN+3 Information on Transaction Flows and Settlement Infrastructures. After the endorsement of both reports by the ASEAN+3 finance ministers in 2015, ABMF released two Phase 3 reports: Implementation of the AMBIF: ABMF SF1 Phase 3 Report, and Harmonization and Standardization of Bond Market Infrastructures in ASEAN+3: ABMF SF2 Phase 3 Report. The SF1 Phase 3 report contained the Single Submission Form (SSF) to be utilized in the markets participating in AMBIF and explained the procedures for issuing an AMBIF bond. The SF2 Phase 3 report (i) identified and agreed upon key transactional financial messages to be harmonized and standardized to facilitate cross-border bond transactions, and (ii) successfully demonstrated the readiness of the region to implement key international standards such as ISO 20022 by 2025. As a result, implementation of ISO 20022 was included as one of the strategic measures for financial integration in the ASEAN Economic Community Blueprint 2025.

ABMF meetings are held three times a year, bringing together more than 100 experts from the ministries of finance, central banks, securities market regulators, central securities depositories, securities exchanges and market operators, financial market associations as well as major financial institutions and IT vendors in the region. The forum is open to experts who are interested in bond market developments and regional financial cooperation.

The 31st ABMF will be organized jointly by the APEC Business Advisory Council/Asia Pacific Financial Forum, XBRL International, and kindly hosted by Daito Bunka University. Tentatively, the Forum plans to discuss:

- the recent bond market developments in the region;
- good practices to develop a local currency bond market;
- regulatory issues such as the benchmark reform and its impact on Asia;
- technology to improve regulation and regulatory reporting;
- the account structure study to contribute to standardization of know-your-customer (KYC) procedures;
- other issues relevant to bond market development.
## DAY 1 – 24 JUNE 2019
Venue: 1st Floor Hall, Daito Bunka kaikan of DBU
2-4-21 Tokumaru, Itabashi-ku, Tokyo

### Sub-Forum 1 Meeting

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ABMF Sub Forum 1 (SF1) Meeting</strong></td>
<td>** Registration**</td>
</tr>
<tr>
<td>09:00 – 09:30</td>
<td><strong>Welcome Remarks</strong> by Mr. Hirofumi Kadowaki, President, Daito Bunka University</td>
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<tr>
<td>09:30 – 09:40</td>
<td><strong>Opening Remarks</strong> by Mr. Toshio Oya, Deputy Director-General, International Bureau, Ministry of Finance of Japan</td>
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<tr>
<td>09:40 – 09:50</td>
<td><strong>Photo Session</strong></td>
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<tr>
<td>09:50 – 09:55</td>
<td><strong>Opening by</strong> Mr. Koji Ito, SF1 Chair</td>
</tr>
<tr>
<td>09:55 – 10:00</td>
<td><strong>Session 1: ABMI and Progress of Bond Market Development in Asia</strong></td>
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<tr>
<td></td>
<td>- Good Practices for Developing a Local Currency Bond Market by ADB secretariat</td>
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<td>- PRC Exchange Bond Market (30 min) by SSE and SZSE</td>
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<td>- Mongolia (15 min) by MMOF</td>
</tr>
<tr>
<td>10:00 – 10:45</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>11:00 – 11:15</td>
<td><strong>Session 2: Update of Credit Guarantee and Investment Facility (CGIF)</strong> by Mr. Kiyoshi Nishimura, CGIF</td>
</tr>
<tr>
<td>11:15 – 12:00</td>
<td><strong>Session 3: Update on Bond Market Development Support by Technical Assistance and Coordination Team (TACT)</strong> by TACT consultants (Daiwa Institute of Research and Nomura Research Institute)</td>
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<td></td>
<td>- Viet Nam (NRI)</td>
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<td>- Myanmar (DIR)</td>
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<td>- Philippines (DIR)</td>
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<tr>
<td>12:00 – 12:30</td>
<td><strong>Session 4: Recent Developments in Asian bond markets</strong> by ABO team</td>
</tr>
<tr>
<td>12:30 – 12:40</td>
<td><strong>Session 5: Bond market-related macroeconomic updates</strong> by Mr. Yasuto Watanabe, Deputy-Director, ASEAN+3 Macroeconomic Research Office (AMRO)</td>
</tr>
<tr>
<td>12:40 – 14:00</td>
<td><strong>Lunch</strong></td>
</tr>
<tr>
<td>14:00 – 15:00</td>
<td><strong>Session 6: Benchmark Reform and its Impact on Asia</strong></td>
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<tr>
<td></td>
<td>- What is the Benchmark reform? – regulator’s perspective by Ms. Simonetta Iannotti, FSB (20 min)</td>
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<td>- What is the Benchmark reform? – market’s view by Ms. Tomoko Morita, ISDA (20 min)</td>
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<td></td>
<td>- Possible impact on emerging Asia by Mr. Edmund Lee and Nick Burrough, Bloomberg (20 min)</td>
</tr>
<tr>
<td>15:00 – 15:15</td>
<td><strong>Coffee Break</strong></td>
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<td>TIME</td>
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<tr>
<td>15:15 – 16:20</td>
<td><strong>Session 7: Panel discussion - Benchmark Reform and its Impact on Asia</strong></td>
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<td></td>
<td>- Preparation and discussion in developed markets</td>
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<td></td>
<td>- Possible impacts on emerging Asia and potential risks and disruptions</td>
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<td></td>
<td>- what do we need to consider and prepare?</td>
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<tr>
<td></td>
<td><strong>Panelists</strong></td>
</tr>
<tr>
<td></td>
<td>- Ms. Simonetta Iannotti, FSB</td>
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<td></td>
<td>- Ms. Tomoko Morita, ISDA</td>
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<td></td>
<td>- Mr. Taro Matsuura, MUFG</td>
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<td></td>
<td>- Mr. Matthew Chan, Executive Director, Head of Policy &amp; Regulatory Affairs</td>
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<td>ASIFMA</td>
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<td></td>
<td>- Ms. Vicky Cheng, Bloomberg</td>
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<tr>
<td></td>
<td><strong>Moderator</strong></td>
</tr>
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<td></td>
<td>- Mr. Satoru Yamadera, Principal Financial Sector Specialist, ADB</td>
</tr>
<tr>
<td>16:20 – 16:30</td>
<td><strong>Closing Remarks by ADB and SF1 Chair</strong></td>
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</tbody>
</table>
**Sub-Forum 2 Meeting**

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
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</thead>
<tbody>
<tr>
<td>09:00 – 09:30</td>
<td>Registration</td>
</tr>
<tr>
<td>09:30 – 09:35</td>
<td>Opening Remarks by Mr. Seung-Kwon Lee, SF2 Chair</td>
</tr>
<tr>
<td>09:35 - 10:15</td>
<td><strong>Session 8: Regional Financial Stability and Cross-Border Collateral</strong></td>
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<tr>
<td></td>
<td>- Overview of regional safety-net by Mr. Namsung Kim, AMRO (20 min)</td>
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<td></td>
<td>- Regulatory risk mitigation and necessary consideration for more sound regional financial systems by Satoru Yamadera, ADB (20 min)</td>
</tr>
<tr>
<td>10:15 - 11:10</td>
<td><strong>Session 9: Technology to Improve Regulatory Reporting – RegTech</strong></td>
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<td></td>
<td>- Technological trend and evolution by Satoru Yamadera, ADB (10 min)</td>
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<td></td>
<td>- Use of Artificial Intelligence, Optical Character Recognition (OCR), and Robotics Process Automation (RPA) by Mr. Takuya Nakagawa, Manager, RPA Solution Group, NTT Data (45 min)</td>
</tr>
<tr>
<td>11:10 – 11:30</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>11:30 – 12:30</td>
<td><strong>Session 10: Account Structure Study and Standardization of KYC</strong></td>
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<tr>
<td></td>
<td>- Recommendation to ASEAN+3 (30 min)</td>
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<td></td>
<td>- Comments from international experts (30 min)</td>
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<td></td>
<td>Mr. Masayuki Tagai, Network Management; Mr. Boon Hiong Chan, Deutsche Bank; Mr. Stephen Bruce, Ernst &amp; Young</td>
</tr>
<tr>
<td>12:30 – 14:00</td>
<td><strong>Lunch, (name of function room)</strong></td>
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<tr>
<td>14:00 – 15:00</td>
<td><strong>Session 11: FinTech and RegTech</strong></td>
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<tr>
<td></td>
<td>Each speaker presents potential use case of technology for finance, regulation, and supervision</td>
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<tr>
<td></td>
<td>- RegTech case in Europe by John Turner, XBRL International (30 min)</td>
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<td></td>
<td>- Legal Entity Identifier (LEI) for FinTech and RegTech (30 min)</td>
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<tr>
<td></td>
<td>by Mr. Hiroshi Nakatake, Managing Director, Transaction Banking Division, MUFG Bank &amp; Mr. Masayuki Tagai, Managing Director, Network Management</td>
</tr>
<tr>
<td>15:00 – 15:20</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>15:20 – 16:25</td>
<td><strong>Session 12: Panel Discussion: How can technology improve the region’s regulatory environment and support market integration?</strong></td>
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<tr>
<td></td>
<td>- Use of technology to improve finance</td>
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<td></td>
<td>- Recommendation for KYC process and use of LEI</td>
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<td></td>
<td>- Implication for regional market integration</td>
</tr>
</tbody>
</table>
## ABMF Sub Forum 2 (SF2) Meeting

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
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</thead>
<tbody>
<tr>
<td>16:25 – 16:30</td>
<td>Wrap-up by ADB and SF2 Chair</td>
</tr>
<tr>
<td>Panelist</td>
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<tr>
<td></td>
<td>- Ms. Kaori Horaguchi, ISDA (Tokyo)</td>
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<td></td>
<td>- Mr. Julius Caesar Parrenas, APEC Business Advisory Council</td>
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<td></td>
<td>- Mr. Boon-Hiong Chan, Director, Global Head of Market Advocacy, Deutsche Bank</td>
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<td>- Ms. Meiko Morioka, Manager, SWIFT</td>
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<td></td>
<td>- Mr. Peter Mcmillan, Bloomberg</td>
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<td></td>
<td>- Mr. Yoshiaki Wada, Chair XBRL Asia Round Table</td>
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<tr>
<td>Moderator</td>
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<td></td>
<td>- Satoru Yamadera, ADB</td>
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</table>
**DAILY PROGRAM**

**Venue:** 1st Floor Hall, Daito Bunka Kaikan of DBU  
2-4-21 Tokumaru, Itabashiku, Tokyo

**ABMF – XBRL Joint Asian Roundtable (PART 1)**

**ASEAN+3 Bond Market Forum (ABMF) – eXtensible Business Reporting Language (XBRL)**  
**Joint Asian Roundtable**  
“Creating the Future: SupTech and RegTech powered by Standards and Structured data”

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
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<tbody>
<tr>
<td>09:00 – 09:15</td>
<td>Registration</td>
</tr>
<tr>
<td>09:15 – 09:25</td>
<td>Welcome Remarks by Mr. Kyosuke Wagai, Chairman of XBRL Japan, Co-host</td>
</tr>
<tr>
<td>09:25 – 09:35</td>
<td>Remarks by Dean of Faculty of Business Administration, Daito Bunka University</td>
</tr>
<tr>
<td>09:35 – 10:05</td>
<td>Report from XII by Mr. John Turner, CEO XBRL International</td>
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</table>

**Recent Trends in Automated Regulatory Reporting and Supervisory Information Collection**

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
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<tbody>
<tr>
<td>10:05 – 10:45</td>
<td>Key note Session 1: Digital innovation and Regulation – US cases</td>
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<tr>
<td></td>
<td>FDIC XBRL and Fintech Update (Mr. Mark Montoya, Webex 20 min)</td>
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<td>SEC (Mr. Mike Willis, Mr. Jonathan Ingram, Webex 20 min)</td>
</tr>
<tr>
<td>10:45 – 11:00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:00 – 11:30</td>
<td>Key note session 2: SupTech case in Japan by Mr. Daisuke Nakai, JFSA</td>
</tr>
<tr>
<td>11:30 – 12:00</td>
<td>Key note Session 3: Regulatory Modernization – India’s case by Mr. Prithwis Jana, Reserve Bank of India</td>
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<tr>
<td>12:00 – 12:40</td>
<td>Wrap-up Panel 1: The Future of Regulation</td>
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<td></td>
<td>- With technologies, what becomes possible?</td>
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<tr>
<td></td>
<td>Panelist</td>
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<tr>
<td></td>
<td>- Mr. Daisuke Nakai, JFSA</td>
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<td></td>
<td>- Mr. Prithwis Jana, RBI</td>
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<td></td>
<td>- Mr. Michal Piechocki, BR-AG</td>
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<td></td>
<td>- Mr. Satoru Yamadera, ADB</td>
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<td></td>
<td>Moderator</td>
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<td></td>
<td>- Mr. Yoshiaki Wada, Chair XBRL Asia Round Table</td>
</tr>
<tr>
<td>12:40 – 13:40</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:40 – 14:10</td>
<td>Key note Session 4: XBRL and ESG reporting by Mr. Toshikazu Otsuka, NTT Data Institute of Management Consulting</td>
</tr>
<tr>
<td>14:10 – 14:40</td>
<td>Key note Session 5: XBRL and Artificial Intelligence by Mr. Shogo Oyama, XBRL</td>
</tr>
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</table>
**ASEAN+3 Bond Market Forum (ABMF) — extensible Business Reporting Language (XBRL) Joint Asian Roundtable**

“Creating the Future: Supertech and Regtech powered by Standards and Structured data”

<table>
<thead>
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<th>TIME</th>
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<tbody>
<tr>
<td></td>
<td>Japan</td>
</tr>
<tr>
<td>14:40 – 15:00</td>
<td>Coffee break</td>
</tr>
</tbody>
</table>
| 15:00 – 16:20 | Wrap-up Panel 2: Text mining, Artificial Intelligence, and technology to overcome difference in languages  
- Technology trend  
- How we can integrate the markets with technologies  
Presentation:  
- The PRA’s approach to Regtech, Mr. Nick Vaughan, BOE, (Webex 15 min)  
- XBRL and the new approach to data collection in the Bank of Russia, Ms. Olga Goncharova, Central Bank of the Russian Federation (20 min)  
- Data and AI: how we can design trusted future, Mr. Masatomo Goto, Fujitsu (20 min)  
Panelist  
- Mr. Masatomo Goto, Fujitsu  
- Ms. Olga Goncharova, Central Bank of Russian Federation  
- Mr. Satoru Yamadera, ADB  
- Mr. John Turner, CEO XBRL International  
Moderator  
- Mr. Yoshiaki Wada, Chair XBRL Asia Round Table |
| 16:20 – 16:30 | Wrap up                                                                |
| 18:30 – | Welcome reception hosted by XBRL Japan  
**ABMF – XBRL Joint Asian Roundtable (Part 2)**
Venue: Room 10202 (Building No.1), ITABASHI CAMPUS of DBU

### ASEAN+3 Bond Market Forum (ABMF) – eXtensible Business Reporting Language (XBRL) Joint Asian Roundtable
“Creating the Future: Suptech and Regtech powered by Standards and Structured data”

<table>
<thead>
<tr>
<th>TIME</th>
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<tbody>
<tr>
<td>09:00 – 09:15</td>
<td>Registration</td>
</tr>
<tr>
<td>09:30 – 10:30</td>
<td>Update from members</td>
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<tr>
<td></td>
<td>Mr. Tom Leahy, Vizor, Implementing Structured Data Collections (20minutes)</td>
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<td>Ms. Connie Chen, PwC China (20 minutes)</td>
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<td>Mr. Alexander Panjaitan / Ms. Diandini Susalit, IDX (20 minutes)</td>
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<tr>
<td>10:30 – 10:50</td>
<td>Coffee break</td>
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<tr>
<td>10:50 – 11:30</td>
<td>Update from members</td>
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<td>Albert Chou, Taiwan Stock Exchange (20minutes)</td>
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<td></td>
<td>Yongjune Chung, XBRL Korea (20minutes)</td>
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<tr>
<td>11:30 – 12:00</td>
<td>Wrap-up panel</td>
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<tr>
<td>12:00 – 12:30</td>
<td>Technical update from XII, by Mr. John Turner, CEO XBRL International</td>
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<tr>
<td>12:30 – 13:30</td>
<td>Lunch</td>
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<tr>
<td>13:30 – 14:00</td>
<td>Vendor session</td>
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<td>Ms. Avey Starr, Managing Director, Seating Inc.</td>
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<td>Mr. K Balachandran, IRIS</td>
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<td>Mr. Raymond Connolly, Vizor</td>
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<td>Mr. Tadashi Okai, Fujitsu</td>
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<td></td>
<td>Mr. Yuichiro Nakayama, NTT Data System Technologies</td>
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<td></td>
<td>Mr. Michal Piechocki, BR-AG</td>
</tr>
<tr>
<td>14:00 – 14:45</td>
<td>Wrap up</td>
</tr>
<tr>
<td>15:00 – 16:00</td>
<td>Campus Tour (Discover Daito Bunka University)</td>
</tr>
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</table>
DAY 5 – 28 JUNE 2019
(Restricted to Registered Participants for 28 June Only)

Future of Technology Day

The participants are cordially invited for a half-day NTT site visit.

NTT DATA Corporation
Toyosu Center Building, 3-3, Toyosu 3-chome
Koto-ku, Tokyo 135-6033, Japan

NTT DATA, one of the ABMF international experts, will provide ASEAN+3 policymakers and infrastructure operators with a half-day program titled “Future Technology Day” on the morning of Friday, June 28.

The program will provide a unique opportunity for them to know cutting-edge information and communications technologies (ICT) that may have the potential for solving a wide range of economic and social problems in their respective countries.

NTT DATA is part of the NTT Group, a world-leading ICT conglomerates that originates from a government-owned company called Nippon Telegraph and Telephone Public Corporation (privatized in 1985). The company specializes in data processing and communications in the Group and provides ICT services ranging from consulting and system development to outsourcing business.

Participants will be invited to the premises of NTT DATA. Several presentations and demonstrations will be done based on the latest technologies, not only those already adopted in commercial products/services but also those still in their infancy.
## NTT DATA CORPORATION
### Site Visit Schedule
(RESTRICTED TO REGISTERED PARTICIPANTS FOR 28 JUNE ONLY)

<table>
<thead>
<tr>
<th>TIME</th>
<th>PROGRAM</th>
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<tr>
<td>08:45 - 09:00</td>
<td><strong>Roll call</strong>&lt;br&gt;❖ Transportation by bus will be provided from from two pick-up points:&lt;br&gt;➢ (1) Hotel Metropolitan Ikebukuro&lt;br&gt;➢ (2) Sunshine City Prince Hotel&lt;br&gt;❖ Bus assignment for participants staying at other hotels are as follows:&lt;br&gt;➢ (1) Hotel Metropolitan Ikebukuro: APA Hotel Ikebukuro-Eki-Kitaguchi and Super Hotel LOHAS Ikebukuro-Eki Kitaguchi&lt;br&gt;➢ (2) Sunshine City Prince Hotel Bus: Centurion Hotel Ikebukuro&lt;br&gt;➢ Participants who did not provide their hotel name should proceed to Hotel Metropolitan Ikebukuro (1)&lt;br&gt;Note: Bus will leave the hotel at exactly 9:00AM</td>
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<tr>
<td>09:00</td>
<td><strong>Exact Time of Departure</strong></td>
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<tr>
<td>09:00 - 10:00</td>
<td><strong>Travel Time</strong></td>
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<tr>
<td>10:00 - 10:15</td>
<td><strong>Arrival</strong>&lt;br&gt;- Conducts procedures for entering the building and moving to the meeting room.</td>
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<tr>
<td>10:15 – 11:45</td>
<td><strong>Program</strong>&lt;br&gt;- Welcome speech and introductory video&lt;br&gt;- The four groups enjoy the same presentations and demonstrations but in different order.&lt;br&gt;- Examples of demonstrations (subject to change): High-resolution digital 3D map, tactile technology for navigation, and virtual reality for working at dangerous high places.</td>
</tr>
<tr>
<td>11:45 – 12:00</td>
<td><strong>Wrap up</strong>&lt;br&gt;- Moving back to the building entrance.</td>
</tr>
<tr>
<td>12:00</td>
<td><strong>Depart for Ikebukuro</strong>&lt;br&gt;- The bus may stop by at several places to drop off participants (e.g., Ginza and JR Tokyo Station).</td>
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</tbody>
</table>
NEW APPROACH TO DATA COLLECTION

OLGA GONCHAROVA

REPORTS PROCESSING DEPARTMENT
BANK OF RUSSIA
New challenges

Tools and approaches
• Granular data collection
• Machine-readable regulation

XBRL in the Bank of Russia
• Scope
• XBRL taxonomy structure

XBRL Russia
NEW CHALLENGES

Mega regulator

Unified processes of data collection

Single entry point for data collection (Hub)

Single point of contact

Centralize knowledge management

Unified data model (XBRL / XML / SDMX)

New challenges

✓ Granular data collection
✓ Robotic process automation (RPA)
✓ Machine-readable regulation (MRR)

✓ Different types of reporting (paper, etc.)
✓ 15 000+ supervised organizations
✓ Different processes and systems
✓ Different types of reporting

Unified processes of data collection

Mega regulator

THE FEDERAL FINANCIAL MARKETS SERVICE
THE CENTRAL BANK OF THE RUSSIAN FEDERATION
THE BANK OF RUSSIA MEGA REGULATOR

Regulated organizations:
- Banks
- Non-bank credit organizations
- Insurance companies
- Pension funds
- Stock exchanges
- Payment systems
- Investment funds
- Special char.of accounts for banks
- XBRL
- SDMX
- Microfinance
- Leasing

Unified chart of accounts:
- Banks - XBRL based
- Non-bank credit - XBRL based
- Insurance - XBRL based
- Pension funds - XBRL based
- Stock exchange - XBRL based
- Payment systems - XBRL based
- Investment funds - XBRL based
- Microfinance - XBRL based
- Leasing - XBRL based

After 2012
INFORMATION FOR THE BANK OF RUSSIA

Data sources
- Supervised entities
- Federal authorities
- Security market participants
- Issuers
- License applicants
- Mortgage lending agency
- Information and analytic agencies
- Foreign regulators and international organizations
- etc.

Types of data
- Financial reporting
- Supervisory and statistical reporting
- Anti-money-laundering and financing of terrorism
- Replies to ad-hoc requests
- Statistical and macroeconomic data
- Requests under the Federal Law
- Appeals, complaints
- etc.

Format
- XBRL/ XML
- XBRL/ XML
- XML
- XBRL/ XML
- XML/ SDMX
- CSV, PDF
- Paper, PDF
Before

Bank of Russia (central apparatus)

Reporting

As is

Semi automatically process (RPA) of controls validating + order issuance

Non-regulatory reporting of Banks

XML

Regulatory reporting of Banks

XML XBRL ( > 90% data collected)

Reporting of NBFI

XML Edifact
TOOLS AND APPROACHES
In the current reporting framework, regulators are basically “historians.”

Regulators should switch to “high frequency” reporting or prevent analysis. But how?

- **Granular data reporting – from reports to triggers and deviations** *(case below)*

  Due to its volume and complexity – only RPA is possible, but…

- **Robots need algorithms – machine-readable regulation (MRR)** *(case below)*

  Reporting (legal) acts transform to XML schemes ready for reading and implementation by robots.

In the future reporting framework, regulators analyze deviations online while supervision and regulation is made/ perceived by machines (MRR). Regulators should become “predictors.”
Bank of Russia’ project “General Ledger of the Credit Organization”

**Project Goals**
- Creating conditions for the transition from "form-centric" to "date-centric" principle of collecting reports
- Improving the reliability and efficiency of reporting data, the elimination of redundancy and duplication
- Reducing the burden on credit organizations
- Empowering Supervisory Analytics

**The composition of the data of the General Ledger**
- Accounts
- CO’ Accounts turnovers
- Transactions
- Clients
- Account blocking

07.2018 Start of Project  01.2021 All CO provide data on a daily basis.

1) Current format – XML (XBRL-CSV or XBRL-JSON in the future?)
2) Technical issues – File size: two terabytes in zip archive/ per day forms
3) Analysis of data collected – new BI tools needed
New supervisory requirements → Legal act → Interpretation of the legal act and business rules/development and software → Generation of reporting data from a variety of systems → XBRL-based data warehouse and accounting systems

as is

Manual reports generation, automated implementation of new requirements takes 3-6 months regardless of changes’ types

~ 37,000 reporting elements initially

Complaints about the current legal field

The implementation of minor taxonomy changes takes 1-7 days;

The implementation of automated generation of new supervisory requirements takes 1-3 months

~ 16,000 reporting elements in taxonomy

It is proposed to publish a single-page legal act with reference to the taxonomy as a legally binding reporting framework in the future

The ability to use Table Link for automated constructor building is the basis for flexible analytics and cross-sectoral supervision for the Bank of Russia

to be
XBRL IN THE BANK OF RUSSIA

XBRL RUSSIA
Financial reporting data, supervisory and statistical data

Since 2018 XBRL filing has become mandatory for:

- insurance companies;
- management companies;
- non-state pension funds;
- securities market participants.

After 2019 – XBRL implementation for:

- credit rating agencies, specialized depositories, microfinance companies.

Next steps

Translation of accounts of the exchange infrastructure on the XBRL:

- Central counterparty
- National Settlement Depository

Decision on XBRL for banks will be made depending on the results of the current XBRL implementation project for non-lending financial institutions
I – XBRL taxonomy structure

- Very complex and detailed taxonomy
- Granular unified chart of accounts

- Taxonomy core is ready for usage by banks – the same chart of accounts
- Granularity of the taxonomy allows to collect all reports automatically and covers ~97% of the management accounting needs of companies

II – Levels of granularity

*Elements - business reporting concepts defined in a taxonomy and quantified in an XBRL instance document.*
Status

- XBRL Russia is a non-profit organization that brings together interested stakeholders (financial market participants and software developers) to implement the XBRL standard in Russia
- Comprises about 100 members (users of XBRL RU services)
- Web-site www.xbrl.ru
- Regularly holds working groups meetings and other working meetings with its members
- Supports XBRL department at the Financial University

Initiatives for market development

- RegTech and SupTech initiatives
- XBRL software certification
- Consulting services
- Training and individual certification

XBRL Russia activities contribute to:
- improve data quality and efficiency of working with reporting data;
- increase data reliability and transparency;
- integration into the global financial market.
THANK YOU!
Regulatory Modernization
– India’s case

Automated Regulatory Reporting and Supervisory Information Collection

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Director
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Regulatory Requirements

- As part of the regulatory and supervisory functions bestowed on it, the Reserve Bank of India collects various fixed format data (called 'Returns') from commercial banks, financial institutions, authorised dealers and non-banking financial institutions.
- Periodicities for submission (frequency) of these returns may be daily, weekly, fortnightly, monthly, quarterly, half-yearly or annual.

Historical Practice in India (RBI)

- The conventional methods of returns submission follow traditional and non-web based modes of communication, viz., hard copies sent through postal service.
- Subsequently, since late 1990’s, RBI started collecting such returns through electronic media.
Regulatory Requirements – Present practice

All these modes of filing returns have their own limitations. Thus, RBI felt to develop a single electronic returns submission window and introduced return submission online.

- The On-Line Return Filing System (ORFS) started in 2006
- XBRL was introduced at RBI since May 2008 (with metadata)
- Uploading data file on the Web based application (transaction reporting)
- Web applications are tuned to validate and load data received through e-mail attachment using specific template (Survey)
XBRL at RBI

- XBRL was introduced at RBI since 2008 to meet the following objectives:
  - To act as a single point for online data submission by regulated entities following the international standard
  - To ensure uniformity in the data received from regulated entities in a timely manner
  - To disseminate / share desired information (data as well as metadata) with respective stakeholders (within/ outside the RBI).
- Working smoothly for more than 10 years with addition of new returns under XBRL.
Benefits of XBRL at RBI

- XBRL benefits includes - cost savings, greater efficiency, improved accuracy and reliability. It also enables
  - Standardisation of code-masters across returns
  - Rationalisation of returns to reduce reporting burden of banks.
  - Data consistency (within return) through proper validations
  - On-line verification of beneficiaries identity (PAN)
  - Enforcement of regulatory requirements (LRS)
  - Provides comprehensive information on each data element through availability of core taxonomy
  - Helps in identifying unique data items and common data items across returns, and assisted harmonisation of banking statistics at RBI.
A few Regulatory Systems

Running on the XBRL platform
Major regulatory and supervisory systems in XBRL

- Central Repository of Information on Large Credit (CRILC) Module to help banks in credit appraisal of borrowers
  - Captures credit exposure details of large borrowers based on reporting by different banks / Financial Institutions / Insurance Companies / Non-Banking Financial Companies
  - Aggregation of data by borrower possible due to standard reporting format facilitated by XBRL
  - PAN of borrower used as basis of generating the report
  - PAN entries validated against Master which is supervised by RBI. Duplication of PAN not allowed in report

- XBRL ensures consistency in reporting data due to which summarization / aggregation is made easier
Large Exposure Framework

- The exposure measurement for banks under ‘Large Exposures Framework’ is aligned with risk-based capital framework and other Basel Standards (Sanctioning up to a percentage of Paid Up Capital).
- The exposure measurement under CRILC framework is based on Sanctioned amount or outstanding, whichever is higher. Thus, CRILC could not serve the purpose.
- Therefore the “Return on Large Exposure Framework” is being developed under XBRL.
Fraud Monitoring System in XBRL

- Centralised Fraud Reporting and Monitoring System (CFRMS)
  - Fraud Monitoring Return (FMR) – 1: Reporting occurrence of frauds with details
  - FMR – 2: Outstanding cases – Discontinued since this can be generated using XBRL repository
  - FMR – 3: Recent developments (Updates) of outstanding frauds
  - FMR – 4: Reporting of frauds related to Dacoits/ Robberies/ Theft / Burglaries

- CFR has enabled banks to view historical fraud data - date wise, entity wise
Liberalised Remittance Scheme

- As per the scheme maximum amount of USD 250,000 can be remitted abroad for a single PAN.

- LRS-Daily return under XBRL allows
  - A facility where AD banks can perform LRS limit checks for multiple PANs at a time for amount remitted till earlier day.
  - Whenever a particular PAN crosses the prescribed limit, across banks, including the current transaction, an e-mail alert is triggered to the bank regarding the breach of regulation.
  - View and download aggregated (AD bank-wise) statement indicating details of remittances made by Resident Individuals under LRS during the month (available only for Foreign Exchange Department of RBI)

- Many other regulatory modules are being developed under XBRL based reporting framework
Expanding Scope of XBRL

- Simultaneously, different types of financial enterprises are started operating.
- Seven payment banks have commenced operations. These technology-led banks use FinTech, both while onboarding customers as well as while carrying out operations.
- Thus, inclusion of different financial entities under RBI’s XBRL based reporting framework is essential, i.e.
  - Payment banks (PB)
  - Non-bank Financial Companies (NBFC)
  - Small Finance Banks (SFB)
- NBFCs are out of RBI’s INFINET and hence, Internet deployment of XBRL was essential.
Recent Developments

- XBRL has been implemented under WebLogic platform (June 2019). **WebLogic** runs on a middle level, between back-end databases and related applications.

- This is a technology which has the following advantages.
  - Enhanced protection to Application and database server as the technology prevents displaying actual server name to users. The Servers are not exposed to the outside world.
  - All the existing XBRL returns can be moved under this new environment.
  - Digital signature can be implemented for returns, which will help to eliminate paper based submission of returns by regulated entities.

- Along with this, 15 new returns are being added under the XBRL based reporting platform.
XBRL Architecture

- Banks (public, private, foreign) using INFINET (India’s Financial Network)
- NBFCs using Internet (Added security features)
- Other Reporting entities (being added recently)

XBRL website: https://xbrl.rbi.org.in

DSIM

XBRL Database (Oracle)

RBI’s Data Warehouse: https://dbie.rbi.org.in

Regular Dataflow

Central Data Repository

Researchers
XBRL at RBI - Meets Current Requirements

- Ensuring Regulations on Liberalised Remittance Scheme
  - PAN based validation to ensure upper limit
  - Access PAN Master using Digital Signature
- Merger of off-site surveillance system of Co-operative banks (Credit unions) and non-bank financial companies (NBFC) at par with commercial banks
  - Include non-bank financial companies (NBFC) under XBRL based online return submission platforms – Internet deployment
  - Supervisory Returns – Fraud monitoring, NPA related returns etc.
  - Registration portal for new NBFCs

However …

- High frequency transaction level data flow – ensuring data consistency and timeliness
Current Requirements …

- **Discontinuation of paper based submission** of regulatory returns, which requires signatory authentication
  - *How to ensure signatory authentication on XBRL?*
  - *Use of digital signature?*

- **Ensure timely flow of consistent** information (more granular in nature) related to regulatory & supervisory requirements
  - Timely, *near Realtime basis*, reporting
  - Consistency across Returns
  - Granular data
The Future of Regulatory Modernisations

- With technologies, what become possible?

- Automated Dataflow

- Element based reporting
Use of advanced technologies for modernising regulation is always there. But it is becoming more and more crucial now-a-days
- as levels of regulation rise and focus on data and reporting requirement increases
- to make regulation highly data oriented and to involve the use of near real-time information together with the incorporation of algorithms and analytics
- necessity to use of social media to make policy makers aware about public expectations

The automation of dataflow from reporting entities to RBI is at the forefront of RegTech revolution
Automated Data Flow (ADF) …

- **Common end state**: State of complete automation for submission of the returns by the banks to RBI without any manual intervention

- **Element based** data capturing instead of **Return based** reporting

**Benefits of automation**
- Improved Timelines
- Enhanced Data Quality
- Improved Efficiency of Processes
- Reduced Costs
- Use of the CDR for MIS Purposes
ADF Approach paper recommendations

- First phase, to ensure seamless flow of data from their (reporting entities) transaction server to their management information system (MIS) server and automatically generate all returns from the MIS server, without any manual intervention.

- In the second phase, the Reserve Bank would introduce a system for the flow of data from the MIS server of reporting entities in a straight through process.

- Finally, there will be one Centralised Information Management System (CIMS) by the RBI streamlining the data collection process from banks ADF server in an automated manner.

- Complete revamping of the existing Data Warehouse (DW) www.dbie.rbi.org.in by the CIMS
CIMS Conceptual Architecture (Big-data platform)

DATA COLLECTION LAYER
- EXTERNAL
  - Banks & NBFCs, Govt. and Non-Govt.
- SOCIAL MEDIA
  - Twitter, Google, Facebook

DATA PROCESSING LAYER
- Database to Database /Web Portal/ Mail/ Middleware
- Access Policy and IT Security
- Data Quality (Data Governance)
- Revision and Finalisation

DATA REPOSITORY LAYER
- Micro & Macro Data
- Final Data
- Dimensions
- Measures
- Queries
- Reports

DISSEMINATION AND ANALYTICAL LAYER
- Big Data Analytics
- Statistical Packages
- Business Intelligence
- Visualisation
- Centralised Analytics Server

Data Masking and Security
- Sandbox
- Data Science Lab
How to implement ADF with Element Based data Flow

INSTEAD OF

Return Based Reporting
Adopting Element-based Approach in Data Reporting

- Element?

- Some key benefits from XBRL taxonomies includes the availability of comprehensive information on
  - each data element with definitions, hierarchy, interrelationships and metadata clearly defined, and
  - improved data quality through greater consistency.

- Future plans include direct filing of instance documents by regulated entities (these are currently converted from excel),
  - a move towards element based reporting and
  - eventually, the use of XBRL for the reporting of all data.
Element Identification & Harmonization

- **Harmonisation of Data Definitions**: 251 returns finalized by the Returns Governance Group of RBI. [Link](https://www.rbi.org.in/Scripts/BS_Listofreturns.aspx)
- Of which around 100 returns are live through XBRL, XBRL development work is in progress for another 40+ returns, only 25 returns are still received on hard copy, rest of the returns are received from system to system integration.
- The core taxonomy created under XBRL project formed the basis of the harmonisation of statistics project.
- Almost all elements can be identified and uniquely defined.
Steps towards Element based Reporting

Continuation(dis) of Excel Templates

- Slowly Excel template may be withdrawn, once ADF system is ready at banks end
- Excel has its own limitations, e.g., generation of data having large records creates problem in Excel
- Generation of XBRL instance document directly from ADF of reporting entities to be ensured

Providing Definitions

- XBRL taxonomy has a definition linkbase, where definition of each element are provided
- Providing definitions of all identified elements will solve the harmonisation issues
- This benefits reporting entities to built a repository of required data elements uniquely in their ADF server
Element Based Data Collection: Across Return validation

- XBRL resulted in within return data validation. Next step would be to ensure consistency across returns.
- Taking advantage from XBRL based reporting to achieve across return Data validation and de-duplication of data submission by Banks to RBI.
- Initially Banks will be required to submit Return Based data electronically to RBI using XBRL platform directly from the ADF server and element based framework will be implemented in a phased manner.
- Helping reporting entities by sharing validation report to correct data at their end.
Benefits and Challenges of Element based approach

**Benefits:**
- Standard and unified method for all elements.
- Improves data quality (consistency and integrity) and facilitates better analytical capabilities.
- Flexibility to add, remove or modify elements.
- Removes duplication of reporting the same element.
- Better visibility of business concepts for the banks and the RBI.

**Challenges:**
- All data elements are not available in a centralized server.
- Data is stored at various sources in different formats.
- Data is finalized at different systems at different times, i.e., they are not in sync.
- Audit of data takes place at different times.
Main takeaways

- Long journey
  - Paper based to electronic form – avoid data entry
  - Media based to online reporting – reduce time lag
  - Computerized monitoring of reporting
  - Automatic validation of information – within return

- What next?
  - Automatic data flow – without human intervention
  - Across returns data validation – element based data
  - Transaction level data flow for analytics – Big Data
  - Considering public sentiment for Central Bank policy making
Thank you!
A few Explanations

- **WebLogic:**
  - WebLogic runs on a middle level, between back-end databases and related applications. This is developed to connect users in a distributed computing environment to facilitate the integration of applications with distributed data and applications with in-built security mechanism to protect Servers.

- **Sandbox:**
  - A regulatory sandbox (RS) usually refers to live testing of new products or services in a controlled/test regulatory environment for which regulators may (or may not) permit certain regulatory relaxations for the limited purpose of the testing.

- **Data Science LAB:**
  - Data science is a multi-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured and unstructured data. RBI has a plan to create a Data science lab internally.
XBRL and Artificial Intelligence

Shogo Ohyama

XBRL Japan Development WG
Fujitsu Ltd.
Agenda

- XBRL Adoption in Japan
- EDINET
- Utilization of XBRL
- Analysis
- Conclusion
## XBRL Adoption in Japan

<table>
<thead>
<tr>
<th>Implementer</th>
<th>System</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services Agency (JFSA)</td>
<td>EDINET (Electronic Disclosure for Investors’ NETwork)</td>
<td>2008</td>
</tr>
<tr>
<td>Japan Exchange Group (JPX)</td>
<td>TDnet (Timely Disclosure network)</td>
<td>2008</td>
</tr>
<tr>
<td>National Tax Agency</td>
<td>e-Tax</td>
<td>2004</td>
</tr>
<tr>
<td>Bank of Japan (BOJ)</td>
<td>Financial Institutions Monitoring Online System</td>
<td>2006</td>
</tr>
<tr>
<td>Ministry of the Environment (MOE)</td>
<td>Environmental Reporting Platform for Financial Institutions (Under POC)</td>
<td>2013</td>
</tr>
</tbody>
</table>

- EDINET has been collecting and disclosing annual securities report and so on using XBRL since 2008.
- Now a lot of data have been accumulated.
## EDINET

### Search results

<table>
<thead>
<tr>
<th>Date &amp; time of submission</th>
<th>Submitted document</th>
<th>Code</th>
<th>Submitter / Fund</th>
<th>Issue / Subject / Subsidiary / Reason for extra report</th>
<th>PDF</th>
<th>XBRL</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018.02.02 15:30</td>
<td>Quarterly securities report-118th Period3Quarter(2017.10.01-2017.12.31)</td>
<td>E01766</td>
<td>FUJITSU LIMITED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017.11.01 14:37</td>
<td>Quarterly securities report-118th Period2Quarter(2017.07.01-2017.09.30)</td>
<td>E01766</td>
<td>FUJITSU LIMITED</td>
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<td></td>
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</tr>
<tr>
<td>2017.08.04 15:00</td>
<td>Quarterly securities report-118th Period1Quarter(2017.04.01-2017.06.30)</td>
<td>E01766</td>
<td>FUJITSU LIMITED</td>
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<td></td>
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<tr>
<td>2017.06.26 15:48</td>
<td>Annual securities report-117th Period(2016.04.01-2017.03.31)</td>
<td>E01766</td>
<td>FUJITSU LIMITED</td>
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<td>2017.06.26 15:35</td>
<td>[Amend1] Annual securities report-116th Period(2015.04.01-2016.03.31)</td>
<td>E01766</td>
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<tr>
<td>2017.06.26 15:38</td>
<td>Confirmation Letter</td>
<td>E01766</td>
<td>FUJITSU LIMITED</td>
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<td></td>
<td></td>
<td></td>
</tr>
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</table>
Example: Annual Securities Report

<table>
<thead>
<tr>
<th>Company Information</th>
<th>Overview of Company</th>
<th>Summary of Business Result</th>
<th>Business Result of Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>Operating profit</td>
<td>Profit loss pre-tax</td>
<td>Profit loss</td>
</tr>
<tr>
<td></td>
<td>Profit loss</td>
<td>Profit attributable to owners of parent</td>
<td>Comprehensive income</td>
</tr>
<tr>
<td>Total equity</td>
<td>Total assets</td>
<td>Equity to asset ratio</td>
<td></td>
</tr>
</tbody>
</table>

**Company Information**

- Company history
- Description of business
- Overview of affiliated entities
- Information about employees

**Overview of Company**

- Overview of business
- Overview of business results
- Overview of production orders received...

**Issues to Address**

- Business risks
- Critical contracts for operation
- Research and development activities

*IFRS*
Example: Annual Securities Report
The entire annual securities report is written in Inline XBRL format.

<Business Risks Text Block>
We face intense competition across all markets for our products and services, which may ......

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
</tr>
<tr>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
</tr>
</tbody>
</table>

</Business Risks Text Block>

<Sales> 150,000,000,000 </Sales>
<Operating income> 20,000 </Operating income>
<Net income> 1,500,000,000 </Net income>
......
XBRL tag for Annual Securities Report

not only financial data but also text data is tagged
– text information of each section is tagged by a text block tag
– financial data of Financial Statements and Summary of Business Results is tagged by detail tag
### Example: Tags for Business Results

#### Company Information
- Overview of company
- Summary of business results
- Description of business
- Overview of affiliated entities
- Information about employees

#### Business Result of Group

<table>
<thead>
<tr>
<th>连续会计年度</th>
<th>2013年度</th>
<th>2014年度</th>
<th>2015年度</th>
<th>2016年度</th>
</tr>
</thead>
<tbody>
<tr>
<td>売上収益</td>
<td>Revenue</td>
<td>4,782,445</td>
<td>4,759,210</td>
<td>4,738,294</td>
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<tr>
<td>営業利益</td>
<td>Operating profit</td>
<td>147,275</td>
<td>178,828</td>
<td>120,812</td>
</tr>
<tr>
<td>税引前利益</td>
<td>Profit before tax</td>
<td>181,103</td>
<td>138,064</td>
<td>131,822</td>
</tr>
<tr>
<td>当期利益</td>
<td>Profit loss</td>
<td>122,010</td>
<td>145,011</td>
<td>90,421</td>
</tr>
<tr>
<td>親会社の利益</td>
<td>Profit loss attributable to owners of parent</td>
<td>118,215</td>
<td>140,024</td>
<td>86,763</td>
</tr>
<tr>
<td>当期純利益</td>
<td>Comprehensive income</td>
<td>175,553</td>
<td>250,283</td>
<td>5,530</td>
</tr>
<tr>
<td>親会社の純利益</td>
<td>Comprehensive income attributable to owners of parent</td>
<td>181,581</td>
<td>240,329</td>
<td>8,860</td>
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<tr>
<td>資産計</td>
<td>Total assets</td>
<td>3,106,937</td>
<td>3,271,121</td>
<td>3,226,808</td>
</tr>
<tr>
<td>財務計</td>
<td>Total equity</td>
<td>697,951</td>
<td>934,397</td>
<td>926,240</td>
</tr>
<tr>
<td>債務計</td>
<td>Equity to asset ratio</td>
<td>273.79</td>
<td>381.88</td>
<td>378.97</td>
</tr>
</tbody>
</table>

#### Research and Development Activities
- Critical contracts for operation
- Issues to address

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Example: Tag for Research and development activities
Some text information represents the direction of the company.

- Business risks / Research and development activities / ...

In fact, text information is an important factor to analysts.
Previous Literatures using TEXT Mining Technique

- Analyzed the President Letters/Chairman’s Statements to shareholders to examine a range of textual characteristics of letters/statements.
- Analyzed Financial Reports in order to see whether the textual part of the report contains some indication of future financial performance.
- Studied the effect of messages posted on Yahoo! Finance and Raging Bull
  - Antweiler and Frank (2004)
- Studied the effect of messages written by security analysts, headlines in newspapers, and messages from financial information companies
  - Takahashi et al. (2006)
Conditional probability technique would be useful to distinguish bankruptcy and non-bankruptcy companies.

Excuses frequently found in Bankrupt companies’ report by using “to our regret”. This explanation shows worse financial position.
Previous Presentation: R&D trend analysis
Previous Presentation: R&D trend analysis

- Changes of FUJIFILM Holdings Corporation.
  Similar business domain is:
  - Pharmaceutical after 2008.

In 2008, it bought out TOYAMA CHEMICAL CO., LTD. (Pharmaceutical industry)

The changes of business domain can be detected.
About uncertainties of entity’s ability to continue as going concern

When uncertainties of entity’s ability to continue as going concern is recognized, then this is explained in the note.

【注記事項】
（継続企業の前提に関する事項）
当社グループは、...
Out group is...
現時点では継続企業の前提に関する重要な不確実性が認められるものと認識しております。
The Uncertainties of entity’s ability to continue as going concern is recognized.

All of the companies with this opinion describe following explanation in the note.

The consolidated financial statements are prepared assuming a going concern. The effects of uncertainties of entity’s ability to continue as going concern is not reflected in the consolidated financial statement.

Data user has to check the report including textual Information carefully

We tried to find out which text block is correlated with going concern opinion
Analysis: Relation between Going Concern and Dividend Policy

Step:

1. Classify as **Companies with auditor's Going-concern opinion (A) vs. Companies without any opinion (B)**
   - Target data: about 3000 companies, 2014-2016
   - Class A includes about 45 companies for each year, and the others are in Class B

2. Analyze Dividend Policy using Co-Occurrence analysis for each class

** XBRL 
**

- **Textual Information**
  - **Company A’s Dividend Policy:** The our company ... basic policy is to pay dividends of surplus. ... improve ......
  - **Company B’s Dividend Policy:** The our company ... To pay dividends of surplus is our basic policy. ... .... our financial ...
  - **Company C’s Dividend Policy:** The our company ... basic policy is to pay dividends of surplus. ... ... ... ... ... position ...
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)

Companies without any opinion (B)
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)

Companies without any opinion (B)
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)

Companies without any opinion (B)
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)  Companies without any opinion (B)
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)

Companies without any opinion (B)

Improve
Retained Earnings
Strengthen
Structure
Financial
Retained Earnings
Strengthen
Structure
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)

Companies without any opinion (B)
Results of Co-Occurrence for Dividend Policy

Companies with auditor's Going-concern opinion (A)  

Companies without any opinion (B)

It's regrettable, but...

No-dividend
Conclusion

Tagged information is valuable to data users.

Results of our study:

– Check the co-occurrence of Dividend Policy
  • We found the difference between the Reporting companies and Non-Reporting companies about going concern opinion

Future

– Develop the Tutorial for data users (What is XBRL, How to use the XBRL data, and so on)
Previous Literature and Related Research:
Cindy Yoshiko Shirata, Shiho Ogino and Hideo Watanabe (2011) “Extracting Key Phrases as Predictors of Corporate Bankruptcy: Empirical Analysis of Annual Reports by Text Mining” in JOURNAL OF EMERGING TECHNOLOGIES IN ACCOUNTING, Volume 8, 2011, pp.31-44

Tools:
KH Coder https://khcoder.net/en/
Interstage XWand (Fujitsu XBRL Tools & API)

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The entire annual securities report is written in Inline XBRL format.

- All text information is tagged as a text block.
- Business risks / Research and development activities / ...

```
<Business Risks Text Block>
We face intense competition across all markets for our products and services, which may ......

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</Business Risks Text Block>

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........