Summary of the 31st ASEAN+3 Bond Market Forum Meeting(s)

24-27 June 2019, Daito Bunka University, Itabashi, Tokyo, Japan

The 31st ABMF Meeting, 18th CSIF Meeting and the ABMF–XBRL Joint Asian Roundtable were kindly hosted by Daito Bunka University (DBU) in Itabashi, Tokyo, Japan. The meetings were held at Daito Bunka Kaikan and the Itabashi Campus of DBU, from 24 to 27 June 2019. In addition to market and regular work updates, the ABMF Meeting (held on 24 and 25 June) focused on the impending interest rate benchmark reform and how technology could shape regional regulatory frameworks and market integration. The ABMF–XBRL Joint Asian Roundtable was themed "Creating the Future: Suptech and Regtech powered by Standards and Structured Data". ABMF Meeting materials are available from the ABMF website (asean3abmf.adb.org), and CSIF Meeting minutes and materials are available separately to eligible participants. XBRL presentations and materials are available from XBRL Japan.

I. ASEAN+3 Bond Market Forum - Sub-Forum 1

1. In his welcome remarks, Prof. Hirofumi Kadowaki, President of Daito Bunka University, explained the history of DBU: it was established in 1923, following a decision by the Diet (Japanese parliament) and was to focus on respect for Japanese culture against a background of overemphasis on western culture at the time. 'Daito' refers to 'a far east area' as Japan would have been described 2,500 years ago. DBU's founding philosophy had been to preserve culture as well as to create new culture. The new Daito vision was focused on research branding projects, including the study and pursuit of shodo, or Japanese calligraphy, and to study the way of Asian people. In terms of subjects taught at DBU, the focus was on Chinese studies and business administration, including pursuit of 'The Way of Management' a concept formalized by Mr. Eiichi Shibusawa, generally regarded as the father of Japanese capitalism. DBU also broke new ground by combining shodo and sports science. Prof. Kadowaki emphasised that while Asia had a long history, DBU also aimed at renewing cultural understanding, in the belief that old ideas can indeed prevail in the modern world, and old ideas and new ideas (also embodied as 'East meets West') should be studied to create the best of both worlds. In this context, DBU was honoured to host the ABMF Meeting and related meetings to foster dialogue between and with the participants to address current and future challenges in Asia against global developments.

2. The opening remarks were delivered by Mr. Atsuhiro Yoshitsugu, of the Regional Financial Cooperation Division, International Bureau of the Ministry of Finance of Japan (JMOF). Mr. Yoshitsugu stated that this meeting was a great opportunity for the public and private sectors to come together and have a great dialogue on subjects of common interest or concern. Prior to 1997, countries as well as companies relied on funding in foreign currencies, which led to the double mismatch that was exposed during the Asian financial

crisis. Lesson from this crisis lead to the creation of ABMI in 2003 to reduce such mismatches and to recycle the savings of Asian countries within Asia. Since then, regional countries have been developing local currency bond markets, with great success – from USD1.3 trillion in 2002, the outstanding balance of bonds issued in local currencies increased to USD13.1 trillion at the end of 2018. ABMI consists of 4 task forces (TF) that address demand and supply of bonds, and improve the regulatory frameworks and market infrastructure in the region.

3. Among ABMI's successes was the establishment of CGIF in 2010, with initial capital raising completed in 2013 and a subsequent scaling up of capital from USD500 million to USD1.3 billion; as of June 2019, CGIF's capital stood at USD1.64 billion. In turn, Asianbondsonline (ABO) represented a great opportunity to access comprehensive information on local currency bond markets, with such information provided free for the public good. ABO was sponsored by JMOF and operated by ADB. ABMF was one of the most important ABMI achievements, bringing together the public and private sectors to standardise or harmonise regulations and market practices of the regional bond markets. As a result of the work of Sub-Forum 1 (SF1), bonds may now be issued in any participating market using standardised documentation, leading to lower cost and faster time to market. Mizuho Bank issued the first bond under AMBIF in 2016, followed by the first AMBIF bond supported by CGIF issued by Aeon in the Philippines (USD1 billion) and the first ever corporate bond issuance in Cambodia (KHR120 billion), both in 2018. Sub-Forum 2 (SF2) had defined transaction flows and standard message items and emphasised on the prevalence of the ISO20022 standard, among others. The active participation by stakeholders from each market has shown the willingness to develop their local currency bond markets.

4. Mr. Yoshitsugu conceded that Asian markets were not immune to shocks and capital outflows from regional markets were likely to remain. While the work of ABMI was making markets more robust, many bond markets were still inadequate. Hence, stakeholders needed to avoid a feeling of complacency - more open bond markets were needed. Mr. Yoshitsugu was confident that this could be achieved with the continued dialogue between policymakers and private sector experts, such as at this ABMF Meeting.

5. **ABMI and Progress of Bond Market Development in Asia** (ADB Secretariat and presenters from the Shanghai and Shenzhen stock exchanges, as well as from the Mongolian Ministry of Finance): Mr. Satoru Yamadera announced that the paper on Good Practices for Developing a Local Currency Bond Market–Lessons from the ASEAN+3 Asian Bond Market Initiative (GP Paper) was published in May 2019; interested parties may download the document from the ADB or ABO websites.[1] The reason why the stock exchanges in the PR China were presenting was for participants to see the growth of the exchange bond market, in particular the growing corporate bond issuance that ABMF emphasizes on under its mandate from ABMI. While many foreign institutional investors focused on the China Inter-Bank Bond Market (CIBM), it was important to note the size,

[1] Available at https://www.adb.org/publications/developing-local-currency-bond-market.

features and developments in the exchange bond market. As such, ABMF will soon publish the Bond Market Guide for the exchange bond market in the PRC.

6. Mr. Dongxing Duan, Director of the Fixed Income Center at the Shanghai Stock Exchange, gave a brief introduction of the China bond market, the SSE and its business. At the end of 2018, China represented the 3rd largest bond market in the world, and the 2nd largest for credit bonds. Total bonds outstanding stood at CNY86 trillion, or USD12.6 trillion, and the issuance in 2018 alone amounted to CNY43.6 trillion or USD6.4 trillion, a 6.8% growth over the previous year. Mr. Duan explained the regulatory framework for the bond market in China, and the regulatory structure of the exchange bond market, with a number of regulatory authorities responsible for the supervision and direction of individual market segments and financial instruments; in the exchange bond market, all bonds must be approved prior to issuance, by either CSRC and/or the exchange. SSE and SZSE were founded in 1990, trading mostly treasury bonds; CSRC introduced regulations for corporate bonds in 2007; private placements for small and medium-sized enterprises have been traded on the SSE since 2012; and with the publication of the Administrative Measures for the Issuance and Trading of Corporate Bonds by CSRC in 2015, the attractiveness of the exchange bond market increased significantly.

7. Since the introduction of the so-called 2015 Measures, the bond market on the SSE had experienced year-on-year growth of 90% in 2016, with the strong growth continuing in the years since. The strong growth was also driven by increasing capital needs. 2018 saw a total outstanding bond balance of CNY10.3 trillion (or approximately USD1.5 trillion), about 2.6 times the total outstanding balance in 2015; the issuance volume in 2018 was CNY5.7 trillion, or 2.4 times the volume in 2015. Of the total trading turnover on the SSE, 92% represented repo trading volume (in the exchange bond market overall, 97% of volume was due to repo trades). Since 2016, the bond trading volume has exceeded the equity trading volume. The SSE was, however, a comprehensive exchange, currently ranking 4th overall in the world by market capitalisation and having the 4th highest trading turnover.

8. The SSE was continuously reviewing and growing its range of debt products and was focused on innovative products or special-purpose corporate bonds, including green bonds and green ABS, poverty alleviation bonds and Panda bonds, and on the continuous improvement of the regulatory framework of its market. As of the end of May 2019, SSE was tracking 39 green indices, including for bonds. The SSE offered itself as an access point into the China bond market for global issuers and investors, by maintaining a comprehensive English website and material, conducting global investor events and offering direct access to listed companies, as well as with global roadshows on the SSE market and its components.

9. Ms. Bonnie Chan, from the Fixed Income Department of the SZSE, explained that Shenzhen was a young city, rising from an original fishing village to the 3rd largest city by GDP in 2017. Shenzhen was a special economic zone, focusing on high-tech companies, with many major companies based there. Similarly to the SSE, the SZSE was a national

exchange in the PR China, but had followed a different development path from the SSE: the SZSE was a multi-tiered exchange, with a main market and a market for SMEs that were niche champions and innovative companies. In the PR China, SME referred to non state-owned companies.

10. Ms. Chan explained the regulatory framework for the exchange bond market, stressing that the 2015 Measures kicked off a boom in the market. No longer could only listed companies issue bonds but the introduction of the Qualified Investor concept, and the ability to issue public offers to Qualified Investors only rapidly formed a professional bond market on the exchange. At the same time, CSRC delegated the vetting process for the listing of bonds aimed at Qualified Investors to the exchanges, and as long as the information disclosure was complete, approval would come from either CSRC or the exchange, depending on the issuance method. A good company would be able to obtain approval within 10 business days for a public offer to Qualified Investors, with a total time to market of about 1 month. For a private placement, the time to market was between 1 week and 1 month, depending on the agreed information disclosure.

11. Other characteristics of the bond market on the SZSE included the listing of hybrid products, such as bonds with equity options (convertible and exchangeable bonds) and a more diversified investor base (banks represented 90% of the business volume in the CIBM) – this also resulted in companies issuing bonds in the CIBM as well as in the exchange bond market. The SZSE had a unique bond trading platform that integrated the trading of pledged repo, with a fixed haircut and CSDC acting as CCP. The ability to access a liquid repo market meant that investors in the exchange bond market were able/willing to accept a lower coupon of bonds, since pledged repo offered an additional income potential; this could result in 20-70 basis points lower interest cost for issuers. The SZSE offered 9 different pledged repo products, from between 1 to 182 days. Many retail investors participated in the pledged repo market.

12. Ms. Chan also reviewed the 3 different types of Belt & Road (B&R) bonds listed on the exchange, namely sovereign B&R bonds, typically by foreign countries along the B&R, the B&R Panda bonds issued by foreign corporates and financial institutions in B&R countries and the domestic B&R bonds by companies in the PR China with exposure to B&R projects. ABS may be labeled as B&R ABS if the underlying assets are generated from B&R projects. Ms. Chan used 3 exchange-listed B&R bonds with different backgrounds to explain the concept. Panda bonds follow the regulatory framework for corporate bonds but also include some special criteria: (i) the use of accounting and financial reporting standards valid in Hong Kong, China, or in European countries and the use of an audit firm based in Hong Kong, China; and (ii) specific domestic credit rating of AA+ or better for issuer and issue (equivalent to a BBB- investment grade rating in international bond markets). The SZSE was discussing with the MOF on relaxing the financial reporting standards further. If the proceeds were to be used outside the PR China, approval from the PBOC and SAFE was required. Shelf-registration was available by default, with approvals for 12 or 24 months available.

13. Ms. Chan also mentioned other fixed-income products issued and traded on the SZSE, including local government bonds, policy bank financial bonds and green bonds. Local government bonds were introduced in 2017 and included sustainable bonds, medical bonds and social infrastructure project bonds. More than 20 provinces had so far issued local government bonds on the SZSE. Policy financial bonds were bonds issued by the PR China's policy banks, including the China Development Bank (CDB) and the Agricultural Development Bank of China (ADBC). In 2018, both institutions had issued bonds amounting to CNY16 billion on the SZSE. Green bonds issued on SZSE were following the Green Bond Principles (similar to the Green Bond Initiative, GBI) promulgated by CSRC and SZSE had a separate coverage team to service such issuers; some local governments – as is their discretion - would give concessions to green bond issuers, similar to those in Hong Kong, China. In 2017, the SZSE partnered with the Luxembourg Stock Exchange to publish a green bond index that reflected labeled (i.e. following the GBI) or unlabeled green bonds issued in the PR China. The SZSE was continuing to expand its issuer base, offer more fixed-income products and encourage more participation on its markets. Among these initiatives were the introduction of tri-party repo and the research on a Bond Connect variant with the exchange bond market.

14. Mr. Sonor Luvsandorj of the Ministry of Finance of Mongolia explained the development of the Mongolian capital market. Mongolia had joined ABMF in May 2018 as an observer and has already embarked on creating a Bond Market Guide using the ABMF format. The MOF oversees the exchange, central depository and clearing house, and was in the process of implementing a payment system reform at the central bank. Mr. Luvsandorj relayed the state of the economy, which was highly correlated with the activity in the capital market. GDP growth was not very stable due to the reliance on the mining sector, coming in at 6.9% in 2018, but rising to 8.6% in Q1 of 2019, which lead to a pick up in capital market activity.

15. As for the milestones of the capital market, the stock exchange was founded in 1991 and has since been privatised. The first corporate bond was issued in 2001 by a construction company; the first equity IPO took place in 2005; government bonds were first issued in 1996. The exchange received a new IT system in 2012 and the MOF revised the Securities Law in 2013 to help develop the market further. 2014 saw the start of trading of sovereign bonds on the exchange and, in 2018, the first dual listing occurred. A review of the legal and regulatory framework in 2017 showed that a stronger specific inclusion of bonds was necessary, as the Securities Law had been focused on equities IPOs and privatisation of former state-owned companies. Governments bonds may be sold to wholesale or retail participants and corporate bonds could be issued via public offers or private placements.

16. The financial sector was dominated by banks, but capital market participation by non-bank institutions was increasing. Presently, two securities companies dominated the intermediation in the primary and secondary market. Mr. Luvsandorj showed a breakdown of market participants and their share of bond trading volume. For government bonds, the IMF program required that the government reduce its debt, which also meant that the

outstanding issues and proposed issuance programme needed a reform, as government bond issuance had resulted in too high costs in the past. The government has since stopped the issuance of tax-free, high-yielding bonds. At the same time, the issuance cost for corporate bonds remained high compared to bank loans, in particular also because the typical tenor was only 1 to 2 years. Mr. Luvsandorj attributed this to not quite the right type of regulations and would also like to see a more diversified field of issuers; most issuers are still coming from the construction industry.

17. The revision of the tax law in February and March 2019 reduced the tax on interest from 10% to 5%, which is expected to make investments in bonds more attractive for investors. Mongolian authorities were also experimenting with Distributed Ledger Technology and a regulatory sandbox. For the time being, the bond market remained at a nascent stage but the MOF was working to implement the IOSCO principles for financial market infrastructures and was hoping that the creation of the Mongolia Bond Market Guide would generate further interest in the bond market. At the same time, the MOF was also working with an ICSD on cross-border issuance of government bonds. Overall, the MOF was hoping for the capital market, in particular the bond market, to take off in the next 2 or 3 years.

18. **Update of Credit Guarantee and Investment Facility (CGIF)**: Mr. Kiyoshi Nishimura relayed what CGIF was to new participants and reviewed the milestones and current operations of CGIF. CGIF was a core element under ABMI, with a focus on increasing the supply of local currency bonds. CGIF started in 2012 and wrote its first guarantee in 2013. It presently had a maximum capacity to issue guarantees of USD2.6 billion, which will increase to USD3 billion in the next 2 years. CGIF was rated AAA by regional credit rating agencies. CGIF had issued guarantees for issuances in 5 out of the 6 major ASEAN markets and for 22 issuers from 10 of the 13 ASEAN+3 countries. So far, CGIF had not encountered a problem with any of its guarantees, with 7 guarantees already having successfully matured.

19. Its current business plan has CGIF focus on first time issuers or to extend the bond tenor across 3 groupings of markets: the ASEAN6 as the primary focus area, the BCLM markets as an increasing focus as their markets developed, and the +3 markets in ASEAN+3, which were not a priority but may be considered as well. CGIF was also supporting AMBIF cross-border issuances and aiming to introducing new debt instrument types, such as project bonds or green bonds. Another goal was to broaden the existing investor base, by encouraging investment from foreign investors, in particular +3 investors. Continued efforts focused on kick-starting LCY corporate bond markets in the BCLM frontier markets (i.e. Brunei Darussalam, Cambodia, Lao PDR and Myanmar).

20. Mr. Nishimura explained the new regional guarantee facility of approximately USD2 billion to provide guarantees to promote local currency infrastructure finance in ASEAN via Infrastructure Investors Partnerships (IIP), where CGIF would offer a guarantee in conjunction with the private sector; such IIP guarantees could also be extended for bank

loans. In the case of an IIP, public sector funds would be used to cover 1st loss. CGIF had been required to develop the IIP concept under the New ABMI Medium-Term Road Map (2019-22) announced by the ASEAN+3 Finance Ministers and Central Bank Governors meeting in May 2019. In addition, CGIF has written 3 new guarantees so far in 2019, for (i) Yoma Strategic Holdings, a Singapore-based but Myanmar-focused company; (ii) Refrigeration Electrical Engineering Corporation (REE), a diversified corporation from Viet Nam; and (iii) CJ Logistics, a leading Korean logistics company with a presence in Singapore, in a first AMBIF issuance listed on SGX. Mr. Nishimura was hopeful to have another AMBIF bond issued and listed in Singapore soon, and was looking forward to a first AMBIF bond issued in Japan.

21. In response to questions from participants, Mr. Nishimura explained that CGIF charged a guarantee fee, which was negotiated on a case-by-case basis. IIPs used public sector money on their balance sheet, since an IIP was essentially a vehicle to pool funds needed for the targeted infrastructure development.

22. **Update on Bond Market Development Support by Technical Assistance and Coordination Team** (TACT, presented by Daiwa Institute of Research and Nomura Research Institute): Mr. Kengo Mizuno of NRI explained the support for Viet Nam as part of TACT, under a separate TA (technical assistance, or project). According to Mr. Mizuno, the Viet Nam bond market was underappreciated, e.g., due to a lack of statistics or general visibility. The bond market was regulated by the State Securities Commission (SSC) for public offers (PO) and the MOF for private placements (PP); a PO takes many months to approve, while no approval was necessary (only a notice from the issuer) for PPs – hence, many issuers preferred a PP issuance. The SSC did not publish statistics on the number of POs; as such, it was often suspected that the market issuances consisted 100% of PP. In 2018, the outstanding balance of PP in the Viet Nam market came to approximately USD20 billion, of which less than 5% were listed. Corporate bond issuance represented about 50% of government bond issuance.

23. Among the corporate issuers, 2 conglomerates dominated the issuances, the rest being banks and other corporates. Trading in corporate bonds has grown drastically, with the trading turnover of corporate bonds higher than that for government bonds. In 2018, close to 90% of the bond trading volume was carried out by a single securities firm, as a result of this institution having a proprietary bond trading system which was open to its customers only; as a result, the firm functioned like a market maker, in a market where banks or securities firms were normally not keen on acting as market makers. Among the investors, 7 bond funds ensured continued interest in bond trading. The use of ISIN was not mandated in the market, other than for listed securities. Depositing a bond with VSD was only mandated for listed bonds, and unregulated for PO, while PP could be deposited with either VSD or a depository member (in their own records).

24. HNX has been charged with maintaining an official bond information website, effective later in 2019, and will collect information and data from issuers and depository members. In

addition, issuers and other parties will have to report updates on their bonds every 6 months. These changes were contained in Decree 163/2018 on Private Placements. However, secondary market data will largely remain unknown; the market operated on a put-through concept, i.e. counterparties bilaterally agreed on a trade that was subsequently entered into the exchange trading system. At present, changes to the Securities Law are being debated or considered by the authorities. If the law is amended, new decrees are expected over the next 2 years. Mr. Mizuno also reviewed the challenges for bond market development in Viet Nam, which includes measures to address the shortcomings above, but also included taxation, which presently applied to securities products but not to banking products with a similar nature, to remove an imbalance in the financial market.

25. In question time, members asked about the potential impact if HNX was suddenly publishing data where no or incomplete data had been before. Mr. Mizuno stated that MOF data (on PP) was complete, while providers such as Bloomberg probably had data that understated the market so far. Yet, he felt that foreign institutional investors may still be reluctant to invest in the market and would continue to observe from afar. Members were of the opinion that the key message to be sent on the Viet Nam market was that there were no restrictions to access and invest in the market; feedback from institutional investors with an eye on the Viet Nam market had doubted that. Mr. Mizuno agreed and pointed to foreign investors-run funds that already invested in corporate issuances. Colleagues from Bloomberg also confirmed that they working with the Vietnam Bond Market Association (VBMA) to obtain and publish more information on its screens. On the question how to develop the secondary market in Viet Nam, Mr. Mizuno opined that the corporate bond market segment already had the highest turnover despite the fact that only transactions in listed bonds were counted. He also felt that Bloomberg should not only talk to the VBMA but also to HNX to get the right data.

26. Mr. Akifumi Nakanishi and Mr. Ryota Sugishita reviewed the TACT work of DIR in the Philippines and Myanmar, respectively, as mandated by ABMI. The project in the Philippines so far consisted of 6 phases and had supported the development of the corporate bond market, indexation and syndication, with the terms of reference being agreed with the ASEAN Secretariat. The 6th phases had started in September 2018 and focused on 4 individual scopes, namely (1) analysis to mitigate financial risks in the bond and repo market, (2) develop safety measures to capture repo market data, (3) assess institutional capacity of SEC on a number of subjects, and (4) develop capacity building measures for the SEC to implement new measures; counterparts were BSP and SEC.

27. The government securities repo market in the Philippines started in September 2017, mainly frequented by banks; once the market picks up, BSP hopes to be ready to fully monitor market activity. At the same time, the capital market at large is regulated by the SEC, with the Bankers Association of the Philippines and the Money Market Association of the Philippines acting as SROs. DIR already conducted the initial market assessment and fact-finding missions and was now carrying out an assessment. The SEC had gone through operational reforms in a challenging environment, with support to be provided for topics

ranging from budgeting and staffing to the need to pick up new or additional market segments, as well as the developments and impact of, e.g., fintech.

28. DIR has been supporting market developments in Myanmar since 2011, and was now carrying out work under Phase IV, which consisted of 4 scopes, namely (1) secondary market enhancements, particularly for OTC trades, (2) establishing a credit rating system and agency, (3) introducing additional bond types, and (4) investor development, across institutional and retail investors, and including non-resident investors. DIR's counterpart is the Securities and Exchange Commission of Myanmar. Mr. Sugishita reviewed the expected outputs; DIR was still doing the fact-finding survey among major banks, securities companies and other institutions, and still talking to the stakeholders, collecting feedback. Investors in government securities were largely banks, the rest were insurance companies and other institutions.

29. Some of the key findings so far included that Myanmar was still a cash based economy, with major banks being quite good in cash management. Some banks were regularly participating in the interbank and repo market. The minimum bidding amount in T-bill auctions of MMK500 million (approx. USD326,000) was found to be a potential obstacle, since this may be too large for some of the securities firms in the market. Less than 10 foreign banks existed in Myanmar, with only some participating in treasury bill auctions. DIR expected the fact-finding to be finalised by September 2019, and hopes to be able to offer a roadmap and propose some standard operating procedures soon after.

30. **Recent Developments in Asian bond markets** (ABO team): Dr. Donghyun Park shared ADB's views on Asia's economic outlook: 2019 growth would see a slight moderation of ADB's original forecast to 5.7%, and growth in 2020 was now envisaged at 5.6%. These changes were due to a slowing down of growth in the developed markets as well as in the PR China, which accounted for 20% of the regional GDP, plus other markets also depending on the PRC China – if the PR China slowed down, they would slow down. Economic growth in the US for 2019 was forecast at 2.4% for 2019, and 1.9% for 2020, with all indicators showing a clear direction, namely down. At the same time, Asia had robust domestic demand, hence, a slowdown of exports would not affect the numbers as pronounced as could otherwise be expected.

31. Reasons for the slowdown were, naturally, the clouds of trade tensions, and ADB had studied the impact of these trade tensions across 3 'channels', i.e. (1) the direct impact on, e.g., farmers and manufacturers; (2) the indirect impact felt by, e.g., component or part makers, and (3) any trade re-direction where production would move from one market to another as a result of these tensions; for the latter, Viet Nam appeared to be a clear beneficiary. The impact on the US and the PR China was significant but still manageable, and would likely not result in a recession. At the same time, if taking into account the so-called confidence factors, such as business and investor confidence indicators (which reflected how decision makers are influenced by current and future events), the impact on the US economy might be larger, since it was a developed market.

32. Trends in the emerging bond markets in Asia had entered a new phase. In 2018, the Federal Reserve had raised interest rates four times, but not done so in 2019; the market expected one or two possible reductions still this year. While the currencies of Argentina and Turkey plummeted, Asia had strong fundamentals that protected its currencies and exchange rates to a certain degree; Malaysia and the Philippines lowered interest rates. The trade conflict reignited the volatility in credit default swaps (CDS). With some FX rates weakening, foreign holdings of bonds in the region trended lower. At the same time, local currency bond markets have continued to grow, with a total outstanding balance of USD15 trillion as of the end of March 2019.

33. Dr. Shu Tian updated participants on the ABO user survey. In response to feedback from ABO users, the ABO team had separated data for government bonds and central bank bills, where issued. The site now also provided quicker data access and an updated selection with a date range and more flexibility. ABO was now working on supporting the ABMI recommendation to strengthen the collaboration among the different ABMI task forces; as part of its to-do list, ABO would integrate historical ABMF documents into its webpages but would also aim to include other types of bonds, provide more information on foreign holdings and the trading flows across ASEAN+3.

34. In this context, she commented on the earlier subject of likely changes to bond data for the Viet Nam market once the bond information center was up and running, that ABO had an agreement with both the MOF (for private placements) and HNX (for listed bond data), and was not taking data from Bloomberg. Once the (more) complete data on Viet Nam is available, ABO will offer comments on the changes and developments, and will insert a caveat when displaying historical data to website viewers. Dr. Shu Tian hoped that ABO will have the new data set with effect from the next quarter and expects to display data for 2012 to 2018 as annual data, and data from 2019 onwards as quarterly data. In this context, Dr. Shu Tian mentioned that ABO welcomed suggestions if participants found some data or information not to be right or something was missing. Here, Mr. Mizuno added that when looking at the Viet Nam market, ABO and users of data should not forget about HOSE (the Ho Chi Minh City Stock Exchange) data, which consisted largely of listed corporate bonds; it was necessary to cover both exchanges. At the same time, if the reporting requirement to the exchanges remained at the stipulated semi-annual interval, ABO may not be able to obtain adequate data for quarterly dissemination.

35. **Bond market-related macroeconomic updates** (ASEAN+3 Macroeconomic Research Office) Mr. Yasuto Watanabe, Deputy-Director at AMRO, shared with participants some bond market-related macroeconomic updates, and stated that AMRO was intending to increase its collaboration with ADB and ABMF and other related entities. Showing a global risk map, Mr. Watanabe pointed out that a potential shift was necessary in the baseline assessment of risks, as a number of short-term risks were more likely to become high(er) risks. This included an escalation of the trade war. On the other hand, perennial risks remain in cyber-attacks and also through climate change. Mr. Watanabe agreed with the ABO presentation but pointed out that domestic demand had moderated somewhat in Q1

2019, after robust growth in 2018. For the trade wars, the real challenge was that nobody knew the schedule and what next steps might be taken.

36. Sovereign bond yields had declined since the trade tensions escalated again on 5 May 2019, as major central banks signaled more easing measures ahead, which by now had been priced in. Foreign capital flows into the regional bond markets remained positive for the time being. Sovereign issuances have increased since the GFC, particularly in the PR China, mostly as a result of favourable borrowing costs. At the same time, heavy refinancing needs lay ahead in the regional emerging markets in the next 2 to 4 years. Apart from refinancing needs, regional emerging markets with large foreign ownership of sovereign debt in local currency were vulnerable to volatility shocks, particularly during episodes of global risk aversion. In the PR China, while government debt has risen since 2010, government contingent liabilities related to local government financing vehicles had also increased, posing a potential additional fiscal burden. At the same time, while general government debt has increased across most regional emerging markets, their debt level (in % of GDP) remained largely at a relatively prudent level. Mr. Watanabe closed by stressing that the FX reserves in these markets remained adequate, helping to mitigate external shocks.

37. In the Q&A session, Mr. Watanabe confirmed that local and central government debt levels in the PR China, as shown in his slides, amounted to more than 100%. Members enquired whether the refinancing projections had taken into consideration the ongoing buy-back or tenor-lengthening initiatives currently carried out by a number of regional treasuries. Mr. Watanabe conceded that no exact data on such initiatives existed but pointed out that the current low interest rate environment made such issuance programs more conducive. The perennial risks, as shown, were not included in the risk assessment because no quantitative study had been conducted (yet) to assess their impact. However, the trade war was reflected in the assessment, if on a moderate level. Colleagues from Indonesia mentioned that the indicated level of foreign investors' holdings of government debt of Indonesia was likely influenced by an improvement in the sovereign rating to investment grade (BBB-). Mr. Watanabe responded that while Indonesia was trying to keep foreign holding to under 40%, a practical ratio was considered 30-35%. The BTr enquired on any advice or a rule of thumb as the foreign investors' ratio in Philippine government securities was between 4-7%, and the BTr was trying to increase foreign investor participation. Mr. Watanabe responded that there may not be a standard formula since each market had a different background and one had to look at many factors to determine a 'preferred' such ratio.

38. **Benchmark Reform and its Impact on Asia** (presenters from the Financial Stability Board (FSB), the International Swap and Derivatives Association (ISDA) and Bloomberg; moderated by ADB Secretariat): Mr. Yamadera opened the session by addressing earlier questions from participants why ABMF would cover the benchmark reform since this was typically associated with short-term or money market subjects. He mentioned that this subject was kicked off some time ago by a question from colleagues in Indonesia on the

possible impact on Asia from the benchmark reform discussions in Europe, followed by the realization how strongly integrated LIBOR, the original benchmark, was into pricing and decision-making processes affecting the bond market at large. As such, developments in the benchmark reform discussions in Europe will very much affect Asian markets and it would be prudent to examine the subject and prepare for any such impact.

39. Ms. Simonetta Iannotti from the **FSB** explained that the FSB Secretariat was hosted by the BIS in Basel. The FSB put together central banks, financial market regulators and financial institutions from G20 + 4 markets and represents the 'regulatory arm' of the G20, to address regulatory challenges after the GFC. The traditional key interest rate benchmarks and, hence, the objects of the interest rate benchmark reform, included LIBOR across a number of major currencies, which is derived from a panel of contributing bank and reflects the rate at which a contributing bank estimated it could borrow on an unsecured basis; EURIBOR (Euro Interbank Offered Rate) for Euro; and TIBOR (Tokyo Interbank Offered Rate) for Japanese Yen. Other Asian key interest benchmarks included in recent ISDA consultations were Hong Kong, China's HIBOR (Hong Kong Interbank Offered Rate) and Singapore's SOR (Singapore Swap Offer Rate).

40. Among the major integrity concerns on these benchmarks were the inherent conflict of interest, in that a contributing bank had an interest in misrepresentation because, e.g., a lower LIBOR would reduce payments received or made on any instruments linked to the benchmark, and would impact on the valuation of lending or other books of a bank. In addition, in the event of a financial crisis, banks could appear more creditworthy than they were. Confidence in the reliability and robustness of major interest rate benchmarks was undermined by attempted market manipulation and false reporting. By 2012, there had already been formal regulatory action on clear misconduct cases underway in Canada, the EU, Japan, Switzerland, the UK and the US. The result of these actions and increased media coverage led to declining liquidity in the benchmarks and an increase in official industry concern.

41. As of now, the USD LIBOR alone represented an exposure of financial products and transactions of about USD200 trillion, across key maturities of 1 month, 3 months and 6 months. Because of their significance, a disappearance of the benchmark rates would cause great disruption of the markets. As a result, the G20 tasked the FSB in February 2013 with reviewing the most widely used benchmarks globally, in close cooperation with the industry, and the FSB established the Official Sector Steering Group (OSSG), co-chaired by the UK FSA and the Fed; the focus was on LIBOR, EURIBOR and TIBOR. In July 2013, the FSB endorsed the IOSCO Principles for Financial Benchmarks[2] on the recommendation of the OSSG. In its own OSSG Report published in 2014, the FSB recommended a strengthening of existing benchmarks, referred to as IBOR+; this included the enhancement of the benchmark by administrators with actual transaction data and other methodological and operational improvements to meet the IOSCO principles. The

[2] https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf.

industry should also develop near risk-free reference rates. The Market Participants Group in the OSSG also highlighted the issues in legacy contract provisions or language in cases an established benchmark was no longer available as reference rate. The FSB published the latest update on the progress of these recommendations in November 2018.

42. The observations from the FSB's ongoing monitoring of the recommendations and related industry actions included that a multi-rate approach was expected, i.e. the combination of a more transaction-based existing IBOR with a more robust and representative risk-free rate (or RFR). However, efforts to build purely transaction-based IBORs have failed so far, as previously lamented by the UK FSA for lacking in support from market participants, as far back as 2017. At the same time, LIBOR was no longer robust or liquid enough to support a multi-rate approach. Public-private partnerships and industry associations were developing more robust fallback language for both derivatives and cash products. Other recent developments included a clearly stated end-date for LIBOR: the UK FCA announced in July 2017 that they will no longer compel LIBOR panel member banks to contribute to the benchmark after the end of 2021, which resulted in the advice to the market that participants should not expect an existence of LIBOR beyond 2021. Significantly, though, the Loan Market Association had determined that close to 120 jurisdictions had exposure to LIBOR (mostly USD) through syndicated loans.

43. Ms. Iannotti reviewed the global implications and lauded the big effort undertaken by ISDA; the present market consultations will conclude on 12 July. Market participants in many jurisdictions were now assessing their exposure to LIBOR and whether term RFRs were necessary to support an overnight RFR benchmark. The industry was also working on what infrastructure improvements would be necessary to support overnight RFR benchmarks, as well as the necessary language or references to benchmarks in legal contracts. The current role of the OSSG is to monitor and coordinate the international benchmark reform efforts; the OSSG meets twice a year to discuss key issues and had formed two subgroups to study accounting, regulatory and tax issues, as well as to support the contractual robustness of industry arrangements.

44. The key issue remains the understanding of the full extent of the use of LIBOR in each financial system or by financial market participants in each jurisdiction, including the readiness to move to a new benchmark after 2021. This included the need to undertake a risk assessment of the potential prudential and conduct impacts associated with a transition in a range of different scenarios, including a LIBOR discontinuation, and the ability to operate in an RFR environment. Ms. Iannotti closed with a brief review of the evolution of benchmark reform activities; for the time being, the 2021 date was not shown but a number of individual projects or initiatives were already referencing 2021 – or 2022, for that matter.

45. Ms. Tomoko Morita, Senior Director **ISDA Japan**, relayed the industry views on benchmark reforms, the challenges identified and the progress made through impressions collected from market participants. Of a notional worth of financial contracts of USD373 trillion, USD220 trillion alone referenced LIBOR; 80% of that related to OTC and exchange-traded

derivatives. However, many syndicated loans, securitizations, business loans and floating-rate notes (Ms. Morita showed an overview of affected products) also referenced LIBOR or another IBOR. Yet, the availability of any of these IBORs in the future was uncertain. As a result, the dependency on LIBOR needed to change, since it would be discontinued after 2021. Here, the key issue was financial institutions' own judgment, since the topic was highly subjective and a liability issue driven by each institution's business. This was also the reason why banks would be happy to step down from any benchmark panel.

46. In principle, each institution must transition to or develop a fallback, which has to be an agreed benchmark – this makes it an industry problem, not just one for an individual institution. Until now, fallbacks had been referenced for emergency situations only. Ms. Morita opined that a transition (instead of a switch) was a safer option but not all transactions or contracts may be able to transition. For derivatives, the industry had so far agreed on 2 possible approaches, namely the use of a Compounded Setting in Arrears Rate, calculated by compounding the observed overnight rate daily over the relevant term, and the Historical Mean/Median Approach, which required the definition and use of a lookback period to determine a representative interest rate; for the latter, one of the key issues remained the length of the lookback period. An alternative was the use of an RFR; an overview of existing RFR and their underlying working groups was shown by Ms. Morita. According to her, the industry had been successful in identifying alternative RFRs so far, but their implementation needed to consider – and satisfy – many stakeholders to be successful.

47. The subject offered a broad range of industry impacts, not least for risk management activities, the replacement of a benchmark for floating-rate notes, as well as accounting, valuation and resulting tax implications. As such, the subject needed an institutional control framework, and existing regulations also may need adjustments. New contracts with adequate language may trigger margining requirements. As a result, the industry was working hard on an agenda to address these issues, with many achievements already registered and the implementation of recommendations and solutions slowly gathering momentum. Ms. Morita showed a transition roadmap and gave the example of the London Clearing House having successfully cleared the first swap transactions based on SOFR, the proposed RFR in the US, in July 2018. Trading based on SOFR has since been increasing but still represented only a fraction of the existing LIBOR volume. Trading volume based on SONIA, supported by the Bank of England, had reached USD1.7 trillion in Q1 2019, which was about 50% of the existing volume. Japan was adopting a multi-rate approach, using an RFR for derivatives transactions and an IBOR+ approach for other products. Ms. Morita concluded that industry efforts were heading in the right direction, but much remained to be done.

48. Mr. Edmond Lee, of Bloomberg, explained that its system saw few trades in 3-month LIBOR but the benchmark continued to drive USD300 trillion worth of contracts. He felt that Asia was ahead in the benchmark reform because market benchmarks here were typically based on transacted data. However, Asia needed to meet European benchmark

regulations and practices. Mr. Lee felt that a recent message from the Hong Kong Monetary Authority summarized the subject well: the benchmark reform was complex, with many areas affected and a start in 2021 was seen as not possible. The impact of the reform may also often be indirect, while it had a direct impact on investors in the home market of the benchmark. This gave rise to the question who would want to invest in an ASEAN+3 market if a benchmark was not considered robust?

49. Mr. Lee also assessed the impact by business area: in the business and front office, data for a new curve construction would be crucial and had to be determined, while systems had to be checked whether they could take the new benchmark and underlying calculations. Operations needed to consider the impact on collateralization, cash and settlement flows; USD65 billion worth of bond contracts with a reference to LIBOR expired beyond 2021 and needed to be adjusted to a new benchmark once determined. Here, Bloomberg was often asked by the industry whether it had the tools to trade, show and value contracts under new benchmarks. Treasury had to consider issues for asset and liability management and how to outfit new issuance. Valuation and market risk would need to factor in, e.g., the change from an unsecured to a secured benchmark, re-assess risk management practices and had to conduct price and valuation testing and modeling under a new benchmark. The technology impact would affect data management across all systems of an institution, and support and connecting systems shared with other market participants. The necessary resulting enhancements to systems and infrastructure would need to be scheduled and carried out in conjunction with business efforts.

50. Here, Bloomberg's advice was to engage central banks and market associations in each jurisdiction. Mr. Lee gave the example where Indonesia had replaced the JIBOR overnight rate with the Overnight Index Swap (OIS) rate in a smooth transition; other markets were working on similar initiatives. In turn, markets should engage stakeholders – after all, most markets only had 6-12 months left to begin testing and modeling.

51. Mr. Nick Burrough, also of Bloomberg, reviewed specific market-related issues. This included a massive impact and scale as an IT project, and using the example of the US, presented a mismatch in the transition from an unsecured to a secured benchmark rate and from multiple tenors to a single, defined tenor; some present money market rates were in effect calculated from USD LIBOR and FX forwards. Responses to ISDA consultations had yielded that for the proposed new benchmarks, compounded rates were not officially known until the following day or days later, depending on the end of the underlying period to be used. Mr. Burrough opined that an RFR would remove the mismatch. He also pointed out that if products stopped, the data they generated for use in other calculations also stopped, and data on any new period would have to be built up from scratch – as such, historical data may not be available any longer.

52. According to Mr. Burrough, some markets were already making changes to their benchmark rates and efforts were rapidly increasing. The HKMA has urged global banks to lead the efforts and financial institutions to start incorporating the new HONIA (Hong Kong

Overnight Index Average) into their considerations and calculations. Yet, fragmentation of efforts and opinions could be observed across markets, also because different market segments had different expectations and needs of a new benchmark rate; for example, the loans and derivatives markets moved in different directions. Mr. Burrough summarized the current situation and efforts as operating under a resource constraint as well as a time constraint; some financial instruments may not survive the benchmark reform.

53. **Panel discussion - Benchmark Reform and its Impact on Asia** (ASIFMA, Bloomberg FSB, ISDA, MUFG, moderated by ADB Secretariat): Mr. Yamadera opened the panel session by stating that foreign entities used the FX market not necessarily through spot transactions; they may use non-deliverable forwards (NDF) or swaps instead. The NDF market was quite sizeable across Asia and was based on LIBOR and influenced the LCY bond yield curves. Obvious questions included whether foreign investors will sell bonds in ASEAN+3 markets if the benchmarks change; ABMF members needed to consider this disruption. In addition, with LIBOR being a benchmark for the same day, though London time but still accessible in Asia; if a future major benchmark were in the US, this would effectively mean the next day in Asia – are traders able to enter benchmark rates for different days from the actual trade date in Asia? Could this result in a bigger impact than was feared for Y2K?

54. Mr. Yamadera highlighted that all of this has not been discussed in ASEAN+3 markets yet in great detail, and ABMF members and market participants had only a maximum of 2.5 years to address these issues; not sure whether that time was enough. He also stressed that this was not a money market issue only – it will affect the debt markets as a whole due to the many inter-connections discussed earlier. Mr. Yamadera introduced the panelists (Ms. Iannotti, FSB; Ms. Morita, ISDA; Ms. Vicky Cheng, Government Relations, Bloomberg; Mr. Taro Matsuura, Market Committee, MUFG; Mr. Matthew Chan, Head Policy & Regulatory Affairs, ASIFMA) and posed the question why regulators came to the decision to change the benchmarks in the first place.

55. Ms. Iannotti attributed the decision to the declining liquidity in LIBOR and banks pulling out of the obligation to submit rates, which increased the serious risk of uncertainty and also legal risk; there was a risk of a negative feedback loop but also the lack of any existing viable alternatives. A need for cooperation had become obvious and so the authorities decided to address the issue together. The consequences of the benchmark issue could have an impact on the entire financial market system – it could affect the viability of individual financial institutions and whole sectors, then create a global impact; this was why it became an issue for the FSB. Mr. Yamadera added that one had to remember the LIBOR scandal, as a result of which the integrity and reliability of the financial market as a whole had been questioned. He also wondered how market participants came to the agreement that a replacement of the benchmark(s) was necessary.

56. Ms. Morita offered the 2017 UK FSA speech as a trigger point, which included the statement that institutions will not be compelled to submit rates after 2021. Market

participants did not want to face the logical consequences from a disappearance of the key benchmark rate. At the time, ISDA surveys highlighted a lack of awareness and acceptance of the necessary developments among financial institutions. However, since then, market participants have moved swiftly; now, market participants and regulators understood the significance of the issue and its implications. The market at large was now working hard to find alternatives. In this context, ISDA was playing a role in the discussions on the derivative fallback language and provisions, since 80% of LIBOR-driven products were derivatives.

57. Mr. Yamadera next posed the question to what extent the Tokyo market was ready to address the benchmark issue. Mr. Matsuura responded that the discussion in Japan could serve as an example for other markets but, at the same time, Japan could have some unique issues not faced by other markets. There were challenges not unique to Japan: the awareness or lack thereof, and that users of the benchmark did not appreciate the significance of the possible disruption. In response, the market committee had been preparing consultation documents for the industry which were ready to be distributed in the next few weeks; this move would create the necessary awareness and also offer plans on what to do in each instance that would affect an institution. Mr. Yamadera added that the lack of, and need for, awareness was also the reason why this session had been organised by ABMF. He also wanted to know what ASIFMA was doing.

58. Mr. Chan stated that creating awareness was ASIFMA's mission. The issue affected both front office and back office and impacted regulations, whether directly related or not and, hence, became a compliance issue by default. ASIFMA wanted to ensure how to deal with a 'winners' (those who successfully transition) and 'losers' (those who did or could not) situation and, preferably, avoid that, since it could give rise to misconduct. Key subjects were the legal issue, where a whole range of contracts had to be 're-papered' (deal documentation created or amended), and accounting issues – all of which were pervasive within firms and across instrument and asset types. In ASIFMA's experience, the corporate sector – as customers – was not aware of the development, and neither was the retail sector. Here, cooperation was key but also a challenge in itself, with many stakeholders, and much effort was necessary to achieve cooperation. ASIFMA's efforts were connected to those by GFMA (in Europe) and SIFMA (in the US), and directed towards coordination between the public and private sectors. The benchmark issue may or may not be bigger than Y2K, but was not the result of specific regulations – as such, it did not hit the key trigger of many organisations, and did not represent a direct imperative for many parties to act. While ISDA was leading the dialogue for derivatives and doing a great job, ASIFMA was looking into the impact on other asset classes. Mr. Chan reminded the audience that typical system enhancements often had a lead time of 18 months and institutions had to consider the necessary legal and regulatory changes before such enhancements could even be defined.

59. Mr. Yamadera stated that ADB was lending to markets based on LIBOR beyond 2021, and its legal department was trying to address this issue now. He also posed the question to

Bloomberg what customer impact it had observed and what was the feedback. Ms. Cheng confirmed that LIBOR business was at the heart of the Bloomberg trading platform, and that it represented a big data play, since Bloomberg provided, e.g., data for ISDA models. Customers in Asia would typically ask: why does it affect us? Then: what is the significance (of the change of benchmarks)? And: what was the size of the problem? Customers would also ask Bloomberg whether the necessary infrastructure was – or would be – in place. In this context, the bigger question was, even if one had the right infrastructure, what data would one put on it? Since the issue was not driven by Asian regulation(s), it had acquired a certain fluidity in interpretation. However, for many parties it came down to whether there was enough data to conduct modeling on the basis of new benchmarks.

60. In the Q&A session, participants pointed out the need for re-papering of contracts, which would incur a fortune in legal costs and asked what the approach was in terms of standardisation of new language or provisions. ISDA was conducting consultations on fallback provisions and will publish such proposed language, using an established protocol to achieve quick compliance. The review and revision of ADB contracts was more difficult since it had no such protocols and the sovereign borrowers were beyond specific financial market practices – contracts would have to be reviewed and adjusted on a case by case basis. For retail, the collective action of each market was required. In Japan, the public consultations will provide a number of alternatives to address issues, and the focus was on how to approach a common response by the industry. Panelists agreed that the commercial work was potentially messy and that many outcomes would turn into technology projects. Bloomberg pointed out that a UK court had already ruled on certain aspects of the benchmark change.

61. Members also stated that the earlier incidents in the London market had now created problems for everybody, including in Asia, and wondered whether a benchmark reform was the best solution. At the same time, the implementation of Basel II and III principles affected benchmarks as well, and members wanted to know whether and how Asia was participating in these developments. According to the FSB, in reality, benchmarks were an issue that was beyond the public sector, yet the public sector was trying to address the issue, also because it was a global issue, as many markets depended on the use of benchmarks. The FSB had an interest in extending its outreach – it had regional consultative groups who met 2 times a year and included markets that were not outright members of the FSB; the FSB simply could not wait and see and wanted to understand the specifics in each region. Markets had to self-assess and be proactive and reach out to the regulators and to or through its respective SROs.

62. Mr. Yamadera opined that ASEAN+3 markets had to think for themselves but also needed a regional discussion, to be able to provide comments into the global discussion. Then, the FSB could take those comments on board and disseminate them to a broader audience. In this context, the question arose: what should the individual financial sectors in Asia do? According to ISDA, so far, no specific plans existed other than for Japan and Singapore. Regulators in Asia still thought that the impact on domestic benchmarks was small.

However if regulators were aware of the issue at large, they must consider reducing any possible impact on their market. Mr. Yamadera enquired since Japanese banks had a large exposure in Asia and would certainly be impacted by the change, what was their request of Asian regulators. MUFG defined the impact primarily on the USD and JPY benchmarks; regional regulators should be aware of the global impact and avoid disruptions to their markets. The regional view was still that the issue was not driven by regulations and, hence, may not require a direct involvement by the regulators – however, some sort of regulatory initiative was necessary to ensure a successful transition in all markets.

63. Since ABMF was studying cross-border collateral as a key subject, members asked whether an additional impact might come from the change of an unsecured to a secured benchmark rate, and the correlation from underlying uncollateralized to collateralized transactions; this could further put a strain on already limited available collateral assets. MUFG opined that RFRs may not require referenced transactions to involve collateral and, hence, the new benchmarks may not create a difference in treatment of collateral, but this depended on each market and solution. The BOJ enquired whether the FSB (or who else) will ensure a consistency in approaches across markets, since coordination required consistency. The FSB was looking into consistency issues, though this was easier said than done. IOSCO was part of the FSB and should converge member interests and developments towards common approaches. Ms. Iannotti conceded that this would take time and effort and was still a long journey. ASIFMA would focus on consistency where it made sense; its focus was the potential fragmentation of the market, or rather, the avoidance thereof. ASIFMA was bringing such issues to the attention of regulators and was encouraging dialogue between the different groups and industry forums. ASIFMA felt that the voice of Asia should be raised and heard, including on a global scale. Bloomberg added that some features in Asia were very distinctive and parties also needed to consider the time-zone factors which other markets did not face. Overall, key was to move to a regime with greater transparency for all market participants.

64. Mr. Yamadera also enquired what safeguards might be in place that the new benchmarks were not subject to abuse. The FSB had addressed this issue from the design side of the benchmarks. Key was to eliminate the inherent conflict of interest among contributors to any benchmark and the FSB wanted to ensure that misconduct would not occur, since it could become a market conduct or systemic issue and pose a risk to the entire financial system. Hence, it needed to be addressed – here, transparency was indeed important. In Asia, the central banks were addressing the issue through EMEAP (Executives' Meeting of East Asia-Pacific Central Banks). ABMF will continue to discuss the benchmark issue, share information with members and observers and work with market information providers. Mr. Yamadera also wanted to know what the FSB might want from issuers. Ms. Iannotti asked issuers to assess their own position and risk and to be proactive in the approach to pricing; she recommended issuers speak to their respective regulator(s); ultimately, the benchmark issue was about risk assessment for each issuer, and the appropriate allocation and use of capital.

II. ASEAN+3 Bond Market Forum - Sub-Forum 2

65. Mr. Seung-Kwon Lee, SF2 Chair, stressed the importance of understanding the impact of technology on the bond market and the capital market at large; for SF2, this was of particular significance because it focused on standardisation and harmonisation of practices in the bond market.

66. **Regional Financial Stability and Cross-Border Collateral** (ADB Secretariat, ASEAN+3 Macroeconomic Research Office (AMRO): Mr. Yamadera pointed out that, with the reliance on USD funding and related instruments – regional authorities had to ask themselves what if such an arrangement would (suddenly) not work anymore, and efforts were subsequently made to establish a regional financial safety net. Mr. Nam Sing Kim, CMIM Specialist at AMRO, then gave an overview of this regional safety net.

67. Mr. Kim noted the typical large capital inflows into regional markets, which had been largely beneficial, but also gave rise to potential market volatility and represented a risk of a reversal of such flows under adverse conditions. In addition, these flows were susceptible to the negative spillover from external shocks for foreign investors, e.g. in their home market or as a result of critical business factors. Coupled with that, ASEAN+3 markets still showed an overreliance on USD funding, even if they were not trading with the US. Mr. Kim reviewed the financial readiness of the markets for potential crisis: domestic tools included monetary policy, fiscal tightening and the gradual appreciation of the FX rate, but offered limited policy space. Multilateral tools included bilateral swap agreements which were relatively easy to establish but depended on the mandate of each market's central bank, and were not available to every country; other multilateral tools included regional financial agreements (RFA; currently 10 RFAs in place), as well as IMF resources at a global level which, however, this carried the stigma associated with having to approach the IMF in the first place.

68. Mr. Kim reviewed the financial safety nets (FSN) presently available globally, their evolution and available resources. The Chiang Mai Initiative Multilateralisation Agreement (CMIM) was established because, despite the available FSNs, there was still a gap in sufficient resources for Asian markets to address a potential crisis. The CMIM resources are the same or larger than those available via the IMF to middle-income Asian economies and, collectively, almost double that of its members' IMF quota. The stigma of IMF support was still a major problem but, at the same time, historically, an IMF facility has not been enough for bailouts. Addressing this stigma and gap had lead to the creation of CMIM, plus the experience from the Asian financial crisis was a major motivation for the establishment of CMIM, and also AMRO. CMIM was created in 2000, then known as the Chiang Mai Initiative (CMI); the multilateral aspect was added later. Now, CMIM was a single programme with a common decision making body; AMRO Limited was created in 2012 and, in 2016, CMIM became an international organisation.

69. Mr. Kim explained the CMIM swap transaction mechanism; fundamentally, it represented a self-help mechanism for ASEAN+3 economies for short-term liquidity. CMIM supported existing international funding arrangements; the total facility available was USD240 billion, of which China and Japan each provided 32%, Korea 16% and ASEAN countries contributed 20%. Collective general decision-making was done by the ASEAN+3 Finance Ministers and Central Bank Governors Meeting, with executive decisions carried out by the Deputies Meeting. Mr. Kim showed the funding mechanism; the US Fed acted as the counterparty for USD swaps. CMIM offered two facilities: a Stability Facility (CMIM-SF) for actual short-term liquidity difficulties and a precautionary line (CMIM-PL) for potential short-term liquidity difficulties. The procedure to draw on either facility was nearly the same, and included an IMF-linked and an IMF-delinked portion. 100% of a facility could be available if IMF was co-financing, or 30% of the CMIM amount was available without involvement of the IMF.

70. CMIM does not have a legal personality, it exists as an agreement only; hence, the need for AMRO to support CMIM activities. While in Europe, IMF co-funding was mandatory or highly recommended, this was voluntary under CMIM. CMIM itself represented the 3rd largest RFA, and the largest outside the EU. Mr. Kim also explained the functions of AMRO: conducting regional economic surveillance and providing technical assistance in support of the regional financial arrangement. ASEAN+3 was continuously reviewing the use and features of CMIM and had realised that the layers of CMIM had to cooperate more closely. A periodic review (the first carried out in May 2019) would result in enhancements to the arrangements; these would be documented in the operational guidelines. Regular test runs, in conjunction with the IMF, would ensure the functioning of the mechanism and members would also identify CMIM's future direction in response to members' changing needs.

71. Mr. Yamadera added that while CMIM was created for a crisis or response to external shocks, it had not been activated during the GFC – Asia had fundamentally been sound during the GFC. At the same time, the characteristics of a crisis may change and it was better to be prepared. Such new type of crisis included a cyber-attack or other possibility of a market disruption. The key question was how could the region, here through ABMF, create more awareness of such potential situations – as presently shown in the impending benchmark reform, which had an inherent risk of market disruption. Nobody knew the potential impact of the benchmark reform but it was likely that an impact will not be limited to developed markets; it may also impact emerging markets, and not be limited to short-term rates, but also likely have an impact on long-term rates. As such, it was important to create further market awareness. Needed were each market's efforts as well as regional efforts, given the inter-connectedness of the ASEAN+3 region. But. Mr. Yamadera asked whether the region had enough policy measures to manage such problems.

72. Mr. Yamadera pointed to the increasing interdependence among financial institutions in the region and how the USD continued to dominate international payments. The correspondent banking model in place created challenges, such as exposure across time-zone

differences. It was also not easy to secure liquidity in LCY versus LCY transactions. Mr. Yamadera likened the LCYs to commodities, with the USD acting as an exchange. To obtain liquidity, market participants could use repo and needed to post collateral. Collateral was typically the first line of defense, and could often be readily used with the central bank. However, foreign bank participants in a given market may not have enough holdings suitable as collateral. Mr. Yamadera reviewed the current layers of the global financial safety net that, however, existed for governments, not for individual financial institutions. Central banks can be lenders of last resort, and collateral can be added later, as available.

73. For banks, self-help was available in the use of cross-border collateral, i.e. the posting of collateral held in markets other than the one a transaction was booked in that had to be collateralized. In Europe, banks could avail themselves of the Correspondent Central Banking Model (CCBM), where financial institutions could use collateral for transactions within the EU as long as it was available with any of the participating central banks. This mechanism showed uses for Italy during the GFC. The work of the Cross-Border Infrastructure Forum (CSIF) was trying to offer a similar mechanism in ASEAN+3, creating linkages between central banks (for currency) and CSDs (holding debt securities eligible as collateral) to put financial institutions in the position to efficiently use its holdings and obtain liquidity as needed within the region. Mr. Yamadera reviewed the evolution of financial cooperation in ASEAN+3 and pointed out that efforts were under way to achieve a stronger economic linkage and synchronization of markets, for which ABMF, ABO, AMBIF and also AMRO were vital milestones. ABMI had expressed the need for further cooperation in ASEAN+3 – that was why ABMF had invited AMRO to participate in ABMF and present updates from time to time.

74. The BOJ echoed the key points from the presentations; it had established bilateral arrangements with Singapore and Thailand, and would consider more such arrangements. Interregional banking could lead to a distortion in individual financial institutions, which could have a knock-on effect on other institutions or markets. Central banks had to enhance their tool kit for liquidity provision, and the use of collateral was one such tool. Financial institutions should be aware that such arrangements existed should they be unable to meet their obligations in case of stress. Mr. Yamadera agreed that awareness and also the usability of such mechanisms were important. At the same time, such mechanisms still had a stigma attached to them. Hence, the region should aim to provide a facility for daily/regular use – CSIF was such a proposed facility. In response to a question, Mr. Kim confirmed that the CMIM had 27 signatories and was established under English law.

75. **Technology to Improve Regulatory Reporting – RegTech** (ADB Secretariat, NTT Data): Mr. Yamadera was hoping that ABMF could propose key regional initiatives to help take advantage of technology in the bond market. For that, one needed to understand that technology improved finance and Mr. Yamadera reviewed what was driving the changes in the finance world. Changes in the data environment lead to an exponential growth of data to be processed, which was possible at lower costs, due to technological advances. But

data had to be processed and for that to be done with the help of technology, data had to be digitized. Once available in digital form, human to machine reading mechanisms could be employed. Then, once transactions crossed borders, there was a chance of a mismatch in understanding, language and interpretation. This required inter-operability of financial systems and the definition and use of standards, such as XML, HTML and XBRL. While standardisation was important, interoperability was key for cross-border transactions. Technology could also address some of Asia's heterogeneous features, such as language and character sets. And, while everything could principally be digital, a link between the digital and real world was needed; examples given included the delivery service in e-commerce and drawing cash from an ATM. Mr. Yamadera outlined that the subsequent presentations were intended to cover these topics in the context of ABMF's work.

76. Mr. Takuya Nakagawa of NTT Data introduced robotic process automation, or RPA, with a workflow example shown. Robots were cheaper than humans – cost savings were a key factor in the application of RPA, and RPA was 3 times more productive than human work. In preparation for RPA, work had to be divided into simple, repetitive steps and non-routine, more advanced work. The simple work could then be automated. Benefits included lower costs, the completion of repetitive work that could wear humans out, the fact that robots do not get tired or bored, that they do not make mistakes; robots would also not quit their job. Local governments in Japan subsidized the introduction of RPA, by up to 50% of the cost. At the same time, obtaining RPA qualifications had been introduced at high school level, as it was now considered an essential business skill.

77. Mr. Nakagawa also explained automation by AI; a key application was AI-OCR, used for the interpretation of an image file to machine data; AI meant there was no need for image frames or forms. He demonstrated the use of AI-OCR in the capture of a doctor's script and mentioned that the technology was now also used in the automation of the Tankan, the BOJ survey. NTT Data was now developing an AI solution for foreign languages. AI speakers were another application, such as those featuring 'Alexa'; an RPA tool was behind the transmission of the voice command into connected actions.

78. Hand sensor technology (with a reference tool attached to the hand) allowed a person to use hands to create business automation without touching a PC. Facial recognition can now identify laughter (effectively, a laughing face). 3D imaging, demonstrated to the audience, collated from satellite images, can be used to create a 3D movie without actually filming the area in sight; this technology had applications where no aerial video was possible. So far, 70 countries were using 3D imaging, e.g. in urban planning or flood detection and prevention. Neuro-AI can predict and simulate brain activities, which could be used to fine-tune advertising or messaging to people; a video showed a commercial overlaid with the expected reactions from viewers generated by Neuro-AI.

79. In the Q&A session, Mr. Yamadera asked about use cases in Japan; there should be a lot of room for applications by banks, the BOJ and the SFA. Mr. Nakagawa confirmed that almost all local banks and also local governments used scanning and OCR technology.

Principally, paper was considered bad. In banking, RPA was considered a good tool since most products were still starting with a form; already about 100 banks and insurance companies used the tool. Mr. Yamadera added that OCR/scanning linked the real world to the digital world, also since regulators mandated the creation of lots of reports. Members also highlighted the issue of data privacy in that inappropriate use of the data could exploit other people's identities. In fact, Japan was the only country in Asia so far to have signed an MOU with the EU on its General Data Protection Regulation (GDPR). Asia should agree on how to use data and consider data privacy as a key point. Mr. Nagakawa opined that digital data was ever increasing and that it was important to keep the information it contained safe. As a result, banks in Japan were not using Amazon's web services since it was not considered safe. However, it was possible to augment such services with sensors or other devices to increase data safety.

80. **Account Structure Study and Standardization of KYC** (ABMF International Experts): Mr. Shinya Kim, NTT Data, thanked the parties who had provided data on KYC processes and reiterated the objectives of the account structure study, including to identify the account structure and what as necessary to open an account, also known as onboarding. For KYC, it was better to distinguish between the information necessary for onboarding (also known as initial KYC) and the one required to support tax processing. Mr. Kim explained the case studies by country, with data flows shown for both initial KYC and taxation data; this included the raising of KYC data for Indonesia, which required the disclosure of the business principle (Shariah or conventional) and the need to apply for a Single Investor ID (SID) with specific underlying data; the tax form could be submitted electronically. In the Philippines, the tax refund process is uncertain, since not proven. Flows for the PR China were checked for all market access channels: Bond Connect, CIBM Direct and QFII. Japan required segregation between domestic and foreign accounts. Malaysia already mandated the use of LEI and submission was possible to Bank Negara online. In Singapore, the CDP has specific data requirements.

81. Mr. Yamadera added that this was a joint study between NTT Data and ADB Secretariat and reviewed the key findings and preliminary recommendations. Three possible account types existed, omnibus, segregated and omnibus with investor ID. A key principle was that financial institutions were required to check their customers, using the initial KYC. While the necessary information was largely similar, the actual data requested could differ by institution; often, the differences were small. In principle, KYC was determined by global, local and home market practices and what or how much was regulatory in nature may not be easily defined. In addition, custodians or market intermediaries needed taxation related info, which was highly repetitive.

82. Based on the study findings, it was best to distinguish between initial KYC and transactional KYC, given the different attributes. Additional information may differ and was difficult to define and standardise. Transactional KYC needed to be provided to the tax authorities, could be standardised or harmonised and, hence, should be tackled first. ABMF recommendations included such standardisation of KYC data elements. Interestingly

enough, there was a significant overlap of the required data with that available under LEI. This Legal Entity Identifier (concept was explained by Mr. Yamadera) had previously been introduced in ABMF and was now mandated for OTC derivatives transactions globally, and extensively used in the EU. If ABMF focused on institutions (i.e. not individuals), the LEI could easily be used. If ABMF were to promote LEI, it would also be easy to use it. One reservation might be on the need to identify the type of business, maybe for statistical purposes or under specific circumstances, but in any case for specific markets only.

83. Mr. Yamadera proposed some tentative steps towards KYC standardisation, including the definition and implementation of a transactional KYC template across regional markets and its equivalent as a messaging format under ISO20022. He argued that if ABMF and its members did not act, the tax process would remain a burden and possible market impediment; hence, it was ADB Secretariat's proposal to do something. If ABMF members came to a common understanding, possibly the MOFs and tax authorities would come to accept such approach, since they also fielded a lot of complaints about tax processing and would gain from a timely and error-free submission of required data. Here, ISO20022 would come in handy, since it defined business processes, not just messaging; members may be able to automate transactional KYC processes using ISO20022. Since ASEAN+3 markets will implement ISO20022 by latest 2025 in their market infrastructures, if ABMF were to work towards that goal, members could receive official support and could maximize the benefits of standardisation at the same time.

84. Mr. Lee, SF2 Chair, deemed this proposal interesting and worthwhile pursuing. To allow a broader perspective on KYC practices, he invited some International Experts to offer their view on the subject. Mr. Steven Bruce, partner at **EY**, opined that cost was key in the considerations on KYC practices. The study showed significant differences across the markets; in turn, the investors were trying to figure out best practice that could be applied as often as possible. Getting submissions wrong could lead to reputational risk. Custodians had their own rules and requirements. Standardisation for parts of the KYC would be a step in the right direction. The study had a lot of upside potential, would give regulators the comfort to know the actual status of KYC practices, and tax authorities a better understanding of what the tax process meant for the market. Mr. Bruce wondered whether it was possible to achieve standardisation for every process and in every market, since a number of distinctions had to be considered: civil law versus common law, prescriptions for beneficial or ultimate beneficial ownership, and so on. He confirmed that tax authorities had received more data in the last 2 years than in the previous 10-15 years; this was a fundamental change. Getting standardisation of KYC practices done in a timely manner was, hence, very desirable. Presently, it took about 6 months to onboard a client; a digital bank could onboard an individual client in 6 minutes.

85. Mr. Masayuki Tagai, of **J.P. Morgan**, wanted to clarify the terminology used. From his perspective, initial KYC as in the presentation was part of the onboarding due diligence process; transactional KYC as in the presentation represented the ongoing due diligence. It was necessary to agree on the terminology, then to apply it consistently in the study. Global

custodians were custodians for global clients and carried out KYC for their own client onboarding purposes. Sub-custodians would also have their KYC requirements over their Global Custodian. Custodians may also support the global investor client need to meet each market's market entry requirements according to each market.

86. Mr. Boon-Hiong Chan, of **Deutsche Bank**, conceded the complexity of domestic versus international requirements and acknowledged the challenges of KYC for onboarding and for tax processing; one key factor was the quality of the information to be obtained. The submission of original documents or scanned copies, the need to certify, notarise or just stamp documents was a major factor as well, since the quality of source information varied by home and host market. This also meant that the acceptance or trustworthiness of the information might differ. Added to that was the validity period of the supporting documents, such as a certificate of domicile or a passport – all this contributed to the complexity of the KYC processes. Mr. Chan pointed that out that KYC was originally meant to support anti-money laundering efforts. The complexity of KYC was in the process and in the timing. Issuers were tasked with withholding tax, but should they be allowed to set their own format or should they follow a market format, at least. Mr. Chan was hoping that the issuer side practices could be standardised and was looking at the financial market infrastructures to act as coordinating bodies. The tax processing may also need to be distinguished between tax application at source and tax reclaim processes; here, it would also be important to take a look at the quality of information. Mr. Chan commended those markets that were looking at a KYC tool or registry, as this would make KYC documentation and processes easier.

87. Mr. Tagai also appreciated that all financial messaging would be ISO20022 within the next 5-6 years. That also gave the opportunity to use ISO20022 in the KYC space. The target should be to simplify correspondent banking to avoid potential gridlock. SWIFT already operated a KYC utility. In addition, the Wolfsberg Group issued a questionnaire[3] about 10 years ago intended to be used as standardised KYC requirements amongst correspondent banking and currently available through the SWIFT-operated KYC utility. Ms. Pinky Padronia, of the Bankers Association of the Philippines (BAP), commented that BAP was working on an ID registry for the Philippines for standard KYC. The registry will not be a repository and not feature a database, which instead will be kept by the respective banks holding the client information. The approach will facilitate a faster and easier KYC process and be commensurate with regulations on the reliance of data stored with third parties. Data required by the BSP will remain outside the registry, as it was pursuant to AML, not KYC as such. The solution was completed in March 2019 and now undergoing implementation in the market. With the registry, the BAP is hoping to ensure client suitability across the industry. A request for KYC relevant data may only be submitted by a client (wanting to open another account), to ensure data privacy. Ms. Padronia pointed to a view on the BAP website how the solution was planned to be implemented in the Philippines.

[3] Official title: Wolfsberg Group Correspondent Banking Due Diligence Questionnaire (CBDDQ); available at: https://www.wolfsberg-principles.com/sites/default/files/wb/pdfs/Wolfsberg%27s_CBDDQ_220218_v1.2.pdf.

88. In the ensuing member discussion, it was commented that with the use of new technology, it appeared easy to replace legacy processes – but that standards were crucial to make new solutions available to all parties. It was also checked whether the proposed approach was in line with the FATF requirements – some markets needed to disclose the beneficial owner (BO) – hence, would it be possible to identify the BO? Mr. Yamadera conceded that the longer ADB Secretariat studied the subject, the more complex it became. A number of countries were already establishing a national ID, for easy identification across a number of applications. However, once business moved cross-border, the same issue of being able to identify the right party came back again. A possible first step could be the mutual recognition of countries' IDs – but this was not likely. Instead, markets should focus on the existing processes and make (more) use of standards. LEI could also offer a link to a national ID. However, the tracing of BO or UBO was a rather difficult issue: it remained difficult to define 'ultimate control', and while the key underlying objective was often to avoid tax evasion, the trading of UBO may not meet the tax authorities' desires, since it could force parties to conceal their identity. Ultimately, ABMF would like to alleviate the burden of all reporting entities.

89. Mr. Yamadera summarised that next steps would focus on cross-border transactions, of entities only, and have a focus to shorten, automate and standardise the relevant processes. He issued a request to members to identify what sort of information was required. And, while ADB Secretariat now thinks that it understands the processes, members were asked to please let the team know if some aspect of these processes had been missed, or if there were additional data elements not previously considered. ADB Secretariat wanted to complete the study latest by early 2020, but depending on available resources. Members' input was a must and very highly appreciated.

90. **FinTech and RegTech** (GLEIF, XBRL International): Mr. John Turner, XBRL International, observed an exponential increase in cost for regulatory submissions and engagement, which were only exceeded by the fines for not getting these submissions right. He defined RegTech as opportunities for companies improving the relations with regulators, while SupTech showed opportunities where regulators themselves could improve. In Europe, where 27 countries shared areas of common law and regulations, a lot of focus has been on identifiers, including universal transaction ID (UTI) and universal product ID (UPI). This had an impact on many financial institutions and other market stakeholders.

91. Parties often asked why they should be concerned about data. But, data was one of the main factors contributing to compliance cost: too many submissions of data, and data being too vague or ambiguous, plus too many amendments to data requirements. However, there were many ways to simplify and streamline data requirements, referenced by Mr. Turner as reduce, clarify, align and make interoperable. Mr. Turner stressed that RegTech was increasingly deployed by specialist firms in conjunction with regulators, with many initiatives underpinned by the use of LEI. This included almost all regulatory initiatives in Asia, since it represented a or the single trusted mechanism for transactions. The use of Open API was

increasingly applied not only by financial firms; participants should keep that in mind when refreshing their technology or infrastructure in the region.

92. Other initiatives in Europe included the EU Single Electronic Format (ESEF) for the submission of financial reporting, the Financial Instruments Reference Database System (FIRDS) and the SFTR or securities financing transactions reporting framework, which addressed transparency in securities lending, repo and margin trading businesses. All of these initiatives used ISO20022, LEI and UTI. The EC FDS (Financial Data Standardisation) initiative was aimed at the harmonisation of definitions across member countries, with next efforts focused on standardizing and streamlining the data. Mr. Turner underscored the need for this initiative with the example of 19 concurrent definitions for 'full-time employee' in the Netherlands alone. Data and their definition was also of paramount importance since regulators were increasingly looking at granular reporting. An example was the introduction of a shared service center for cooperative banks in Austria, from which regulators could then draw data at different hierarchy levels. In Asia, an example was the MAS Open Taxonomy in Singapore, which was driven by the financial industry in collaboration with MAS.

93. Mr. Hiroshi Nakatake, MUFG and a board member of GLEIF, updated participants on LEI and introduced a number of LEI use cases. The focus was on the usage of LEI by regulators and central banks. At present, 1.36 million active LEIs existed in 222 jurisdictions, with the US, UK and Germany the top jurisdictions. In Indonesia, Australia, Korea and Japan, the use of LEI was mandated, but only resulted in a small number of LEIs issued. Here was a great opportunity to improve through cross-border coordination. LEI contains data on who owns whom and is able to aggregate group entities as a result. The SWIFT Payments Group was considering the use of LEI in its payment messages. Benefits of that application for sanction screening and due diligence included better compliance at lower cost, risk reduction and higher STP for financial institutions, as well as risk reduction and less delays for clients.

94. Mr. Nakatake explained some of the current and future adoptions of LEI, by the Bank of England, the European Central Bank and the Reserve Bank of India. LEI was already in the process of being embedded into ISO20022. He highlighted the potential use of LEI in trade finance and in AML. LEI in RegTech applications would allow further automation and digitization and would make the participation in the digital marketplace easier and safer. The value of LEI included the automation of data entry across multiple applications, the linking of LEI across transactions and the automation of tax classification. In the regulatory space, 101 rules already referenced LEI, while 49 rules mandated the use of LEI for certain entities. Coverage of OTC derivatives transactions had reached almost 100%, while 78% of securities issuers were already captured.

95. LEI offered avoidance of duplication, using simple data and could be applied across countries, jurisdictions and authorities without further standardisation. It was already mapped with other significant identifiers, including BIC and ISIN. Key applications included

the monitoring of financial risks and exposure aggregation across entities. LEI aided in statistical analysis and allowed the understanding of company and market structures, aiding in transparency for the benefit of investors. It could help identify target entities, counterparties, contracts and transactions and support AML. Many use cases existed or were considered in payments areas. The use of LEI could also create benefits for the work under ABMI, in particular for the desired cross-border connectivity and interoperability mentioned earlier.

96. Mr. Tagai offered additional comments: it appeared that there were sufficient use cases for regulators by now to implement or mandate LEI, but what did that mean for a market participant? For example, the use of a SWIFT BIC, instead of an LEI, might make sense where a SWIFT BIC is mandated to match a legal entity, such as was the case in Japan. However, BIC is just an operational message router, with multiple entities using a single BIC; at the same time, one entity could have many BICs to facilitate its transaction businesses. At the time of the GFC, Lehman entities had not been identifiable properly by BIC – that had been a watershed event for regulators that led to the need for a common identifier.

97. Mr. Tagai urged markets that did not have a mandatory ID to focus on an implementation of those by risk category, starting with derivatives, then into other areas such as payments and so on, as and if required. Parties should also ask themselves what they are replacing, since existing IDs may not go away, at least not immediately – original IDs were still needed to feed existing structures. Adding LEI could unify these structures or act as a connector. For every market participant, an internal assessment was the start of a journey but this would bring clarity to the organisation and eventually lead to support of a sound decision on the implementation of identifiers and new technology alike.

98. **Panel Discussion: How can technology improve the region's regulatory environment and support market integration?** (APEC Business Advisory Council (ABAC), Bloomberg, Deutsche Bank, ISDA, SWIFT, XBRL, moderated by ADB Secretariat): Mr. Yamadera introduced the panel and posed the question to panel members how to reduce the burden that came with reporting and increasing KYC and other responsibilities and how solutions should be implemented. He opined that Asia should not be a follower in these subjects, but instead lead the discussion. Standardisation was recognised as key, as was the significance of interoperability; the use of IDs was important, with LEI but one example.

99. On the proposal of **ABAC** and the challenges seen, Dr. Julius Caesar Parrenas responded that a lot of work on data was underway. ABAC wanted to develop a data ecosystem roadmap on the basis that 'data was the new oil' since all technology needed data to run. ABAC looked at data from a lending perspective, but lessons drawn also applied to transaction data. However, with the use of data came concerns, with data privacy being a prime example. In addition, different types of data offered different challenges: structured data was being widely used, while unstructured data was the newer trend and used in social media and, e.g., geotagging applications; there was much growth of unstructured

data. At the same time, the regulatory framework was often not well developed. The concerns mentioned were expressed in the new data privacy rules appearing in many countries; yet, efforts in this regard were also not coordinated, which created another challenge. The primary challenge for the sharing of data cross-border was data security or data protection, to prevent hacking or leaking of information. Here also, the lack of standards posed a challenge that needed to be addressed. ABAC recommendations included that regulators should encourage the capture, use and sharing of data and that interoperability as well as data privacy efforts needed platforms that allowed these principles to function appropriately.

100. Mr. Yamadera added that it was important to promote the use of data; for this many proposals were available, including the use of distributed ledger technology. On what was next in this regard, Mr. Chan (**Deutsche Bank**) offered his observations: the use of data included cyber security and cyber incidents, i.e. what to do after any such incident. Defining such response required industry participation. How technology improved regulations: the use of blockchain for the issuance of bonds, e.g. Bond-I bonds in Australia, defined a participant universe and the creation of digital assets carried a built-in compliance list, such as the validity of an offer only to qualified investors in a certain geography. So far, these initiatives were carried out in a private market. However, in the US alone, 70 providers offered solutions with a so-called 'compliance aware token', where the token effectively checked participants against a white list or other defined checklist. SGX had invested in a company currently exploring this solution in the regulatory sandbox of MAS; however, this solution was still aimed at private markets.

101. Mr. Yamadera stated that in order to create data, one needed certain features and conditions. The LEI was one such possible feature; as mentioned, identifiers were key for cross-border business. Ms. Kaori Horaguchi, of **ISDA**, explained why LEI was introduced in the OTC derivatives space. Following the GFC, G20 committed to the introduction of transparency in this business, and FSB issued a recommendation to create and implement an identifier. By now, many FSB jurisdictions mandated the use of LEI. And, while the use of LEI for OTC derivatives was concentrated in the US and Canada, some of the European regulations (EMIR, MIFID) that required LEI also affected non-EU participants: all transactions involving EU counterparties had to carry LEI, or no trade; trade repositories would reject records without LEI. In Australia, the use of LEI was mandated since April 2019, with some concessions. In Japan, the inclusion of LEI in prescriptions of the FIEA (Financial Instruments and Exchange Act) had already been requested. Overall, the market called for efficiency and data quality. ISDA also carried out work on margining businesses and was involved in conducting and publishing an FSB review into the topic.

102. Mr. Yamadera commented that ordinary reporting did not show the connectivity of entities; now, the push for transparency was coming from the regulatory side, since regulators wanted to understand the network of participants in a given business. ABMF participants now had to think how to utilise such data or identifiers for their own purposes; here, it was important to be proactive: lead the discussion instead of follow it. SWIFT had

been involved in LEI since its creation and Ms. Mieko Morioka, of **SWIFT**, stated that SWIFT was part of the initial discussion and formalization of LEI in 2012. The EU had now fully adopted LEI, while the Asia Pacific region was beginning to adopt. For SWIFT, it was natural to get involved since its users required such solution. SWIFT had started the inclusion of LEI in MT300 messages and now will include LEI into corporate action and payment messages. On the often-asked question of whether LEI will replace BIC, Ms. Morioka opined no, since LEI was focused on risk and other uses, whereas BIC had its own function in the overall financial messaging concept. SWIFT reference data and its KYC utility already included LEI and also offered a BIC to LEI mapping service.

103. On the question of how **Bloomberg** viewed the LEI benefits, Mr. Peter McMillan mentioned that it has been issuing LEI for the past 2 years. While there were plenty of use cases, clients were still concerned about the cost of requesting an LEI. LEI itself offered a clear, concise and actual definition of an entity, and the richness of its level 2 data brought additional benefits. Practical illustrations of these benefits included an investment bank linking with private banking data to understand revenue opportunities as well as customer connections, and upstream and downstream supply chain identification, where LEI can link data via entities. One key benefit for all these applications was the confidence one could derive from knowing exactly who one was dealing with. At the same time, the basic fact that an identifier existed was beneficial because parties would find a use for such identifier; the more parties used LEI, the more use cases would appear. As a result, LEI was now used widely in Fintech and Regtech applications and represented both cost saving and revenue opportunities. Mr. Yamadera stressed that LEI helped identify whether an entity existed. In turn, an entity with LEI, as well as the issuer of that LEI, needed to regularly validate the underlying data – this was why users could rely on LEI. The cost for having an LEI ranged from USD100 to USD200. However, LEI was freely usable and did not carry IP restrictions, which was beneficial for extensive use.

104. Mr. Yamadera enquired how Asia could participate in the discussion around LEI and what considerations would be for Asia. Mr. Wada, of **XBRL** Japan, opined that XBRL was a good way to digitize structured data, and to be able to identify individual data for data consumption; however, XBRL did not have the capacity to identify the source of the data. That is why XBRL was now including LEI so that data could be identified together with the originator of that data. Now, it was possible to concentrate on how to overcome the issue of language, which together with LEI, could reduce the efforts for cross-border business. For that, it was necessary to discuss available technology and apply such technology to reduce the regulatory reporting burden and its cost, which was previously estimated at 5% of global GDP. Other panelists offered the best way to accelerate the implementation of LEI might be peer pressure and the promotion of the rich underlying data, which included the chance to adopt data for other business needs as well.

105. Mr. Chan from ASIFMA added that the specific issue for Asia was data localization, i.e. the need to maintain data originating from a market in that same market. Some jurisdictions were indeed enforcing data localization. While this development originated from e-

commerce, and the need for personal data protection, financial institutions were being caught up in the respective regulations, as cross-border business data was dealt with in the same manner as personal data. The underlying reason was a lack of confidence in cloud technology or virtual data storage and a corresponding reluctance to use such technology. In contrast, Japanese prime minister Abe had just recently called for a need to break down barriers to cross-border data use. Dr. Parrenas commented that data localization resulted in a lot of (extra) costs, which were being passed on to consumers, but it did not necessarily mean safer data. What it did result in was preventing domestic companies from accessing technology in other markets. To uplift such restrictions would need a regional solution, also so that consumers would have confidence in data sharing.

106. Mr. Chan from Deutsche Bank added that data localization might be seen as data sovereignty, because it also included hardware localization. Some exemptions had been or needed to be carved out for financial data, since – strictly speaking – no cross-border payment could be processed otherwise. One key issue were the conflicting requirements of wiping data clean after each transaction and the need to keep transaction data for AML purposes and inspections. In any case, the enforcement would follow the data, illustrated in the case the US brought against Microsoft-held data under the so-called 'Cloud Act', even if the data was stored in the EU. This also highlighted the question: as an Asian company, what rights did the company have in respect to the data it owned or held? The EU had the 'Budapest Agreement'[4], which represented the approach to cross-border cyber-defense cooperation. Asia did not have such an agreement, but ASEAN had proposed a similar concept this year.

107. On the question whether the use of blockchain would help improve transparency, panel members opined that trade finance was already mobilizing blockchain to improve cross-border flows. MAS and HKMA had signed an MOU that was now being executed in actual business transactions. Such agreements, however, required the same blockchain variant and needed cooperation among all affected parties. While blockchain was often portrayed as the perfect solution to all problems, all existing solutions were still very localized or isolated. Many applicants were struggling to find viability in the use of blockchain for their particular problem. DLT had some nice features which may, however, not be suited for all applications, such as for high speed and high volume cases, since system operations costs were still a major issue – this limited the outright use of DLT. On data localization, it was felt that this might originate from the Ministry of Defense or the ministry responsible for information technology in a given market; maybe it was possible to talk to these stakeholders to find ways to mitigate these concerns. A possible approach was seen in the regional trade agreement that had a provision that signatories will allow data to cross borders; this agreement was instead driven by the trade ministries.

108. Mr. Yamadera summed up the discussion: there was more data and more ways for sharing it, which generated its own challenges. Personal data was more sensitive, as it

[4] Officially, Budapest Memorandum on Security Assurances; see https://en.wikipedia.org/wiki/Budapest_Memorandum_on_Security_Assurances.

often included credit data. Some data was anonymous but could still serve a purpose. With the use of LEI, members could push for the use of associated data, at least for entities, but it was important that a common understanding existed. Hopefully, ABMF could continue to offer a platform for discussions in this regard. Some members were already talking about including LEI in transactional business and ADB Secretariat hoped to continue offering insights into how technology and data could actually be implemented for the benefit of its stakeholders.

109. Mr. Kosintr Puongsophol, ADB Secretariat, updated members that a new ADB TA (technical assistance) on **green bonds** was being finalised. ADB had previously published a study on green bonds and ABO continued to generate research material on the subject. ADB Secretariat was hoping to work together with ABMF members and observers on promoting green bond and sustainable bond issuance. If members knew of underwriters who would like to discuss how ADB could support green bond issuance, please put them in touch with ADB Secretariat.

III. Next ABMF Meeting

110. The 32nd ABMF Meeting and 19th CSIF Meeting are to be held in Shenzhen, kindly hosted by the Shenzhen Stock Exchange (SZSE), in the week of 14 October 2019, with the exact dates to be specified at a later stage. The meeting dates were subsequently confirmed for 17 and 18 October, and the venue confirmed as the China Capital Market Institute (CCMI) in Shenzhen, with the meetings jointly organised by ADB with the SZSE and the Asian Prime Collateral Forum (APCF). A preliminary agenda was sent together with the meeting invitation, while the final agenda will be sent to members and observers nearer the meeting date, once all topics and presenters have been confirmed.