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SUSTAINABLE FINANCE IN ASIA: HELPING ASIAN GREEN BOND ISSUERS TO ACCESS INTERNATIONAL CAPITAL MARKETS

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Executive Summary

In an environment of pressing sustainability challenges and increasingly sustainability conscious investors, developing financial instruments to support public interest is critical. The first green bond was issued in 2007, and in recent years a variety of new sustainable finance innovations have followed suit. Today's financial markets already include sustainable debt-financing tools such as green bonds, sustainability bonds, social bonds, green loans, and sustainability linked loans. While use of all of these instruments is growing rapidly, green bonds remain the most developed instrument, with the largest cumulative scale, the longest history, the most-developed regulatory framework and the best verification practices. This trend is the same in Asia, which arguably has the world's greatest need for sustainable financing, as calculated specifically for infrastructure. [1] In analyzing how sustainable finance instruments can be scaled up in Asia, this report focuses specifically on the case of green bonds.

Considering that the vast majority of labelled ESG-assets are located in Europe (and to lesser extent in the United States), establishing relations between Asian green bond issuers and global investors is critical to help Asia meet its challenges. This report marries policy recommendations with case studies of individual organizations, who have issued green bonds – either internationally or domestically – in the past.

From this outset the report identifies three key ways in which Asian green bond issuers can be assisted in accessing global capital markets at the policy level: Establishing international green standards or interim translative mechanisms, providing policy support, and increasing demonstrative issuances.

1. **Harmonized standards** could be further developed on the basis of current efforts, especially those of the EU, China, and under the ICMA Green Bond Principles. By developing common overarching frameworks of objectives and activities, a 'Rosetta Stone' concept, making standards compatible by making them comparable, is flexible enough to allow for the different policy priorities of different countries. To achieve harmonization of global standards, Asian countries and ASEAN could consider arranging their green bond objectives, activities and technical standards according to the 'Rosetta Stone' framework currently being devised by the EU and China in dialogue with ICMA. Based on this, they can establish more detailed guidelines and regulations. This approach allows for near-term transparency and lower transaction costs, while laying the groundwork for complete standardization at a global level in the long-term.

2. **Policy support should** be expanded, drawing on existing successful cases. In terms of educating stakeholders, Asian countries could, for instance, follow Indonesia's and China's examples to establish centers for knowledge and learning of green finance. In terms of financial support, Asian countries could also follow Hong Kong's, China's, and Singapore's examples of subsidizing verification costs. Further compensation schemes on interest rates, project guarantees, and project development, as seen at the provincial level in China, could be adopted at a larger scale across the Asia region once the outcomes of these projects are more apparent.

3. **Demonstrative issuances** should be scaled up, learning from examples such as those of the China Development Bank, the Hong Kong Special Administrative Region government, and the Indonesian government's green sukuk, which are paving the way for corporate entities to issue green bonds in the future. Governments of other Asian countries could follow such examples by issuing sovereign or quasi-sovereign bonds on both local and international capital markets. Such sovereign demonstrative issuances provide best practice cases and show the potential of issuing green bonds to Asian organizations aiming to be active in capital markets and sustainable finance. As seen in the current green bond market, demonstrative issuances can be carried out not just by sovereigns, but by corporates as well.

The case studies of green bond issuances by ICBC, Sindicatum, and RCBC highlight how the challenges listed above can be overcome in practice, under the unique circumstances of each issuer. While ICBC issued internationally to reach global investors with a large-scale issuance, Sindicatum went abroad to find investors interested in the mix of green and local currencies. On the other hand, RCBC successfully catalyzed local capital markets for their issuance with a smaller scale issuance. These cases confirm the need to access international capital markets and raise questions on the varying reasons to do so. At the same time, they explore whether Asian investors show a sufficient appetite for sustainable finance instruments. As ICBC, Sindicatum and RCBC clearly voiced a preference for a single global green standard for the sake of increasing clarity and reducing transaction costs, global standardization should remain the long-term goal of green bond standard harmonization. However, ICBC and RCBC also support the development of a 'Rosetta Stone' framework-based approach in the near-term – and using such a framework to gradually achieve a global standard in the future.

All interviewees further indicated that public support in

the form of knowledge sharing and financial incentives could be an effective way of increasing issuance, although none of them had received public financial support. As front-runners in the green bond markets of their respective countries, ICBC, Sindicatum, and RCBC show that demonstrative effects from sovereign and sovereign-backed issuers are not a prerequisite for other types of organizations to issue green bonds. While Chinese green bond issuance abroad has been expanding in 2017 and 2018, time will tell whether Sindicatum's issuance can spark further international issuance out of Singapore, and whether RCBC's case can give rise to Philippine green bond issuance at home and abroad.

Considering that the challenges to scale up Asian green bond issuance are a result of green bonds having existed for only twelve years, and different countries and regions wanting to finance different policy goals with green bond proceeds, other newer sustainable finance instruments face a similar set of obstacles. Therefore, it is possible to use this report's conclusions and proposed solutions to make broader inferences. For instance, the development of a common framework for comparing green standards can also be applied to a broader set of sustainability issues. In providing increased public support for green bonds, it is simple to expand the scope to include other sustainable finance instruments. Furthermore, demonstrating the practice of green bonds with sovereign issuances can also be replicated for other instruments, such as national development banks providing green or sustainability linked loans.

1. Oxford Economics (2019). Global Infrastructure Outlook: A G20 Initiative. Oxford, UK: Oxford Economics

Background: Sustainable Finance in Asia and the Need for International Capital Markets

1. Financing Asia's infrastructure investment needs

Asia requires an enormous amount of infrastructure investment to continue on its current development path. According to an often-cited number from the Asian Development Bank (ADB), to eradicate poverty and continue growth, Asia will need to invest USD 22.6 trillion in infrastructure between 2016-2030, or USD 1.5 trillion annually.[1] Further estimates suggest that whereas Asia's share of world energy consumption was one third in 2013, it will likely be more than half in 2035.[2] A large part of this energy consumption will be used to continue its growth path and eradicate poverty.

2. Ensuring the integration of social and environmental sustainability

For the purpose of this report, sustainability is defined on the basis of the 17 Sustainable Development Goals (SDGs), which were launched by the UN in 2015.[3] Replacing the Millennium Development Goals (MDGs)[4] which were in place from 2000 to 2015, the SDGs run from 2015 to 2030, and are also referred to as the 2030 Development Agenda. The SDGs are comprehensive in nature, and consist of a wide range of issues ranging from poverty alleviation to gender equality. Thus, they provide an overarching direction that sustainable infrastructure investment should aim towards. One central aspect of sustainable development, encompassed in SDGs 7 and 13, is climate change mitigation and adaptation. Parallel to the SDGs, the Paris Agreement on Climate Change was signed in December 2015, setting the goal of limiting global warming to well below 2 degrees Celsius.[5] According to the latest report by the Intergovernmental Panel on Climate Change (IPCC), to reach a 1.5-degree Celsius warming scenario,

1 Asian Development Bank (2017), *Meeting Asia's Infrastructure Needs.* Manila, Philippines: ADB

2 Hee Ng, T. & Tao Y. J. (2016), Bond financing for renewable energy in Asia. *Energy Policy 2016*

3 United Nations (2015). *Transforming our world: the 2030 Agenda for Sustainable Developmen*t. A/RES/70/1

4 United Nations (2000). *United Nations Millennium Declaration.* A/RES/55/2

5 United Nations Framework Convention on Climate Change (2015). *Adoption of the Paris Agreement.* FCCC/CP/2015/L.9/Rev.1

global emissions must reach a net zero by 2050.[6] As all signatories to the Paris Agreement on Climate Change are also subject to the negative effects of climate change, all parties involved in financing the region's economies and infrastructure must put climate change concerns front and center.

Asia's infrastructure financing must meet the emission reduction benchmarks set for each country, which were submitted by each party to the Paris Agreement as Nationally Determined Contributions (NDCs). In line with this obligation, the ADB in the aforementioned report estimates that in order to bring about Asia's infrastructure development whilst taking climate change into account, the need for investment in Asia is even higher: USD 26 trillion, i.e. USD 1.7 trillion per year from 2016 to 2030. In short, rendering the region's appetite for economic growth and infrastructure development compatible with its environmental obligations will be one of the greatest challenges moving forward.

This challenge is perhaps most pressing in Asia's three most populous nations: China, India, and Indonesia. Their cases are representative of Asia's developing countries, as they face common issues while experiencing country-specific difficulties at the same time. In this way, they reflect needs common to all Asian countries, and the diversity in each country's local peculiarities. Considering that China, India, and Indonesia are already some of the world's greatest emitters of CO2 (respectively the largest, the third largest, and the twelfth largest in 2017),[7] the SDGs cannot be achieved globally if they are not thoroughly integrated into economic development models in Asia.

In addition to climate change incentivizing these countries to reduce their emissions, China, India and Indonesia have pernicious environmental problems of their own. At an increasing scale over the last decades, China has struggled with deforestation and air and water pollution. India, too, suffers from air pollution (with smog levels exceeding those of China's in recent years) and groundwater depletion. Indonesia struggles with deforestation as a consequence of man-made forest fires and air-pollution. Similar issues exist across Asia according to each country's unique characteristics. For this reason, Asian nations have a global obligation and strong local incentives to bring about the economic development they require in a sustainable way. The region's appetite for sustainable finance will only continue to grow.

3. The role of sustainable finance instruments

3.1 Involving both public and private sources of finance

Given the urgent sustainability challenges in Asia, the amount of research and policy recommendations in this field has proliferated. With few exceptions, all researchers have arrived at roughly the same conclusion: Greening Asia's development can only be achieved

6 Intergovernmental Panel on Climate Change (2018). *Global Warming of 1.5 degrees.* Geneva, Switzerland: IPCC

7 Global Carbon Atlas (2018). *Co2 Emissions.* Available from: http://www.globalcarbonatlas.org/en/CO2-emissions

through a mixture of public and private finance. Green finance expert Dr. Ma Jun, Chair of the China Green Finance Committee (CGFC), estimates that China will need between RMB 3 and 4 trillion per year until 2020 to meet its environmental needs. To achieve this, 85% of capital has to be raised in the private sector as this is where most of the capital is located.[8] According to the DBS (formerly the Development Bank of Singapore) and the United Nations Environment Program (UNEP) whereas 75% of current green finance flows across ASEAN come from public finance, this number is expected to drop to 25%, and consequently, private capital has to be scaled up by at least a factor of ten.[9] President Widodo of Indonesia has launched a USD 400 billion infrastructure project to be executed between 2015 and 2019, of which approximately USD 150 billion (37%) must be privately funded.[10] India has adopted perhaps the most concrete target, namely the installation of a 165 gigawatts renewable energy capacity by 2022, which requires an investment of USD 200 billion and is to be achieved through both public and private finance.[11] In short, Asia is in need of innovative ways to complement its public funding with private funding.

3.2 Green bonds as the most developed sustainable finance instrument

Issuing green bonds, i.e. bonds whose proceeds are earmarked for funding climate and environmental-friendly projects, is an effective and increasingly popular way to achieve this end. In just over a decade, annual green bond issuance grew over 100 times in terms of total value: From USD 1.5 billion in 2007, to USD 167 billion in 2018.[12] Increasingly, bond issuers in Asia are picking up the practice: whereas China had still not issued a single green bond in 2015, in 2016 it accounted for 40.9% of global green bond issuance (followed by 24.6 % in 2017 and 23.0% in 2018).[13] Furthermore, India financed part of its 2022 renewable energy targets through the issuance of green bonds by public institutions and corporations.[14] Additionally, whereas ASEAN's green bond issuance was USD 2.3 billion in 2017, its green bond issuance cumulatively stood at over USD 5 billion in 2018, of which 39% was

8 International Institute of Green Finance & UNEP (2017). *Establishing China's Green Financial System: Progress Report 2017.* Beijing, China: IIGF

9 Development Bank of Singapore & UNEP (2017). *Green Finance Opportunities in ASEAN*. Singapore, Singapore: DBS

10 Climate Bonds Initiative (2018). *Green Infrastructure Investment Opportunities Report, Indonesia.* London, UK: CBI

11 Jonathan Drew (2018). *The green bond market in Asia-Pacific*. Zurich, Switzerland: ICMA

12 Bloomberg (2019) *Sustainable Debt Market Sees Record Activity in 2018.* Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

13 中央财经大学绿色金融国际研究院 (2018) 中国绿色债券发展报告 . (International Institute of Green Finance (2018). *China Green Bond Market Development Report 2018*. Beijing, China: IIGF.)

14 Climate Bonds Initiative (2018). *India Ranks 8th in World for Climate Aligned Bond Issuance*. Available from: https://www.climatebonds.net/resources/press-releases/2018/10/climate-bonds-state-market-report-points-huge-india-green-growth

issued in Indonesia.[15] Bank of America Merrill Lynch, expects Asia's total green bond issuance to be around USD 600 billion in the upcoming five years,[16] while the former head of the United Nations Framework Convention on Climate Change (UNFCCC), Christina Figueres, aims for USD 1 trillion globally by 2020.[17] Hence, though green bond issuance may have started in Europe, a vastly growing number of public and private organizations in Asia are embracing this instrument for their sustainable development.

Essentially, the key motivations for issuers to issue with a green label are that green bonds can help attract new investors while highlighting the sustainability ambitions of the issuer. Today, a growing amount of research also shows that a green premium exists for most markets, issuers, locations, and currencies.[18] This premium is the result of the existence of a greater demand for green bonds than total green bond issuance at the moment. This trend is clearest in secondary markets.[19] Additional benefits include increased visibility and attention to the issuer's sustainability credentials, as well as the issuer being considered an early adopter, giving demonstrative effects to other organizations.

Some commentators disagree with the fundamental necessity of labelled financial instruments, whether they are green, sustainable, social, or other. Their main argument is that rather than creating labelled financial instruments as a niche market, the best way to finance sustainable projects is to make organizations as a whole more sustainable so that any bond issued will automatically be green. This would have to go hand-in-hand with increased sustainability disclosure requirements and third-party verification, to prove the sustainability characteristics to investors. Whereas in the long-term this might be a satisfactory solution, the development of sustainable finance instruments is critical in the short- and medium-term, as climate change and challenges posed by other environmental issues require immediate answers, to finance sustainable development in the coming years.

Providing a practical guide for issuing green bonds, the International Capital Markets Association (ICMA) launched the Green Bond Principles (GBPs) in 2014. These principles are a common reference point used voluntarily by most regulators and issuers across the world, since ICMA is a trade association for the participants in the capital markets and since they promote transparency, standardization, and disclosure. As such they are supporting the market need to meet increasing regulatory requirements and investor expectations. The GBPs covers the use of proceeds, project selection and evaluation, management of

15 Climate Bonds Initiative (2018). *ASEAN Green Finance: State of the Market 2018*. London, UK: CB

16 Investment and Pensions Europe (2018). *Bank analysts estimate $600bn of green bonds from Asia by 2023*. Available from: https://www.ipe.com/news/asset-allocation/bank-analysts-estimate-600bn-of-green-bonds-from-asia-by-2023/www.ipe.com/news/asset-allocation/bank-analysts-estimate-600bn-of-green-bonds-from-asia-by-2023/10024890.fullarticle

17 Figueres, C. (2018). *Ex-UN climate chief calls for green bonds to hit $1 trillion by 2020.* Available from: https://www.climatechangenews.com/2018/03/21/ex-un-climate-chief-calls-green-bonds-hit-1-trillion-2020/

18 Zerbib, O. D. (2019). The effect of pro-environmental preferences on bond prices: Evidence from green bonds. *Journal of Banking and Finance*, Vol. 98 (p. 39-60)

19 Bloomberg (2017). *Investors are willing to pay a "green" premium*. Bloomberg New Energy Finance report

proceeds, and reporting.[20] These principles were launched once the green bond market had reached USD 10 billion, and hence became large enough for non-sovereign organizations to issue green bonds, which enhanced fears of 'green washing' since non-sovereign issuers are generally less transparent and since the invested amounts were large enough to attract attention in the market.

3.3 A growing toolbox of sustainable finance instruments

The green bond is no longer the only debt-finance instrument used to raise private funds for sustainable development in Asia. In addition to the sustainable-debt market growing rapidly in size (by 26% between 2017 and 2018, reaching USD 247 billion worth of issuance of sustainable debt products),[21] this market has also diversified over the past four years, with the introduction of four additional instruments: sustainability bonds, social bonds, green loans, and sustainability-linked loans (or sustainability-improvement loans, or ESG-linked loans). The growth of the market in absolute terms, and the diversification of sustainable finance instruments, as shown in Figure 1 below, should be seen as a testament to the vast increase in market demand for sustainable finance products. As the majority of these instruments could be employed as a means to achieve financing for sustainable projects that Asia requires, their characteristics, market size, and the development stage of corresponding regulatory frameworks will be considered before concluding that green bonds are the most mature, and therefore the most appropriate financing tool to achieve sustainable development in Asia.

Sustainability Bonds

As an alternative to green bonds, the first sustainability bond was issued in 2014 by Unilever (GBP 250 million). The International Capital Market Association (ICMA) defines sustainability bonds as bonds whose proceeds are applied exclusively to finance or re-finance a combination of green and social projects,[22] i.e. projects with clear environmental and socio-economic benefits.[23] For this reason, the Sustainability Bond Guidelines (SBG) published by the ICMA in June 2018 have the same four core elements as ICMA GBPs.[24] Such standardization of practices between sustainable finance instruments facilitates the development of new instruments and reduces the transaction costs for issuers who first issued green and then sustainable, or vice versa. In 2018, total sustainable bond issuance was roughly USD 12 billion. This was the first year that issuance surpassed USD 10 billion.[25] In addition, in 2018, the European Investment Bank (EIB) issued a EUR 500 million sustainability awareness bond, aiming to expand the benefits of impact reporting and transparency beyond

20 International Capital Market Association (2018). *Green Bond Principles*. Zurich, Switzerland: ICMA

21 Bloomberg (2019) *Sustainable Debt Market Sees Record Activity in 2018.* Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

22 International Capital Market Association (2018) *Sustainability Bond Guidelines (SBGs*). Zurich, Switzerland: ICMA

23 Nasdaq (2019). *Sustainable Bonds.* Available from: https://business.nasdaq.com/list/listing-options/European-Markets/nordic-fixed-income/sustainable-bonds

24 International Capital Market Association (2018) *Sustainability Bond Guidelines (SBGs)*. Zurich, Switzerland: ICMA

25 Bloomberg (2019) *Sustainable Debt Market Sees Record Activity in 2018.* Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

climate change and using the proceeds to fund high-impact water projects.[26] Considering the accompanying demonstrative effects and organizational scale, increasing issuance by such multilateral development banks (MDBs) could expand market issuances by others in the future.

Social Bonds

The second sustainable-debt financing innovation came about in 2015 with the issuance of the first social bond. The International Capital Market Association (ICMA) defines social bonds as bonds whose proceeds are used exclusively to finance or re-finance social projects, i.e. projects with clear socio-economic benefits.[27] The principal attempt to establish norms for social bond issuance came about with the ICMA's release of the Social Bond Principles (SBPs) in June 2017. One of the largest social bonds issued to date is the EUR 500 million Korean Housing Finance Corporation Social Covered Bond, which, which was verified by Sustainalytics to be in line with the SBPs. In 2018, social bond issuance totaled at roughly USD 11 billion as social bond issuance for the first time exceeded USD 10 billion per annum.[28]

Sustainability in the Loan Market

More recently, labelled sustainable debt-financing products that focus on raising funds in a sustainable fashion outside of capital markets have been invented. This development was mostly a consequence of insufficient green bond issuance to meet the demand of sustainable investors.[29] Instead, green and sustainability-linked loan structures have been invented in order to accomplish sustainability aims.[30] While the bonds listed above are mostly relevant to larger organizations with a size and credit rating sufficient to be active in debt capital markets, different forms of sustainable loans can also serve small- and medium-sized enterprises, special purpose vehicles, individuals, and other smaller entities. Yet, unlike bonds, green loans and sustainability loans are private, and for this reason the level of reporting in the public domain is less rigorous than for bonds.[31] As such, the external verification that is recommended for both loans and bonds are in almost all cases publicly disclosed for bonds as these are issued on capital markets to seek investors. This is not the case for loans

26 European Investment Bank (2018). *EIB Issues First Sustainability Awareness Bond.* Available from: https://www.eib.org/en/infocentre/press/releases/all/2018/2018-223-eib-issues-first-sustainability-awareness-bond.htm

27 International Capital Market Association (2018). *Social Bond Principles (SBP*). Zurich, Switzerland: ICMA

28 Bloomberg (2019) *Sustainable Debt Market Sees Record Activity in 2018.* Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

29 '"As there are not enough green bonds to cater for demand, we are seeing green investors and larger investors that increasingly allocate part of their mandate to green finance become attracted to the green loans market" - Leonie Schreve, ING, Global Head Sustainable Finance, in Environmental Finance (2018). *The green and sustainability loan market: ready for take-off.* Available from: https://www.environmental-finance.com/content/analysis/the-green-and-sustainability-loan-market-ready-for-take-off.html

30 It is important to note that while unlabeled loans are often used to finance sustainable activities, it is the labelling that constitutes an innovation, and consequently creates a new sustainable finance instrument.

31 'However, there are some practical differences between the two sets of voluntary principles. For example, because loans are private, the level of reporting in the public domain may be slightly less than for bonds, Dawson explains.' Clare Dawson, CEO of the LMA in Roumpis and Cripps, in in Environmental Finance (2018). *The green and sustainability loan market: ready for take-off.* Available from: https://www.environmental-finance.com/content/analysis/the-green-and-sustainability-loan-market-ready-for-take-off.html

as the terms of the loan and the external verification details are in most cases only known to the creditor and debtor, which does not provide outside parties with the same level of information..

Green Loans

The labelled green loan market began in 2016 with Lloyds Bank's USD 1.27 billion earmarked loans for greener real estate companies in the United Kingdom. Outside the official concept of a green loan, banks have always been giving loans to projects with environmental benefits. For example, China has been measuring its green loan proportion since 2007, which has, at present, exceeded 10%. The sustainability-character of green loans is based on the fact that their proceeds are used exclusively for environmentally beneficial activities. Therefore, green loans follow a similar framework as the green bond. In fact, the Loan Market Association (LMA) and the Asia Pacific Loan Market Association (APLMA) issued the Green Loan Principles (GLPs) in March 2018 that, like the Sustainability Bond Guidelines, are based on the GBPs, and share the four aspects of the GBPs. Frasers Property completed first syndicated secured green loan structure in South-East Asia in 2018 under the GLP, financing a green building with environmentally friendly designs and operations in Singapore. Despite their rapid growth, green loans constituted the smallest share of the sustainable debt market in 2018, as total green lending remained around USD 6 billion.

Sustainability-Linked Loans

The predominant sustainable loan structure is the sustainability-linked loan (or sustainability improvement loan, or ESG-linked loans). In a sustainability-linked loan (SLL), also known as sustainability improvement loan or ESG-linked loans, the terms of the loan are linked to how borrowers score on predetermined sustainability factors such as environmental, social, governance (ESG) rating or ESG-related indicators. The ESG rating for a company is typically determined by an independent ESG-rating party such as Sustainalytics. The ESG concept is chosen as a framework as it has been applied for more than ten years adding to the research on the correlation between ESG variables and financial performance.[32] Based on the ESG concept, the variables chosen for this type of loan differs by the nature of the borrower, as tailored to a specific industry. If the borrower achieves its ESG-rating targets over a specified time period agreed upon by the lender and the borrower in advance, then the latter receives an improvement on the loan terms agreed upon in advance, which in most cases is a reduction in interest rate. In some cases, the reverse is also true: If the ESG-rating of the borrower decreases over the duration of the loan, the interest rate increases.

Hence, unlike in the case of green, sustainability and social bond issuance, or the green loan, where the primary quality is the use of its proceeds on specific green, sustainable or social projects, sustainability-linked loans are uniquely linked to a borrower organization's ESG-rating overall. In this sense, such loans can be a first step towards increasing sustainability performance of organizations with a limited part of their activities belonging to what is commonly labelled as 'sustainable'. Yet, whilst the loans ESG criteria are typically precisely worded in the loan documents,

32 Barnett,M. & Salomon, R. (2006). Beyond Dichotomy: The Curvilinear Relationship between Social Responsibility and Financial Performance. *Strategic Management Journal, Vol. 27, 2006*

there is often limited public disclosure of these criteria hence there remains a risk that the actual sustainability impact of the instrument may be limited without further disclosure. .[33] This is especially true in comparison to the way in which all other sustainable finance instruments have an ESG-impact on the basis of appropriate use of proceeds on a predetermined set of eligible activities. For this reason, for the sustainability linked loans to become a more effective low-threshold entrance to sustainable finance, the criteria of how ESG-improvement is measured should be formalized and disclosed publicly.

The concept of a sustainability-improvement loan was pioneered by ING and Sustainalytics. The pioneering loan of EUR 1 billion to Philips in April 2017 was structured by ING and supported by a consortium of 15 other banks. Even though the practice of giving out sustainability improvement loans has only begun recently, this sustainable debt financing instrument was the story of 2018, as yearly sustainability-linked lending increased by 677% between 2017 and 2018 reaching an impressive USD 36 billion.[34] While the above cases were carried out without a set of guidelines, in March 2019 the LMA issued the Sustainability Linked Loan Principles to provide guidance and a common framework for creditors, debtors, and verifiers.[35]

Comparing Sustainable Finance Instruments

While more sustainable debt financing products are entering the market, and as additional sustainable finance instruments grow their market share, it is likely that green bonds' market share of the total sustainable debt-financing market will further decrease in the future. Yet, the green bond remains the most developed sustainable financing tool to date. This is the case for three reasons: Green bonds dominated the sustainable debt market even in 2018, the regulatory environment for green bonds is the most developed compared to other sustainable finance instruments, and the sustainable-effects of green bonds are easier to verify as those of sustainable debt-financing products in the loan market. In fact, whereas the entire global market grew by 26% to a total of USD 247 billion in sustainability-themed debt instruments raised during the year, green bond issuance still made up over 73% of the market (USD 182.2 billion in yearly issuance).[36] In addition, green bond issuance goes back to 2007, whereas the first sustainability bond was only issued in 2014, the first social bond in 2015, the first green loan in 2016, and sustainability-linked loan in 2017. As a consequence, regulatory initiatives for green bonds such as guidelines and taxonomies are at advanced stages of development, especially in the European Union (EU) and China, and to a lesser extent in Japan, India, and ASEAN. Finally, because the loan market is private, in general the sustainability impact of the green loan and the sustainability-improvement loan is more difficult to verify. The sustainability linked loan has the additional weakness – that the ESG-criteria on which the sustainability improvement loans interest rate is dependent remain vaguer than the standard way

33 Environmental Finance (2018). *The green and sustainability loan market: ready for take-off.* Available from: https://www.environmental-finance.com/content/analysis/the-green-and-sustainability-loan-market-ready-for-take-off.html

34 Bloomberg (2019) *Sustainable Debt Market Sees Record Activity in 2018.* Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

35 Loan Market Association (2018). *Sustainability Linked Loan Principles (SLLP).* London, UK: LMA

36 Bloomberg (2019) *Sustainable Debt Market Sees Record Activity in 2018.* Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

Figure 1. Comparison of sustainable finance instruments

Financial Instrument	Year of first application	Sustainability impact via	Use of Proceeds	ICMA/LMA Guidelines		Total Issuance 2018 (USD)[37]	Market Share (in 2018)	Growth (2017 to 2018)	First Half 2019[38]
Green Bond	2007	Use of Proceeds	Green	Green Bond Principles (GBP)	2014	182.2 billion	73.8%	5%	99.8 billion
Sustainability Bond	2014	Use of Proceeds	Green and Social	Sustainability Bond Guidelines (SBG)	2017	12 billion	4.8%	14%	19.6 billion
Social Bond	2015	Use of Proceeds	Social	Social Bond Principles (SBP)	2017	11 billion	4.4%	29%	8.5 billion
Green Loan	2016	Use of Proceeds	Green	Green Loan Principles (GLP)	2018	6 billion	2.3%		24.8 billion
Sustainability-Linked Loan	2017	Sustainability performance	General Corporate Purposes	Sustainability Linked Loan Principles (SLLP)	2019	36.4 billion	14.7%	677%	24.6 billion
					Total	247 billion		26%	177,3 billion

in which to ensure environmental benefits: the use of proceeds in eligible categories. Hence, in spite of the rapid growth of all sustainable finance instruments, green bonds are the most developed debt financing tool that Asian governments, institutions, and corporations can employ to achieve the sustainable investment that Asia requires.[39]

4. The need to access sustainability conscious investors in international capital markets

In scaling up Asian green bonds, issuers have to cater to sustainability conscious investors. Research of the Global Sustainable Investment Alliance (GSIA) shows that in Asia (excluding Japan) only 0.8% of funds were managed with strategies including sustainability components, whereas this number is 21.6% in the United States and 50% in Europe. As a result, over 90.7% of global sustainable investment, around USD 20 trillion, is located in either Europe or in the United States.[40]

In addition, sustainable assets as a proportion of total managed assets in Asia only grew by 16% each year in the two years leading up to 2016. In comparison, in the same period in the United States, the age of sustainably managed funds grew by one third on a yearly basis. In

37 Bloomberg (2019) Sustainable Debt Market Sees Record Activity in 2018. Available from: https://about.bnef.com/blog/sustainable-debt-market-sees-record-activity-2018/

38 Bloomberg (2019). First half 2019, latest data as provided to ING

39 While this is the case today, the entire toolbox of sustainable finance instruments should continue to grow as a whole, especially the use of bonds to access global capital markets should go hand in hand with loans to use the credit-driven financial systems of Asian countries.

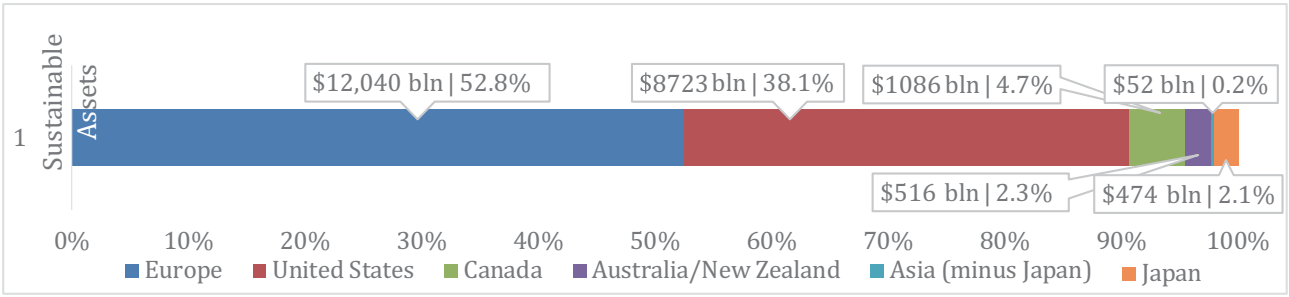
40 Global Sustainable Investment Alliance (2017). Global Sustainable Investment Review 2014-2016. New York, USA: Bloomberg

Figure 2. GSIA's Definition and Screening Criteria of Sustainable Investing

'*an investment approach that considers environmental, social and governance (ESG) factors in portfolio selection and management.*' ESG factors can be 'considered' by using one or multiple of the following methods:

1. **Negative/exclusionary screening:** the exclusion from a fund or portfolio of certain sectors, companies or practices based on specific ESG criteria;
2. **Positive/best-in-class screening:** investment in sectors, companies or projects selected for positive ESG performance relative to industry peers;
3. **Norms-based screening:** screening of investments against minimum standards of business practice based on international norms;
4. **ESG integration:** the systematic and explicit inclusion by investment managers of environmental, social and governance factors into financial analysis;
5. **Sustainability themed investing:** investment in themes or assets specifically related to sustainability (for example clean energy, green technology or sustainable agriculture);
6. **Impact/community investing:** targeted investments, typically made in private markets, aimed at solving social or environmental problems, and including community investing, where capital is specifically directed to traditionally underserved individuals or communities, as well as financing that is provided to businesses with a clear social or environmental purpose; and
7. **Corporate engagement and shareholder action:** the use of shareholder power to influence corporate behavior, including through direct corporate engagement (i.e., communicating with senior management and/or boards of companies), filing or co-filing shareholder proposals, and proxy voting that is guided by comprehensive ESG guidelines.

Figure 3. Global distribution of sustainable investment assets between regions



Europe, in spite of its pre-existing high base, sustainable assets grew by 12% annually.[41] Furthermore, a HSBC 2017 global survey confirmed that only 68% of Asian investors are willing to increase their efforts to achieve SRI status, compared to 97% of European investors.[42] To access a larger capital pool and investor base for sustainable finance, Asian issuers should 'go global' and tap into international sustainable capital markets.[43]

41 Global Sustainable Investment Alliance (2017). Global Sustainable Investment Review 2014-2016. New York, USA: Bloomberg

42 HSBC (2017) Growing Investor Appetite for Green Assets Puts Pressure on Companies to Explain Their Climate Strategies. London, UK: HSBC

43 This necessity to 'go global' can both be acted upon by issuing in the large local markets or catering to global investors that may be present in local markets. The physical location is not the main concern. Rather, it is reaching global investors. In Asia, this could be done in Singapore, Hong Kong, or Tokyo, among other places. Despite such mobility of global investors, in practice such sustainable investors are most active in Western markets.

Three Ways to Assist Asian Green Bond Issuers in Accessing International Capital Markets

Multinational Development Banks, academics, and corporations have indicated the complications that come with 'going global' for Asian green bond issuers. This report's proposes policy measures to bridge the gap between Asian green bond issuers on the one hand, and international sustainability investors on the other by answering the following question: How can Asian green bond issuers better access sustainability investors in global capital markets? It provides an answer to this question through providing solutions to three types of challenges and by analyzing three cases in practice.

The first part explores three major challenges that Asian green bond issuers, according to the literature, face when attempting to access global capital markets, discusses to what extent Asian governments and public institutions have formulated answers to these challenges, and proposes additional solutions that Asian public institutions should consider implementing. The analysis of the issues presented in the first part is based on secondary and primary literature. Secondary literature includes reports published by a wide range of MDBs, studies released by knowledge and learning institutions such as the Climate Bonds Initiative (CBI) and the International Institute of Green Finance (IIGF), and corporations. In terms of primary literature, this section compares and contrasts green bond regulations and guidelines that several Asian and non-Asian political actors have enacted. Effectively, this report proposes three key ways on the basis of which an efficient global green bond market can be established: harmonization (not a *one-size-fits-all* standardization) of global 'green' standards, enhancing policy support, and increasing demonstrative issuances.

1. Establishing global 'greenness': Standardize where possible, translate where necessary

Although sustainable issuers and investors have opposing interests when it comes to negotiating the levels of coupon rates and terms to maturity, both parties share the fundamental aim of ensuring that the product traded amongst them is unambiguously 'green.' The projects on which the issuer spends the bond's proceeds are confined by the green directive received from the asset managers buying the bond, who also have to ascertain that this directive is in line with the environment-related investment mandate they received from the asset owners. Due to this shared interest, both investors and issuers are pushing for clarity of standards and increased transparency based thereon.

Issuing as an unlabeled green bond still allows the issuer to finance green projects but does not assure the investors of the green nature of the bond. Commissioning an external review is an increasingly common method to ascertain that the definitions of

'green' of all parties are met. However, these assurances come at a price, as the expenditure required to commission an external review is making green bonds more expensive than they otherwise would have been. Furthermore, trading green bonds on a global level aggravates this issue, as uncertainty whether a green bond is considered green in both, the issuer's and the investor's country of domicile, raises doubts about its tradability on secondary markets.[1]

To tackle this issue, clear alignment in the framework and verification by external reviewers is welcomed by the investor community. For Chinese institutions issuing green bonds on European capital markets, it has become the norm to commission two external verifications covering the Chinese standard and a chosen international standard. For example, when the ICBC issued its record USD 2.1 billion green bond on the Luxembourg Stock Exchange, CICERO was consulted to verify the bond's compliance with international market standards whilst Zhongcai Green Finance Consultants Ltd. had to ascertain the bond's adherence to Chinese definitions of 'green'. Such double third-party assessment was also carried out for the Agricultural Development Bank of China, as well as Industrial Bank. Here, it is worth noting that while in the Chinese case two external verifications are common, this is not necessarily the case for other Asian issuers.

A variety of institutions go as far as saying that differences in the definition of 'green' standards is one of the principal challenges to setting up an efficient global green bond market. The CBI has characterized cross-border capital flows to China's green bond market as currently obstructed by a number of green and non-green factors. Amongst these, the most important factor is 'differences between Chinese and international green definitions'.[2] Similarly, the joint political representation of the world's largest economies at the G20 in Hangzhou in 2016 identified the 'lack of clarity in green definitions' as one of the principal challenges to the establishment of a global green bond market specifically, and the development of green finance more generally. As a consequence of differing standards, the ADB fears that a limited number of green bonds will be heavily oversubscribed, while other instruments such as non-labelled green bonds, which may also have environmental benefits, may be overlooked.[3] In short, there is a consensus on the problem of different standards, but few clear suggestions for a solution.

The potential of standardizing based on the Green Bond Principles

A *one-size-fits-all* solution to the issue of differing standards is standardization, i.e. the adoption of one green bond standard specifying objectives, and eligible activities for using the proceeds of green bonds for the entire world. Although the first green bond had already been issued by the EIB in 2007 as a Climate Awareness Bond, the first capital market-based initiative to create

1 While minor differences also exist in the management of proceeds, project evaluation, as well as reporting and disclosure requirements of different countries, these remain simpler to address given the guiding nature of most green bond standards. For example, even though countries and exchanges have different regulations on the reporting and information disclosure, these are simpler to standardize. The real issue is finding a common language of what qualifies as 'green' under use of proceeds classifications.

2 Climate Bonds Initiative (2018). *China Green Bond Market 2017*. London, UK: CBI

3 ADB (2018). *Asia Bond Monitor: The Role of Greenness Indicators in Green Bond Market Development: An Empirical Analysis.* Manila, Philippines: ADB

guidelines on issuance and on what constitutes 'green' was only initiated with the release of ICMA's GBPs in January 2014. This indicates that it was only by 2014 that the green bond market had gathered enough pace to require guidelines. At this time, the market had grown to a sufficient size for for-profit organizations to start issuing green bonds too (USD 10 billion issuance in 2013).[4] Amidst fears of 'green washing,' the ICMA intended to promote integrity in the green bond market by providing a 'foundation [for all participants in the market] to develop their own robust practices, referencing a broad set of complementary criteria as relevant.'[5]

The GBPs have four components with criteria that green bonds should live up to: Use of proceeds, process for project evaluation and selection, management of proceeds, and reporting. Most importantly, the first component of the GBPs designates a list of ten project categories of eligible activities to be funded with green bond proceeds.[6] It is emphasized that this list is by no means final nor comprehensive, leaving leeway for stakeholders to develop more detailed definitions. The second component urges documentation of the way in which eligible projects ought to be evaluated and eventually selected. The third component sets out that the net proceeds of the green bond should be moved to a sub-account, or sub-portfolio. The fourth and final component stipulates that information released on the use of proceeds should be renewed annually until fully allocated. Finally, the ICMA recommends external verification to ensure compliance with all these criteria.[7]

The release of the GBPs did spur initial steps towards standardization, as several countries based their own guidelines on the GBPs. In spite of their shared foundation in the GBPs, the following section will point out that countries and regional political bodies have defined what should qualify as green differently. The underlying reasons for these different opinions are differences in stages of development, political priorities, economic models and natural resource endowment. For these reasons, each country has different priorities on what environmental protection regulation and guidelines should focus on. For example, while most developed countries focus on climate change, developing countries prioritize dealing with problems related to pollution.[8]

With clearer guidelines from the GBPs, and as the global green bond market was expanding rapidly, the governments of China, Japan, India, and the member-states of ASEAN also woke up to the need of regulating green bonds. In March and May 2017 respectively, the Japanese Ministry of the Environment adopted the

4 Climate Bonds Initiative (2014). *Overview: the Dawn of an Age of Green Bonds?.* London, UK: CBI

5 International Capital Market Association (2018). *Green Bond Principles (GBP).* Zurich, Switzerland: ICMA

6 The project categories the that are listed as appropriate use of proceeds within the GBP are: 1. renewable energy, 2. energy efficiency, 3. pollution prevention and control, 4. environmentally sustainable management of living natural resources and land use, 5. terrestrial and aquatic biodiversity conservation. 6. clean transportation, 7. sustainable water and wastewater management, 8. climate change adaption, 9. eco-efficient and/or circular economy adapted products, production technologies and processes, 10. green buildings. International Capital Market Association (2018). *Green Bond Principles (GBP).* Zurich, Switzerland: ICMA

7 International Capital Market Association (2018). *Green Bond Principles (GBP).* Zurich, Switzerland: ICMA

8 European Investment Bank & China Green Finance Committee (2018). *The Need For a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC

'Green Bond Guidelines'[9] and the Indian government released the 'Disclosure Requirements for Issuance and Listing of Green Debt Securities'. Both closely resemble the GBPs, as they emphasize that they are legally non-binding and contain a non-exhaustive list of eligible activities for the use of proceeds. However, it is worth noting that the Indian Guidelines leave out the 'pollution prevention and control' and 'eco-efficient and/or circular economy adapted products, production technologies and processes' as eligible categories, which are included in most other standards.[10]

The GBP also spurred regional integration of standards, as capital market regulators and industry players in Southeast Asia conjointly released the ASEAN Green Bond Standards (ASEAN GBS) in November 2017. Although the ASEAN GBS share the GBP's four components and make the external verification optional, differences between the two exist. Firstly, the language used in the ASEAN GBS is firmer than the language used in the GBPs, the Indian, and the Japanese standards, as they state that ASEAN green bond issuers *must* show compliance with the ASEAN GBS. Even though the guidelines are still voluntary, as they have not been adopted into corresponding regional or national regulatory frameworks, this difference in language matters: it gives a much stronger signal to market players and stock exchanges in terms of what norms and standards they are expected to meet. Secondly, the ASEAN GBS state that the issuer *must* ensure that information on all four criteria is publicly accessible on a website throughout the bond's tenure. In contrast, the GBPs merely encourage annual reporting.[11] Lastly and perhaps most importantly, the ASEAN GBS identify only broad categories of eligible projects for the use of proceeds to be used for, while explicitly excluding all fossil fuel power generation projects.[12] In its broad and abstract categories of eligible activities, the GBPs makes no such specific exclusions.

Figure 5. Comparison of green bond policies in Asia and in Europe

ASEAN	ASEAN Green Bond Standards	The ASEAN Capital Markets Forum (ACMF) launched the ASEAN Green Bond Standards in line with the GBP to drive sustainable investment for ASEAN Green Bonds. The language used in the ASEAN GBS is much firmer than the language used in the GBP ('ASEAN green bond issuers *must* show compliance'), which gives a much stronger signal to market players and stock exchanges in terms of what norms and standards are expected of them. Furthermore, they strictly exclude all fossil fuel related projects (November 2017)
China	Various detailed documents by respective regulators based on overarching guidelines	The Guidelines for Establishing the Green Financial System, which was jointly issued by PBOC and 6 other ministries. Additional documents provide detailed regulations and guidance from PBOC, NDRC, CSRC, CBIRC, NAFMII, and the Shanghai and Shenzhen stock exchanges

9 Japanese Ministry of Environment (2017). *Green Bond Guidelines.* Tokyo, Japan: JME

10 Securities and Exchange Board of India (2017). *Disclosure Requirements for Issuance and Listing of Green Debt Securities.* Available from: https://www.sebi.gov.in/legal/circulars/may-2017/disclosure-requirements-for-issuance-and-listing-of-green-debt-securities_34988.html

11 ASEAN Capital Markets Forum (2017). *Green Bond Standards*. Kuala Lumpur, Malaysia: ASEAN

12 Ibid.

EU	High-Level-Expert-Group (HLEG)	The European Union has established a HLEG on sustainable finance that advices the European Commission on the sustainable finance taxonomy and an EU green bond standard based on the GBP. The preliminary reports were released on June 18th 2019
India	Listing Disclosure Requirements	The Securities Exchange Board of India (SEBI) has released guidelines for Green Bonds, which are close to identical to the Green Bond Principles. Curiously, they leave out 'pollution prevention and control' and 'eco-efficient and/or circular economy adapted products, production technologies and processes' as eligible activity categories for the use of proceeds. (May 2017)
Japan	Green Bond Guidelines	Japan released the Green Bond Guidelines in March 2017 that closely resemble the Green Bond Principles and emphasize their non-legally binding status (March 2017).
South Korea	No regulations or guidelines	Whilst South Korea has a mature bond market, USD 18 billion of non-labelled green bonds, and 6 green bond issuances, no specific regulations and guidelines exist. Broad policies do exist that can form that basis for green bond regulations such as the 2009 Korean Green Growth Act and 2015 Emission Trading Scheme

The Chinese government went further than ASEAN and the EU, both of which also went further than Japan and India in creating a legal environment for green bonds. China's efforts is based on a clear top-down approach to financial market governance different from the approach taken by most other countries in the West and in Asia. As a consequence of the initiation of three legislative initiatives throughout 2016 and 2017,[13] the CBI in January 2018 commended China for the development of its regulatory oversight, which it labeled as 'the most comprehensive in the world.'[14]

Figure 6. Visualization of regulations of the Chinese green bond market

Types of Green Bonds	Green Financial Bond	Green Debt Financing Instrument	Green Corporate Bond		Green Enterprise Bond
Regulating Actors	PBOC	NAFMII	Shanghai Securities Exchange	Shenzhen Securities Exchange	NDRC
Policy Documents & Release dates	PBOC announcement no. 39 **22/12/2015**	NAFMII, guideline for non-financial enterprise green note **22/03/2017**	Guidelines to Support Green Corporate Bond Issuance by CSRC 2/3/2017		NDRC no. 3504 **31/12/2015**
			Announcement no 13【2016】by Shanghai Stock Exchange **16/3/2016**	Announcement no 206【2016】by Shenzhen Stock Exchange **22/4/2016**	
Use of Proceeds Classifications	GB Catalogue	GB Catalogue	GB Catalogue		NDRC catalogue with 12 types

13 'the Guidelines for Establishing the Green Financial System' (the Guidelines) by the People's Bank of China (PBoC) and six other ministries in August 2016, the centralizing efforts under the umbrella of the 'Development Plan for Building the Standardization System for the Finance Sector (2016-2020)', and more recently 'the Green Bond and Verification Guidelines (Provisional)' in December 2017.

14 Climate Bonds Initiative (2018). *Chinese Regulators Introduce Supervisory Scheme Green Bond Verifiers*. Available from: https://www.climatebonds.net/2018/01/chinese-regulators-introduce-supervisory-scheme-green-bond-verifiers-further-step-buildingg

Types of Green Bonds	Green Financial Bond	Green Debt Financing Instrument	Green Corporate Bond		Green Enterprise Bond
Management of proceeds	A specialized account has to be established to clearly track the management of proceeds	A specialized account has to be established to clearly track the management of proceeds	A specialized account has to be established to clearly track the management of proceeds	A specialized account has to be established to clearly track the management of proceeds	Unspecified
Project evaluation and assessment	Third Party Certification	Third Party Certification	Third Party Certification	Third Party Certification	No need of Third-Party Certification, Regulator decides
Information Disclosure	Has to notify the market on use of proceeds each quarter and last year report of funds using & special auditor report before 30th April each year as well as reporting to PBOC	Disclose to the market use of proceeds and development of green projects every half year	At least disclosure once a year. A Guidance in preparation		Unspecified

The limitations of a *one-size-fits-all* standardization approach

The multitude of standards in different jurisdictions (and in the case of China, even within a single jurisdiction) for green bonds makes a *one-size-fits-all* standardization approach to harmonization of global green standards increasingly less feasible. In addition to the fact that China's inclusion of 'clean coal' conflicts with ASEAN GBS's exclusion of 'any fossil fuel projects', the CBI points out that aspects of China's listing of 'clean coal' as a green category makes European investors wary.[15] The EIB, which assists the EU's High-Level Expert Group (HLEG) in shaping the EU's policy on green bonds, conjointly with the China Green Finance Committee (CGFC) explored the differences between China's, the EIB's, and the MDB-international development finance club (IDFC)'s definitions of green (on which the future EU definitions of 'green' will likely be based) and ways in which to overcome them in a series of White Papers. Their collaboration reached two important conclusions: The overwhelming majority of eligible activities overlap, yet there remain principal areas of difference in some categories that are difficult to bridge.

Firstly, the EIB and MDB-IDFC both, exclude clean goal and 'environmental restoration projects, coal washing, and processing cleaner gasoline and diesel, and a few aspects of ecological protection and climate change adaption', which are all considered green as per China's standards. In return, areas that the EIB and MDB-IDFC include but are absent from the Chinese standards are 'renewable energy plant retrofits, wind-driven pumping systems, energy audits to end-users, carbon capture and storage, non-motorized transport, projects producing low carbon components, as well as a number of aspects of technical assistance'.[16] Finally,

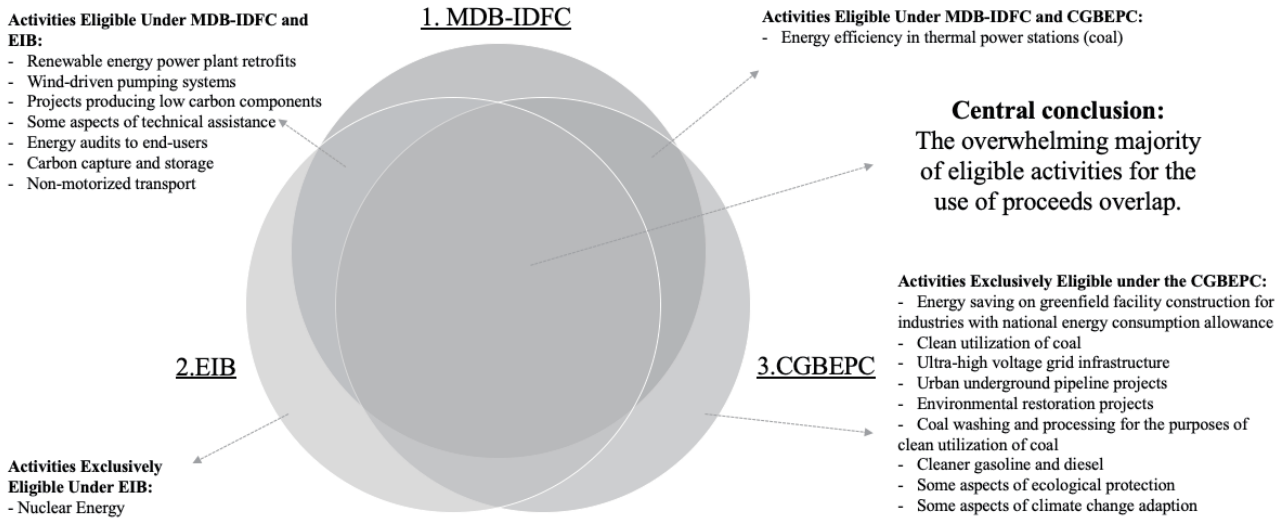
15 Climate Bonds Initiative (2018). *Chinese Regulators Introduce Supervisory Scheme Green Bond Verifiers*. Available from: https://www.climatebonds.net/2018/01/chinese-regulators-introduce-supervisory-scheme-green-bond-verifiers-further-step-buildingg

16 European Investment Bank & China Green Finance Committee (2018). *The Need For a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC

the EIB includes nuclear energy as an eligible category, but this is left out in both, the Chinese and MDB-IDFC, definitions entirely.

Even though the conflicts represent a minority of all project areas, given that this minority usually consists of heavy asset projects in energy or infrastructure, it has a consequential negative effect on the development of an efficient international green bond market. Solving the overlap is unlikely in the near future on either side. In the EU, the Technical Expert Group on Sustainable Finance launched interim EU Taxonomy reports in June 2019. The Taxonomy is intended to be a classification tool to help investors and companies make informed investment decisions on environmentally friendly economic activities. This preliminary version goes beyond the EIB and MDB-IDFC's climate mitigation scope to include transition and adaptation, whilst the final version will include broader green and sustainable categories outside climate change. As part of this effort, the EU will also develop a voluntary green bond standard named the EU Green Bond Standards, which is predicted to be similar to ICMA's GBPs with more concrete guidance. On the Chinese side, the National Development and Reform Commission (NDRC) and 6 other ministries released the 'Green Industry Catalogue' in March 2019, which still included most items that do not overlap with the EU's standards. As the green bond standards of the People's Bank of China PBoC (as launched by the CGFC) and NDRC will be updated based on the NDRC catalogue, it is most likely that these items will be included in the future revisions as well. Consequently, conflicts in Chinese and EU definitions of green are likely to remain, and global standardization is unlikely to be achieved in the near future.

Figure 7. Comparison of MDB-IDFC, EIB and CGBEPC Green Bond Standards: Eligible Activities for the Use of Proceeds



The potential of using a 'Rosetta Stone' mechanism

Acknowledging this reality, the EIB-CGFC cooperation has shifted its focus to establishing a translation device: a

Figure 8. Example of principles of objectives and activities of a Rosetta Stone

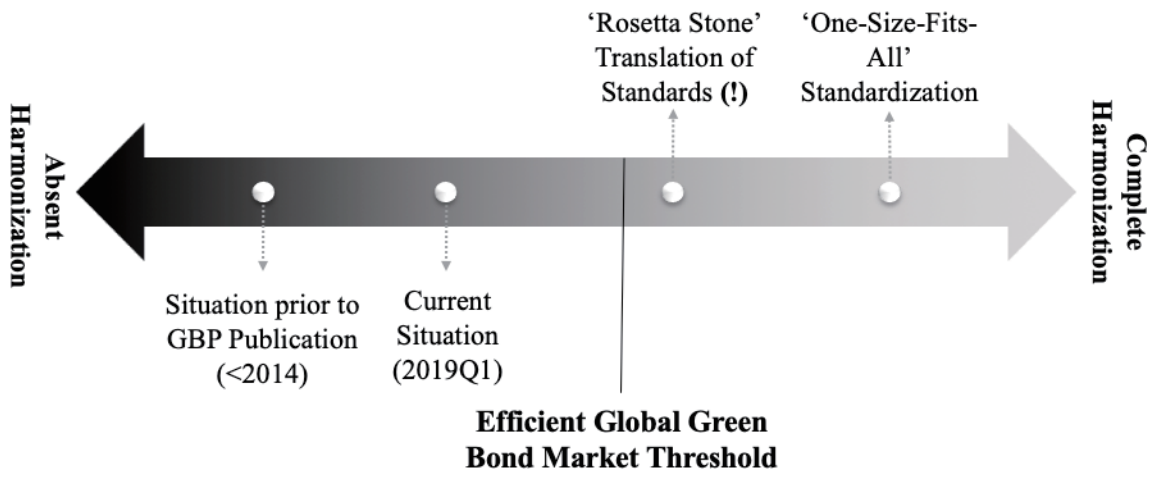
	Climate change mitigation	Climate change adaptation	Biodiversity	Natural resource conservation	Pollution prevention and control
Energy					
Energy Efficiency					
Green manufacturing					
Transport	E.g. Intercity rail, subway, bus rapid transit, electric vehicles, etc.				
Buildings					
Water management					
Natural resource management					
Wildlife management					

'Rosetta Stone'.[17] The goal of this endeavor is to make the EU and China standards compatible by making them comparable, thereby facilitating cross-border green capital flows. Practically, this means that this Rosetta Stone is created by both parties agreeing on the same basic framework of objectives (e.g. climate change mitigation, climate change adaption, biodiversity, natural resource conservation, pollution prevention and control) and activities (e.g. energy, energy efficiency in energy supply, eco-efficient products etc.), under which any party can make their own technical standards (e.g. nuclear energy or coal washing) for what qualifies as green. The final version of the Rosetta Stone will then be able to comprehensively show international investors whether a green bond lives up to a) only the Chinese standard, and therefore should receive the 'China-Green' label, or b) the standards of the EU, and therefore should receive the 'EU-Green' label, or c) both, and therefore should receive the 'China-EU-Green' label. As a second step, to reduce the differences within the technical standards, the EU and China are already in dialogue on setting similar thresholds, such as for emission per kilometer to qualify as green transport.

Hence, the challenge that a lack of a global green bond framework presents is best overcome not by standardization in isolation, but by a two-fold approach to harmonization: standardization between the EU and China where possible and the creation of an EU-Chinese 'translation device' for the areas in which green standards are bound to remain different. Considering global harmonization of standards as a continuum allows the aforementioned reasons why different countries

17 European Investment Bank & China Green Finance Committee (2018). *The Need for a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC

Figure 9. Global Green Bond Standard Harmonization Continuum



have different understandings of what qualifies as green (differences in stages of development, political priorities, economic models and natural resource endowment) to be accommodated.

In addition, this approach does not have to be limited to remedying the challenges that differences in standards cause between China and the EU. Instead, considering that the EU and China together dominate both the investment[18] and issuer side[19] of the green bond market, this 'standardization-where-possible-translation-where-necessary' approach has a good chance to set an international precedent, as by attaching their own standards to the Rosetta Stone the corporates and sovereigns of other countries can substantially simplify the trading of their green bonds internationally.

The GBPs are appropriate for the promotion of such a framework globally, because as mentioned before, the GBPs have served as a global reference point for several green bond principles whilst the CGFC and EIB merely provide a regional effort. Whereas the idea was discussed at the GBPs annual meeting in 2018, the plan to promote a Rosetta Stone through the GBPs has yet to be adopted. As consensus is building, it remains possible that the GBPs adopt such a measure in the future. The EIB, as one of the two main parties involved in establishing this framework, was the main advocate pushing the international adoption of this initiative within the ICMA GBP working group.[20] This effort will persist following the forthcoming update of the green bond standards in China and the development of a

18 Almost 50 % of all European investment funds were governed with sustainability conscious strategies in 2016. Only 0.8 % of funds in Asia (without Japan) are governed with sustainability conscious strategies.

19 Among the top 10 green bond issuing EU-countries and China in 2017: #2 China, #3 France, #4 Germany, #5 Sweden, #6 Spain, #7 Netherlands. Climate Bonds Initiative (2018). *Green Bond Highlights 2017*. London, UK: CBI

20 European Investment Bank & China Green Finance Committee (2018). *The Need For a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC

sustainable finance taxonomy in the EU in 2019. At the same time, the EU and the Chinese government can take the idea to multilateral forums such as the G20 and the United Nations.

2. Explaining and compensating: Policy support

Harmonized green standards are a necessary but not a sufficient condition to achieve an efficient global green bond market. The adoption of a legislative framework without proper policy support for bond issuers to comply with these standards risks leaving them void. Therefore, other challenges to establishing an efficient global green bond market include a lack of knowledge about this standard and of green finance in general among potential Asian green bond issuers. The additional expenditure that green bond issuance requires for verification may also pose a barrier to issuers, although typically not a significant barrier. During and following the development of a common green framework as suggested above under the GBPs, regional, national, and local governing bodies can support green bond issuing financial institutions and corporations concretely in two ways: Through initiating centers for knowledge and learning that provide explanation of these standards, as well as through financial support covering additional costs specifically associated with green bond issuance. The concrete examples of policies in the areas of knowledge and learning initiatives and financial support of several Asian countries discussed in this section could be adopted by other countries in the future.

Several Asian governments have taken concrete steps in this direction. For example, the governments of Indonesia and China have set-up knowledge and learning hubs for green finance, while the governments of Singapore, Japan, Hong Kong, local governments in China, and the PBoC have initiated measures that render green bond issuance more attractive. The Indonesian government has delivered policy guidance to Indonesian non-sovereigns, who intend to issue green bonds internationally by publishing the Roadmap for Sustainable Finance in Indonesia 2015-2019.[21] An integral part of this initiative is expanding learning networks for capacity building through the Bali Center for Sustainable Finance launched by Udayana University in 2017. China's Tsinghua University fulfills a similar function of expanding learning and network capacity, as it initiated the Center for Finance and Development. One of the key programs of this center is the Green Finance Leadership Program (GFLP), which provides a platform for knowledge sharing on best practices of, and inspiring innovations for, scaling up green and sustainable finance. Since its inauguration in May 2018, the GFLP has hosted two events. The larger of the two was the 2018 Beijing International Green Finance Forum, which was attended by experts and senior officials from central banks, ministries of finance, financial regulators, ministries of environment, and other governmental agencies from 48 developing countries along the Belt and Road. In addition to aiding Chinese institutions, the GFLP has also supported actors abroad, as it received requests from several developing countries to help build capacity for their local financial sector.[22]

21 Climate Bond Initiative (2018). *Green Infrastructure Investment Opportunities Report, Indonesia*. London, UK: CBI

22 European Investment Bank & China Green Finance Committee (2018). *The Need For a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC. p.14

Besides explaining green bond issuance, the governments of Singapore, Hong Kong, and local governments in China have financially supported some financial institutions and corporations involved in green finance. Singapore's central bank carries the cost of the external review process to ensure the 'green' character of bonds for investing parties. However, Singapore only does so for companies issuing on the Singaporean stock exchange, and not for Singaporean companies issuing elsewhere. To receive this support, the issuer has to follow the guidelines of either the GBPs, or the ASEAN GBS. Recently, this support has been expanded to cover social and sustainability bonds. The grant was originally designed for a minimum issuance size of SGD 200 million. This has been changed to SGD 20 million or equivalent per issue, as long as the program size is at a minimum of SGD 200 million, (or equivalent in other currencies), making the grant much more accessible to issuers. While external verification is not mandatory, it is carried out for the vast majority of green bonds to ensure investors of their green characteristics. Given that the activities of most sustainability investors take place on international capital markets, subsidizing green bond issuance on non-domestic markets will further support Asian green bond issuers' success. This would, of course, be equally true for other sustainable finance instruments. Hong Kong has followed Singapore's example, but only subsidizes 50% of the external verification process. Moreover, Chinese local governments substantially increased their support in terms of supporting methods as well as number of local governments providing support. Some key supporting methods are interest subsidies, guarantees for green bond financed projects, fast-track approval processes, coverage of issuance costs, as well as guiding institutional investors to buy green bonds. Such types of measures now exist in provinces such as Inner Mongolia, Fujian, and Jiangsu, as well as Shenzhen and Beijing.

Finally, the PBoC has policies to incentivize green bond issuance in the pipeline. At the close of 2017, the PBoC introduced the green Macroprudential Assessment (MPA) system. As part of this system, banks receive an MPA score, the height of which is determined by the proportion of its portfolio consisting of green loans, and by the bank's history of green bond issuance. A high score may result in monetary rewards in the near future.[23] In addition, in June 2018, PBoC expanded the guarantee scope of its medium-term lending facility (MLF) to include green finance instruments as suitable collateral. The new types of guarantees include collateral, such as highly rated loans from small companies, agricultural financial bonds, and green bonds.

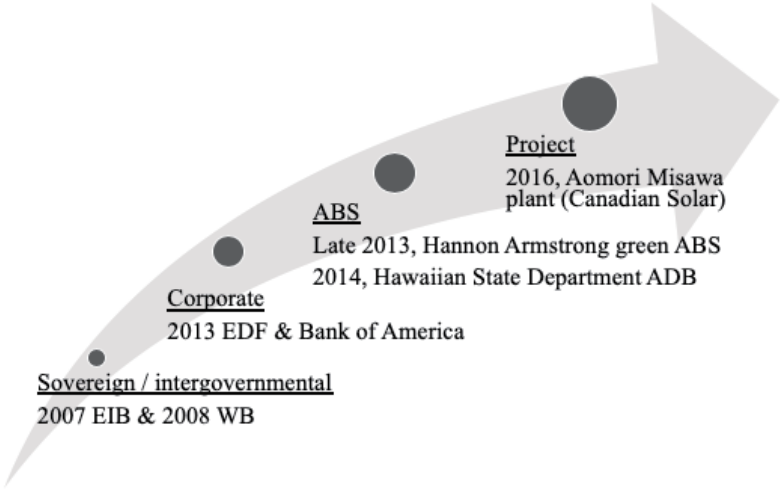
3. Exhibiting: Demonstrative issuance

A third challenge facing Asian green bond issuers attempting to access international capital markets is insufficient international bond issuance demonstration. From such demonstrations, issuers are able to derive insights on how to issue their own green bonds in compliance with green bond regulations in the Asian issuer's country, and the EU investor's country whilst the new connections within sustainable investor pools can be shared with non-sovereign green bond issuers in the future.

Indeed, past experience suggests that issuance demonstration by public institutions done successfully

23 European Investment Bank & China Green Finance Committee (2018). *The Need For a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC. p.12

Figure 10. Historical process of demonstrative effect between levels of issuers globally



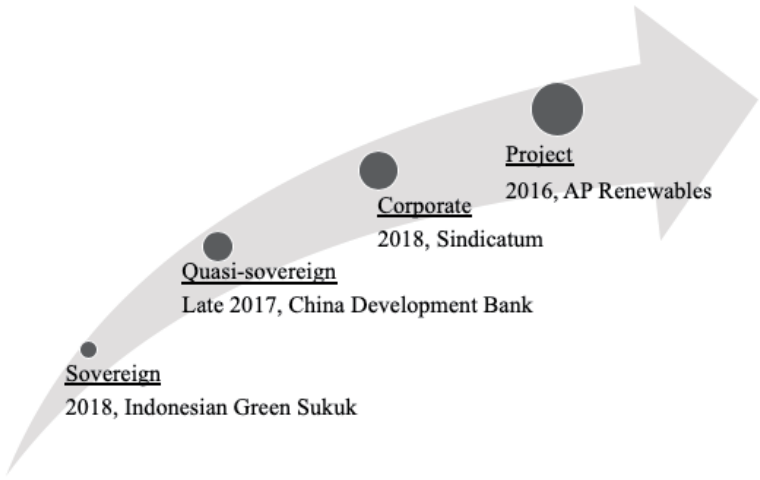
incentivizes other institutions to follow suit. Briefly put, the process begins with the highest credit rated public institutions, and gradually evolves through semi-public, corporate, asset backed, to project bonds. As the market matures, this also opens the possibility to use securitization to create asset backed bonds, within which securitization of green loans of commercial banks in particular, holds potential to ultimately finance SMEs via green bonds. This is true not only for green bonds, but also for developing a bond market in countries with less sophisticated capital markets. In fact, green bond issuance itself started with the EIB's pioneering issuance of the first Climate Awareness Bond in 2007. Only after a number of other AAA-rated public institutions had grown the market to USD 10 billion issuance in 2013, the first corporations started issuing green bonds in 2013.

When it comes to exhibiting Asian issuance attracting global investment specifically, China Development Bank (CDB), the Hong Kong Special Administrative Region government, and the government of Indonesia have, as public institutions, taken up the mantel to provide an example of how to successfully bridge the gap between an Asian country and the EU.

In November 2017, CDB issued a quasi-sovereign international green bond on the China Europe International Exchange (CEINEX) market place in Frankfurt, the first green bond of the platform and also the first bond denominated in both, USD and EUR. While only externally verified against the CBI standard, the CDB green bond met both international green bond standards as well as Chinese green bond requirements. With a narrow green scope, it strictly excluded clean coal and fossil fuel-related technologies, and nuclear and nuclear-related technologies from the use of proceeds. As a sovereign backed Chinese institution, this provided clear demonstrative effects, leading to a rapid increase of Chinese green bonds being issued abroad. To certify its commitment, CDB developed a green bond framework of its own based on the 2017 version of the GBPs and obtained the Climate Bonds Initiative Certification as verified by Ernst & Young, and published annual green bond reports on its website.

Furthermore, the Indonesian government became the first Asian sovereign to sell a green bond internationally,

Figure 11. Process of demonstrative effect between levels of issuers in Asia



as in 2018, it issued the largest green Sukuk bond ever (USD 1.25 billion) listing on the Singapore and Nasdaq Dubai Exchanges.[24] By doing so, it tapped into investment from Europe and North America making use of both regions' increasing prominence of sustainable investment strategies,[25] whilst the Islamic character of the bond also led Islamic investors in Asian countries to buy one third of the 5-year part of the bond even though these investors are not known for their sustainability strategies.[26] The Indonesian example, hence, shows that creative issuance of sovereign green bond can help a country attract investment in multiple ways: it expands the network that Indonesian non-sovereign bond issuers can make use of in the future in traditional sustainability investor strongholds like the European capital market, whilst at the same time innovative sovereign bond issuance (i.e. the bond's Islamic character) rendered green bonds attractive to non-sustainability focused investors. As a consequence, commentators dubbed the sovereign bond issuance a 'significant milestone for the country' that will most likely have a 'trickle-down effect'.[27]

However, the green bond market has shown that demonstrative issuances can also be achieved by non-sovereign issuers. This is seen in the case of RCBC where it issued the first public ASEAN green bond to demonstrate its sustainability strategy, and also

24 Green Sukuk: A bond that apart from measuring up to green standards is also in line with Islamic finance principles

25 Strait Times (2018*) Indonesia raises 165 bln in first Asian sovereign green bond sale.* Available from: https://www.straitstimes.com/asia/se-asia/indonesia-raises-165bln-in-first-asian-sovereign-green-bond-sale

26 Reuters (2018). *Green, Islamic investors find common ground with Indonesian sukuk.* Available from: https://uk.reuters.com/article/indonesia-sukuk-esg/green-islamic-investors-find-common-ground-with-indonesian-sukuk-idUKL8N1QK0SE

27 Asia Asset (2018). Southeast Asia green bond issuance to hit US$5 billion in 2018. Available from: https://www.asiaasset.com/news/RAMbond-gte_nim2_final_DM2803.aspx

responding to the call of the Securities and Exchange Commission (SEC) of Philippines for such issuances. It is also seen in the cases of ICBC and Sindicatum. In addition to following demonstrative issuances, pioneering demonstrative issuances is something that issuers can consider, also as a way to attract more investors and raise publicity.

Finally, there is a commendable future demonstration initiative on the way. Phase II of the CGFC-EIB White Paper recommends issuance demonstration following the update of the Chinese Green Bond Standards, and the establishment of a sustainable finance taxonomy in EU is expected in 2019. Specifically, the setup of a translation device (Rosetta Stone) between these two frameworks ought to be put into practice with an EIB sustainability panda-issuance in China. By doing so, it will provide a demonstrative effect from European issuers to Asian investors. In spite of the bond having been issued that way around, such issuance still sets an example for how to render the issued bonds both 'EU and China-green'. As with the role of the EIB in initiating the green bond as a concept, they can continue to play a demonstrating role in expanding the market such as in this case. Considering the aforementioned potential of a China-EU translation device setting a global green precedent, a successful demonstrative issuance of this kind can also enthuse parties outside of the EU and China to follow the EIB's example.[28]

28 European Investment Bank & China Green Finance Committee (2018). *The Need For a Common Language in Green Finance, Phase II.* Katowice, Poland: EIB & CGFC. p.18

Case Studies of Asian Green Bond Issuers on Local and International Capital Markets

Analyzing a number of concrete cases allows for the analysis and recommendations above to be rooted in real life practice. As such, it verifies whether the challenges identified and the recommendations to overcome them are in line with the needs of individual Asian green bond issuers, who in the past have issued green bonds in local and international capital markets. It does so through three cases of Asian green bond issuing institutions from China, Indonesia, and the Philippines. Analysis of each case is based on official material from issuers, rating agencies, and exchanges, as well as from analysis conducted by researchers and the media. Furthermore, an in-depth interview was conducted with the relevant personnel of each institution. This has provided direct input on the challenges and recommendations derived, and gives a more detailed insight into the motivations and considerations carried out inside the institutions throughout the process of issuance.

Industrial and Commercial Bank of China (ICBC) is a Chinese majority state-owned commercial bank created in 1984, and publicly listed in 2005. Providing a wide range of financial products and services to 6.2 million corporate customers and 567 million personal customers, it is the world's largest bank measured by total assets (estimated to be more than USD 4 trillion). While loans constitute its main business, ICBC provides a wide range of financial services such as investment banking, asset management, leasing and insurance. As an increasingly global financial institution ICBC has over 400 branches in more than 60 countries. In 2008, it was the first Chinese bank to sign the Equator Principles.

While active on the Chinese and international capital markets for a number of years, ICBC issued their first green bond in 2017 on the Luxembourg Exchange at about USD 2.1 billion. Their second issue, as detailed above, was issued on the London Stock Exchange in mid 2018 based on the same green bond framework used previously. While the two bonds are similar,

Industrial and Commercial Bank of China (ICBC): A Chinese state-owned commercial bank reaching sustainability conscious investors by issuing green bonds in London

Issuer (country)	Issuance place (country)	Underwriter	Standards	Verifier	Credit rating	Amount (million)	Tenure	Listing Date
ICBC (China)	London Stock Exchange	A consortium of 10 underwriters	GBP, Chinese PBOC Standard, CBI	Second opinion: Cicero Verification: Beijing Zhongcai	Moody's: A1 S&P: A Fitch: A	3 tranches: USD 500 USD 500 EUR 500	3 years 5 years 3 years	June 2018

such as using the same green bond framework, this case study focuses on the most recent issuance. The central motivation of ICBC to issue a green bond on the international capital markets was to reach European investors who constitute the majority of global environmentally conscious investors. Simultaneously, the majority of ICBC's green bonds issued globally were in USD and EUR. As predicted, more than 70% of investors were European with specific sustainability mandates, with the remaining being spread across the world. Issuing in Europe and in a green format at the same time, ICBC furthermore wanted to attract new investors outside their historical circle of investors. Yet, while successfully attracting new investors, ICBC did not experience a direct new investor premium, nor did they experience a green bond premium. Once the Chinese market achieves adequate sophistication for ICBC's needs, similar bonds could be issued based on the same green bond framework as in this case. ICBC used the same green bond framework for their 2017 and 2018 issuance, on which a second opinion was provided by CICERO with a 'dark green' labeling, while being verified by Beijing Zhongcai according to both CBI and the Chinese PBoC green bond catalogue standard. The main components for use of proceeds were renewable energy, lower carbon transport, energy efficiency, and water management.

In regard to standards, ICBC's existing knowledge and practice working on green credit in China for a number of years greatly facilitated the effort of establishing a green bond use of proceeds framework. ICBC's internal think tank on green finance under its Urban Development Branch was the main organizer of this work. While it indeed required great effort to develop the framework, it can be seen as an investment that pays off over time, as ICBC expects to use the framework for numerous issuances over time. As a Chinese issuer in an international market, ICBC further encountered an added cost of arranging a double verification, to adhere to both, the CBI and the Chinese standards. However, given the size of the issuance, this remained a small proportion for ICBC, while it could be a bigger problem for smaller issuers. An additional challenge encountered by ICBC was the separate processes of the generic bond issuance process and the green component. This presented a challenge in terms of timing both relative to each other without bottlenecks. In addressing the issue of differing standards between China and the EU, ICBC's issue was also motivated by the ambition of showing that the differences could be smoothly overcome in practice, bringing down the perceived barrier for other issuers. Looking forward, ICBC finds that it would be simpler to have a single global green bond standard, as it would make it easier to convince international investors that as a Chinese company, they can also be 'green' as defined by international standards. The concept of a common framework as represented by a Rosetta Stone approach could be an important step along the way to harmonize the standards.

While ICBC did not receive any direct public support for their issuance, from their perspective, such support could play an important role through expertise development and direct financial support. A concrete suggestion is the development of a platform for organizing learning and knowledge sharing. This would work towards making Chinese and Asian organizations currently considering issuing green bonds more comfortable with the process by improving their understanding of the advantages and challenges, as well as showing cases highlighting that issuing green bonds is not as complicated as often perceived. While ICBC has substantial green finance expertise internally, such a platform could be useful for many other potential issuers. The efforts by the Luxembourg Green Exchange could serve as model for this. Despite not receiving any public financial support, ICBC finds that it could encourage further green bond

issuance, especially for other issuers to whom the relative additional cost of issuing under a green label might be higher. As the practical green labeling costs are a bigger proportion of issuing costs for a smaller issuance, developing the green bond market for such issuers requires more support. Such support would add an important element on the scale of weighing costs of labeling with public support, a new investor premium, as well as a green premium.

While ICBC was an early Chinese issuer of green bonds, from their perspective, demonstrative effects by public institutions' issuance is necessary to set the pricing benchmark for green bonds, and to increase quality issuance from their respective countries to provide liquidity and choices in bond selection. Such issuance gives a best practice example that others can follow in their own issuances.

In the green bond market in general, ICBC stresses the importance of taking a long-term gradual approach from an issuer perspective. Once an institution has put in the effort to issue a green bond the first time, the cost for the next green bond is much lower, and consequently, they are likely to issue in a green format again. As such, the first issuance can be seen as an investment to be paid off over several future issuances, rather than to be covered by a single issuance. Many issuers may be calculating these costs and benefits with too short a time horizon. As a repetitive issuer with great green bond ambitions, ICBC showcases the logic of this calculation in practice.

Sindicatum Renewable Energy Company Pvt. Ltd. (Sindicatum) was established in 2013 and is headquartered in Singapore. Sindicatum is a developer and operator of small-scale renewable energy projects in its target markets of South and South East Asia. The company sells its renewable energy electricity generation output to government utilities and commercial off-takers under long-term power purchase agreements (PPA). The capacity of Sindicatum's portfolio of operating projects and projects under advanced development is expected to reach 612 MW by the end of 2019.

The green bonds, all guaranteed by GuarantCo, were issued in three tranches. Sindicatum's first green bond issuance took place on 19th January 2018 in two Indian Rupees (INR) denominated tranches at a total value of c. USD 40 million. The company's second largest green bond issuance took place on August 15th 2018 in Philippines Peso (PHP) denomination at a value of c. USD 20 million. The bonds were successfully listed on the London Stock Exchange on 27th November 2018. The main purpose of the issuance was to raise capital at various tenures and currencies in a green format, which required locating investors outside of Asia. While a labeled green bond could have been effectively issued in Asia in USD or SGD, the need to combine INR and PHP with different maturities and green labelling required the issuance to be done globally. Similarly, INR and PHP denominated bonds could have each been raised in respective domestic markets, but the international issuance provided the ability to execute multi-currency

Sindicatum: A Singaporean company financing renewable energy investments in India and the Philippines by issuing a green bond internationally and listing in London

Issuer (country)	Issuance place (country)	Underwriter	Standards	Verifier	Credit rating	Amount (million)	Tenure	Listing Date
Sindicatum (Singapore)	London Stock Exchange	ING Bank	ICMA GBP & ASEAN GBS	Second opinion: Sustainalytics	Moody's: A1 Fitch: AA-	3 tranches: INR 951.1 INR 1.585.3 PhP 1.060.2	5 years 7 years 10 years	27 November 2018

tranches. The bond was 100% guaranteed by GuarantCo, part of the Private Infrastructure Development Group, which is supported by the governments of UK, Switzerland, Sweden, Netherlands, and Australia.

With regards to standards, verification of the greenness of the bond was straight forward because Sindicatum is a renewable energy and company and all its business is green by all green bond standards. This includes ICMA GBP and ASEAN GBS, under which the green bond was issued. Sindicatum hired Sustainalytics, an independent party that provided a second opinion for green related verification purposes. Sindicatum expressed that while green labeling was natural for their case as a renewable energy company, it did indeed require an extra cost and a process to be considered for the issuance. Sindicatum found that Sustainalytics's opinion on their green bond framework was transparent, credible, and aligned with the ICMA GBPs. From their perspective, the development of a global, clear, and standardized process would help accelerate practices and encourage undertakings towards green labeling. An example to follow is that of global efforts towards standardizing accounting practices based on the framework of the International Financial Reporting Standards (IFRS).

Sindicatum did not receive any local support throughout the green bond issuance process. While Singapore has a support scheme that covers costs associated with second opinion providers, this support only covers various forms of issuance in Singapore and does not cover Singaporean companies issuing abroad. Consequently, with Sindicatum issuing internationally and listing in London, they were not eligible for such support. Sindicatum finds that public support schemes can play a central role in developing the green bond market in Asia and globally. Developing green bond markets through a bottom-up approach does not help form a legal definition of green bonds that can gain local market support. In their view, a solution to address this issue would be to follow a top-down practice, with financial market regulators defining what qualifies as a green bond, and then establish support schemes accordingly. This approach is currently seen in China, as elaborated upon above.

While Singapore has not provided any clear demonstrative effect by public institutions, from the perspective of Sindicatum, another way of assisting the development of the green bond market in the Asian region is through additional sovereign issuance. Such issuance will put green bonds into the mainstream investor market and give access to corporate, asset-backed securities, and project issuances in the future.

As for the future, Sindicatum believes that market trends suggest an increase in Asian green bond issuances in both global and Asian markets. An increasing number of Asian green bond issuances provide a backlog of successful cases that can be used by current institutions considering issuing green bonds. Simultaneously, the shift of Asian institutional investors towards greener company structures and business models encourages Asian markets to provide investors with green bonds issuances.

RCBC is a Philippine bank established in 1960 in Manila, which today is part of the Yuchengco Group of Companies. RCBC is amongst the largest Philippine banks in terms of total assets, with 6.5 million customers, 448 domestic branches, and a presence in 24 countries through remittance services and tie-ups. While focused on retail banking, RCBC also offer services within leasing, investment banking, foreign exchange services, and more.

While being historically active in the Philippine PhP bond market, RCBC has also raised USD by issuing bonds in key global financial centers, such as Singapore.

Rizal Commercial Banking Corporation (RCBC): A Philippine commercial bank issuing a green bond domestically

Issuer (country)	Issuance place (country)	Underwriter	Standards	Verifier	Credit rating	Amount	Tenure	Listing Date
Philippines	Philippines	ING & HSBC	ASEAN	Second Opinion: Sustainalytics	N/A	PhP 15 billion	1.5 years1.5 years	1 February 2019

By issuing a PhP denominated green bond domestically in 2019, RCBC became the first Philippine green bond issuer. Key motivations for issuing under a labeled green format were to support the greening of the bank as a whole, while accessing new domestic investors. Issuing at a relatively modest scale and with a short tenure served as an introduction to the green bond market, which could lead to more issuances in the future. RCBC was interested in issuing another tranche with a longer tenure at the same time, but felt that the current price advantages of a shorter tenure meant that a longer tenured tranche would need to wait. In determining the place and currency for issuance, RCBC decided that issuing in USD under a green format would require going to an international market such as Singapore, while issuing at modest scale in PhP was possible domestically. Raising PhP was also desirable, given the amount of green PhP assets of RCBC. The issuance was oversubscribed more than three times, suggesting a substantial appetitive for such sustainable finance products in the Philippines. Through dialogue with investors, it was clear that while many were interested in buying the bond simply because of its financial characteristics, many investors saw the green format as a feature that made it more attractive. According to RCBC, Philippine investors are gradually developing a sustainability consciousness in their investment decisions, but to turn this intention into practice requires concrete investment opportunities. This provides a positive outlook for the Philippine green bond market, as well as for the development of other sustainable finance instruments. With substantial oversubscription of the RCBC issuance, it is also possible that such interest can turn into a green premium, while this can only be statistically proven once the market is more mature.

As the first green bond issuance of RCBC, as well as the first green bond issuance in the Philippines aligned to the ASEAN standards, the issuance encountered challenges in working with green bond standards and frameworks. In this process, RCBC received support from the underwriter, ING, in developing its Green Finance Framework, with ING being designated as the sole Green Structuring Advisor. The framework is based on both the ICMA GBPs as well as the ASEAN GBS. Furthermore, as the capital raised from the issuance can be used for labelled green loans, the framework is also based on the Loan Market Association and the Asia Pacific Loan Market Association's Green Loan Principles. Sustainalytics provided a second party opinion on the framework. Catering only to domestic investors, RCBC did not experience challenges in dealing with different green bond standards. A key advantage of issuing under the ASEAN GBS is that fossil fuels are excluded, which would otherwise have been a concern for RCBCs green bond investors. Considering their long-term ambitions of issuing green bonds internationally, RCBC opined that a single global standard would make it simpler for both, the issuer and investor. The current lack of such clarity constitutes to be a challenge for RCBC to realize this ambition.

As of today, the Philippines has limited governmental

support for green bond issuers in terms of designated knowledge support and financial support. With RCBC as the first green bond issuer in the country aligned with the ASEAN standards, there is also no prior experience to develop such support from. However, it is clear that the Philippine government is supportive of developing a domestic green bond market, and as such, RCBC received strong encouragement to carry out the issuance. As a sign of support in a broader context, the Securities and Exchange Commission of the Philippines played a central role in the creation of the ASEAN standards as the co-chair of the green finance committee of the ASEAN Capital Markets Forum. However, there is no direct financial support for Philippine green bond issuance. According to RCBC, providing such support would make a big difference for many issuers considering issuing green bonds. This support could either be in terms of covering verification costs, or through direct support on the interest rate or project guarantees.

In terms of demonstrative effects, with RCBC as a public commercial bank being the first issuer, the RCBC issuance had not been preceded by a Philippine sovereign or sovereign-backed issuance. Yet, according to RCBC's experience, such sovereign issuance could be an important driver of further Philippine issuance. This is because it not only shows clear support from the government, but because it also provides a practical case for others to learn from, and can help educating investors of the advantages of such sustainable finance instruments.

Looking forward, it is a clear ambition of RCBC to become active on the international green bond market, at a larger scale, over a longer tenure, and across different currencies. As a front runner in the Philippines on green bonds, such international issuance could lead the way for more Philippine issuances. While it is indeed positive that Philippe investors are interested in green bonds at the current scale, accessing international capital markets would require raising the capital needed for sustainable investment in the Philippines as a whole.

Conclusion

In an environment of pressing sustainability challenges and increasing sustainability-conscious investors, developing financial instruments to support public interest is critical. Today's financial markets already include tools such as green bonds, sustainability bonds, social bonds, green loans, as well as sustainability-linked loans. While all of these instruments are growing rapidly, green bonds remain the most developed with the largest cumulative scale and longest history. This trend is the same in Asia, which, as a region, has the world's greatest need for sustainable financing. In analyzing how sustainable finance instruments can be scaled up in Asia, this report focuses specifically on the case of green bonds. Establishing relations between Asian green bond issuer and global investors is critical to help Asia meet its challenges. This report marries policy recommendations with case studies of individual organizations, who have issued green bonds – either internationally or domestically – in the past. From this outset, the report identifies three key ways that Asian green bond issuers can be assisted in accessing global capital markets: Establishing green standards, providing policy support, and increasing demonstrative issuances.

Firstly, **harmonized standards** should be further developed based on current efforts, especially those of the EU, China, and under the ICMA Green Bond Principles. Specifically, the EIB's and the CGFC's initiative to devise a 'Rosetta Stone' (in order to link and allow for translation between China and the EU's green bond markets) is the foremost harmonization initiative to date. To achieve harmonization of global standards, Asian countries could, once the Rosetta Stone has been adopted and after these countries have established more in-depth guidelines and regulations of their own, arrange their green bond objectives, activities and technical standards accordingly so they can be inserted into the Rosetta Stone. If they do so, asset managers will not just be able to see whether a bond is 'China-Green', 'EU-Green' or 'EU-China Green' more easily, but they will also be able to ascertain whether they are 'Japan-Green,' 'India-Green,' and 'ASEAN-Green.'

Secondly, **policy support** should be expanded, drawing on the successful cases existing today. Two forms of policy support can support Asian green bond issuance internationally: explanation and compensation. To overcome lack of policy support, Asian governments who have not yet taken initiatives in providing policy support could follow the examples of the governments that did. In terms of explanation, Asian countries could, for instance, follow Indonesia's and China's examples by establishing centers for knowledge and learning of green finance (and other examples detailed in this report). In terms of compensation, Asian countries could follow Hong Kong's, China's and Singapore's examples by subsidizing the cost of external verification, which are specific to green bonds, and make green bond issuance more expensive than it otherwise would be. Additionally, Asian countries could analyze the respective successes and failures of local Chinese government initiatives and

the upcoming measures of the PBoC to include green bonds in its MPA system, and to expand the guarantee scope of its medium-term lending facility to include green finance instruments as collateral.

Lastly, **demonstrative issuances** should be scaled up, learning from the examples from across the globe. In particular, the CDB's quasi-sovereign bond issuance on CEINIX at the Frankfurt stock exchange and the Indonesian government's decision to issue the largest green sukuk as Asia's first sovereign green bond issuance internationally will both set clear examples for corporations in the future to overcome the gap between the Asian issuer and the European (or American) investor. Such sovereign issuances provide best practice cases, and show the potential of issuing green bonds to Asian organizations aiming to be active in capital markets and sustainable finance.

The cases of ICBC, Sindicatum, and RCBC highlight how the challenges listed above can be overcome in practice – under the unique circumstances of each issuer. While ICBC issued internationally to reach investors for a large-scale issuance, Sindicatum went abroad to find investors interested in the mix of green and local currencies. On the other hand, RCBC successfully catalyzed local capital markets for their smaller scale and shorter tenure issuance. These experiences confirm the observation that there exists a need to catalyze international capital markets while raising questions about the varying reasons to do so, and whether Asian local investors show sufficient appetite for sustainable finance instruments. As all cases clearly voiced a preference for a single global green standard for the sake of increasing clarity and reducing transaction costs, this should remain the long-term goal of green bond standard harmonization. However, ICBC and RCBC also support the development of a 'Rosetta Stone' common framework-based approach in the near-term and using this framework to gradually achieve a global standard in the future. The cases further suggest that public support for expertise and financial incentives could be an effective way of increasing issuance, although none of the cases themselves were eligible for financial support. As front-runners in the green bond markets of their respective countries, ICBC, Sindicatum, and RCBC show that demonstrative effects from sovereign and sovereign-backed issuers are not a prerequisite for other types of organizations to issue green bonds. While Chinese issuance abroad is maturing already, time will tell whether Sindicatum's case can spark further international issuance out of Singapore, and whether RCBC's case can give rise to Philippine green bond issuance at home and abroad.

Considering the challenges and solutions to scaling up Asian green bond issuance, it is clear that other sustainable finance instruments face a similar set of obstacles. Consequently, it is possible to use the conclusions on green bonds to make broader inferences. For instance, in developing a common framework for comparing green standards, this provides a benchmark for doing the same for broader sustainability issues. In providing public support for green bonds, it is simple to expand the scope to include other sustainable finance instruments. Furthermore, demonstrating the practice of green bonds with sovereign issuances can also be replicated for other instruments, such as national development banks providing green or sustainability-linked loans. As such, financing sustainable development in Asia requires a wide range of sustainable finance instruments, broad participation by public and private stakeholders, and a long-term approach to aligning economic models with social and environmental goals.

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