



Sustainable and actionable:

An ESG study of climate and social challenge
for Asia

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About the research

Sustainable and actionable: An ESG study of climate and social challenge for Asia is an Economist Intelligence Unit report, commissioned by Amundi. It explores environmental, social and governance (ESG) investing in fixed-income markets and examines the evolution of “green” debt from an issuer, investor and regulatory perspective. Central to the study is a question about market progress and if it has been enough, in Paris Agreement terms. Our research is based on in-depth interviews conducted with 14 executives at asset-owner firms, regulatory bodies and finance professionals at academic or advisory organisations alongside extensive desk research and historical analysis. While the study concentrates on stakeholders and market players in Asia, the conclusions and implications are globally minded.

Dewi John is the report author and Jason Wincuinis is the editor.

We would like to thank the following individuals (in alphabetical order) for their time and insights:

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- Sandra Carlisle, senior responsible investing specialist, HSBC Global Asset Management
- Chi Kit Chai, head of capital markets and chief investment officer, Ping An of China Asset Management (Hong Kong)
- Michael Ferguson, sustainable finance Americas team leader, Standard & Poor's
- Bertrand Jabouley, sustainable finance APAC lead analyst, Standard & Poor's
- Matthew Kuchtyak, assistant vice president of ESG risk, Moody's Investors Service
- Liew Tzu Mi, chief investment officer (fixed income), sustainability committee chair, GIC

- Carmen Nuzzo, head of fixed income, Principles for Responsible Investment
- Heike Reichelt, head of investor relations and new products, World Bank
- Toshihiro Nakashima, managing executive officer, Nippon Life Insurance, Japan
- Richard Sheng, secretary of the board and brand director of Ping An Insurance (Group) Company of China, Ltd.
- Stefen Shin, principal investment officer for capital markets and structured products investment operations, Asian Infrastructure Investment Bank
- Mervyn Tang, senior director, global head of ESG research, Fitch Ratings
- Eddie Yue, chief executive, Hong Kong Monetary Authority

Executive summary

Along with its wealth, Asia's climate risks have been rising. Low-lying coastal cities are particularly vulnerable to climate change and regional population and economic centres—such as Bangkok, Ho Chi Minh City, Manila and Shanghai—sit upon that precipice. Yet in terms of green fixed income, Asia faces another risk: lack of issuance and uptake.

Fixed-income plays a significant role in climate mitigation because its market is about 60% larger than its equity cousin which still attracts more media and investor attention. Global issuance of green fixed income has increased markedly since its inception, reaching US\$350bn in 2019. Still, the amount is only about 5% of the global fixed income market and represents just over a tenth of what needs to be raised to meet Sustainable Development Goals (SDGs) in emerging markets alone.

Efforts to make Asia's finance greener have marked a transformative effect on the relationship between companies and investors. Conversations about sustainability that were absent a decade ago are now happening and have been central to helping the region come so far in such a short time: Asia's banks and corporates have gone from 1% of green issuance in 2013 to 45% in 2019.

Still, not all is rosy (or green) as many obstacles remain. Asia's green fixed income originates from a narrow base. China is the dominant market regionally and credit quality is largely confined to supranational institutions and investment-grade issuers. That is not enough. Other markets, such as high-yield, asset-backed securities (ABS) and private debt are,

at best, in infancy. Furthermore, developed-market investors tend to underweight Asia.

Green fixed income data is also a persistent challenge. A profusion of providers use a wide range of methodologies, many of which can be opaque and defy comparison. Investors face difficulties in determining those which best suit their needs. The vast amount of data that issuers are required to provide can also be a deterrent to going green; or worse, it leads to "greenwashing", a vexing problem of questionable categorisation globally. The emergence of more consistent taxonomies is helping, but the patchwork of approaches still forms a barrier. Market practitioners interviewed for this paper did find agreement on green fixed income limitations, but they also showed optimism that recent developments in debt-products indicate a positive direction, even if the needle measuring progress has yet to move as far as it should.

From consensus, the region's green fixed income progress depends on the development of a consistent taxonomy—not just in Asia, but globally—as well as better linkage of Paris Agreement goals to quantifiable key performance indicators (KPIs). The result could create better incentives for issuers and asset owners alike.

Have green bonds—as the largest green fixed income competent—been enough? Despite the interviewees' breadth of experience and varied professional functions, they are almost entirely synchronised in their response to this question: "no".

So what's next?

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Introduction: between “ought” and “is”

Climate risks are rising in Asia. So an urgent question for financial markets becomes: what impact is the region’s green fixed income having on climate change mitigation? And could it do more?

The first *Sustainable and Actionable* report largely examined ESG in equities. This report will take a harder look at green fixed income and what asset owners in particular believe can be done to better its impact and influence. It will also scrutinise the space between what ought to be done and what is currently happening.

Paris Agreement goals

The Paris Agreement of 2015 offered a market framework for the development and application of sustainable asset classes. The agreement called for a strengthened response to threats from climate change, with three principal objectives:

- **Mitigation:** Hold global temperature increases below pre-industrial levels (limit the rise to 1.5 °C)
- **Adaptation:** Adapt to adverse impacts, foster climate resilience and reduce greenhouse gases
- **Transition:** Encourage “finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development”¹

Green fixed income offers a chance to mobilise capital and align markets with the Paris Agreement objectives.

Amounts needed to be raised

Over 2019 green fixed income grew, hitting a record US\$350bn globally, according to the Climate Bonds Initiative. Labelled green bonds are still a small part of global debt, but their share is increasing—from near 1% five years ago to about 5% today.² According to rating agency Moody’s, green bond issuance was on course to reach US\$300bn in 2020—with social and sustainability bonds combining for a further US\$100bn.³ However, that prediction came before the covid-19 outbreak.

The numbers are significant but meeting UN Sustainable Development Goals (SDGs) in emerging markets alone could require as much as US\$3.3trn to US\$4.5trn annually.⁴

One way that green-labelled instruments play a role in battling climate change is through funding renewable energy projects. The International Energy Agency estimates that emerging markets will add about 4,000 GW of new capacity by 2040 (almost two-thirds of global additions). Asia stands at the forefront: China and India alone should account for half those capacity increases.⁵

¹ Paris Agreement, *UN Climate Change*, 2015. <https://unfccc.int/process/conferences/pastconferences/paris-climate-change-conference-november-2015/paris-agreement>

² “Led By Green Bonds, The Sustainable Debt Market Looks To Surge Ahead”, *S&P Global Ratings*, February 13 2020. <https://www.spglobal.com/ratings/en/research/articles/200213-led-by-green-bonds-the-sustainable-debt-market-looks-to-surge-ahead-11347081>

³ “Green, social and sustainability bond issuance to hit record \$400 billion in 2020”, *Moody’s Investors Service*, February 3rd 2020. <https://www.eticanews.it/wp-content/uploads/2020/02/Sector-In-Depth-Sustainable-Finance-Global-03Feb20.pdf>

⁴ “World Investment Report 2014: Investing in the SDGs”, *United Nations Conference on Trade and Development*, May 2014. https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf

⁵ “World Energy Outlook 2019”, *International Energy Agency*, November 2019. <https://www.iea.org/reports/world-energy-outlook-2019>

But that's only one prong of attacking the social and climate challenge. Waste and water management, public transportation, electric vehicles and green building projects are all needed in emerging-market cities. Development may demand a cumulative US\$30trn by 2030 according to the International Finance Corporation, a funding arm of the World Bank.

Costs for ignoring these challenges could go even higher. Losses from natural and man-made disasters in 2018 hit US\$165bn.⁶ The same year, the Intergovernmental Panel on Climate Change estimated economic damage from a 1.5°C increase in global temperatures could reach US\$54trn by 2100; under a 2°C assumption, those costs jump to US\$69trn.⁷

Asia's share of risk is critical. Bangladesh, China, Indonesia, India and Vietnam in particular are all exposed to rising sea levels and face material credit risks. Some high-income economies, such as Japan, are also under threat.⁸

The role of Asia's asset owners

While market perception is that Asia has been something of a climate-change laggard, this view is changing. Large asset owners (AOs) such as Japan's Government Pension Investment Fund (GPIF) can be credited with catalysing a transformation.

While Asia may bear the brunt of climate change, it is also in a position to maximise investments aimed at addressing Paris Agreement objectives and could stand to benefit if risk is managed prudently. Chi Kit Chai, head of capital markets and chief investment officer for Ping An of China Asset Management (Hong Kong), a division of China's largest insurance firm, explains that "each dollar spent on green projects in China has a much bigger impact on the environment than the same dollar spent in some developed countries".

The inevitable question is whether or not the available financial measures and instruments will be sufficient to keep the world below the Paris Agreement's 1.5°C threshold.



⁶ Working Paper: *Climate Change Investment Framework AIIB Asia Climate Bond Portfolio Case Study*, December 2019 (DRAFT)

⁷ "Special report: Global Warming of 1.5°C", *IPCC*, October 2018. <https://www.ipcc.ch/sr15/>

⁸ "Sea level rise poses long-term credit threat to a number of sovereigns", *Moody's Investors Service*, January 16th 2020. https://www.moody's.com/research/Moodys-report-on-global-sea-level-rise-says-Vietnam-Egypt--PR_417214

Sustainable fixed income: what's on offer?

Green fixed income covers a range of ESG securities, of which green bonds were the first out of the blocks and still constitute the largest section of the market.

Green bonds enable capital-raising for new and existing projects with environmental benefits. Proceeds must be exclusively used for eligible projects such as renewable energy, energy efficiency, clean transportation, sustainable water management and green buildings. The use of proceeds must be verified by a third party, such as ratings agencies or accountancy firms.⁹

The World Bank issued the first branded green bond in 2008, although the European Investment Bank launched a "climate awareness" bond in 2007 which is often seen as the category's original. Initial uptake was limited and slow. Until 2013, only France, Germany, Norway, Sweden, and the US issued green bonds, with development banks representing the majority. Proceeds went mainly towards renewable or energy-efficiency projects.

The watershed was 2013 when the number of issuing countries increased to nearly 50 and the first uptake was seen in Asia. Additional green fixed income offerings, such as social bonds, also began to feed through. Since then, a variety of such fixed-income securities have come to market. Briefly, the main structures are:

Social Bonds: raise funds for projects with positive social outcomes, such as

affordable basic infrastructure, access to essential services, affordable housing and food security.

Sustainability Bonds: exclusively finance or re-finance a combination of both environmental and social benefits.

Sukuk Bonds: Sharia-compliant debt plays a growing role in countries with large Islamic populations, such as Indonesia and Malaysia. The latter has led in terms of issuance through small-scale utilities and power developers; Indonesia, with US\$2bn of issuance over 2018-19, has dominated in terms of value.¹⁰

Transition bonds: help carbon-intensive companies become more sustainable, including entities that are not yet green enough to qualify for eligible projects or to issue fully "green" securities. The most significant opportunity for these bonds is in improving energy and materials efficiency in heavy industries, such as cement, iron, steel, and aluminium. An energy company could, for example, issue them to move from coal to gas-fired power plants.

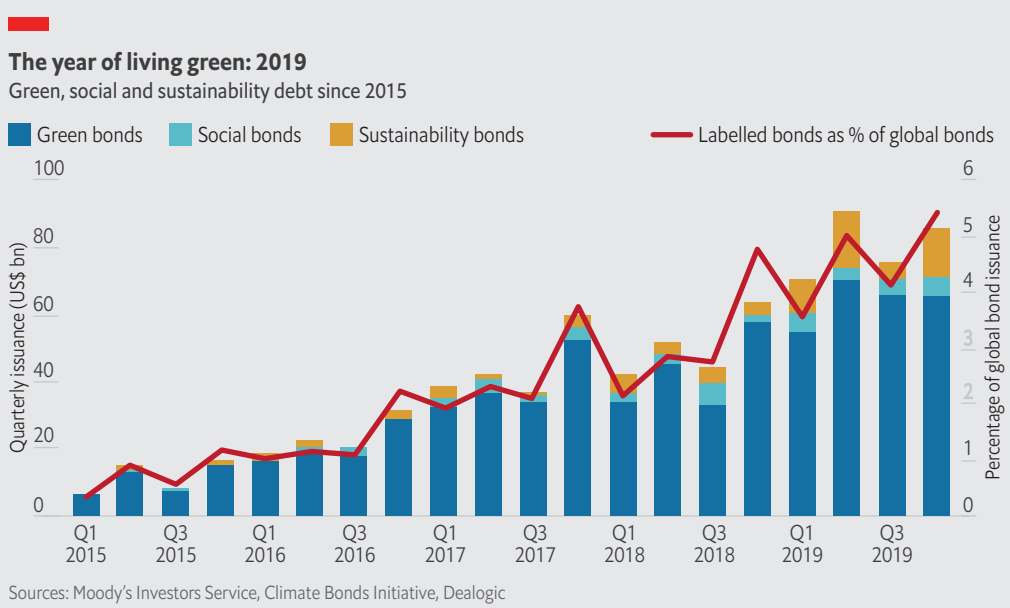
Sustainability-linked bonds: are variable-coupon instruments directly linking the cost of funding to the achievements of specific targets, such as the issuer's ESG score, carbon emission or water usage. These give issuers incentives to reach a predetermined target by reducing capital costs. While offering a new way to diversify on sustainability objectives,

⁹ Detailed outlines of what boxes a bond must tick to be designated as a GB are in the ICMA's Green Bond Principles. <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

¹⁰ "World Energy Outlook 2019", *International Energy Agency*, November 2019. <https://www.iea.org/reports/world-energy-outlook-2019>

these instruments do not rely on use-of-proceeds principles; issuers can raise money without tracking, auditing or regularly reporting the allocation of proceeds.

Issuance beyond green bonds increased from 6% of the total sustainable-debt market in 2018 to about 35% in 2019, according to the CBI.



Rise of global ESG

In 2018, total outstanding debt securities stood at US\$111.3trn. By way of comparison, global listed equities had a value of about US\$70trn that same year.¹¹ The measure shows the potential of debt as a lever for climate and social change.

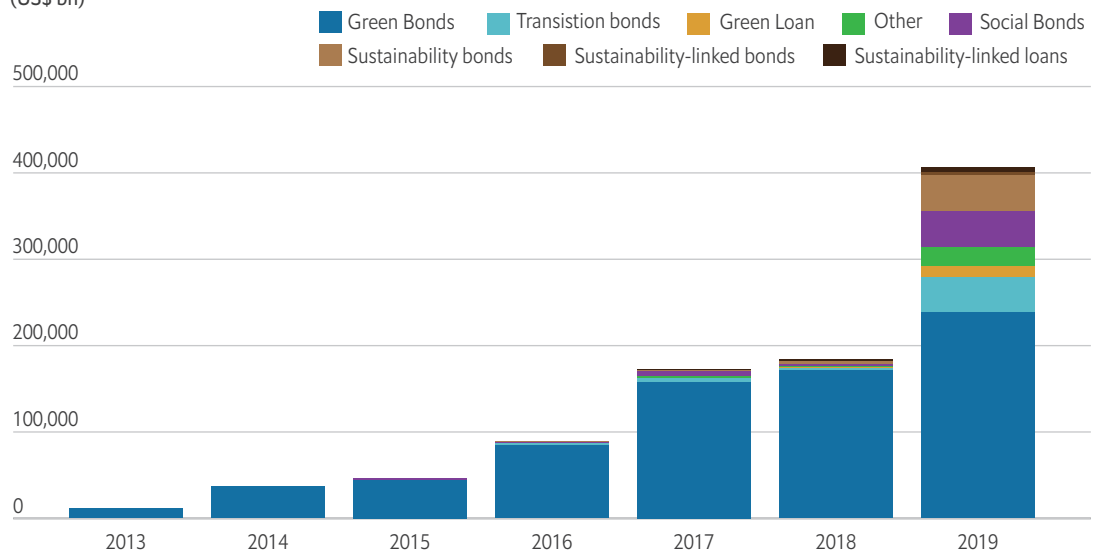
In 2019, issuance of sustainable debt doubled and the market became broader and deeper.



The market is in an evolving and creative phase.

Carmen Nuzzo, head of fixed income, PRI

Figure 1: Sustainable capital-raising on the rise
Annual issuance in sustainable debt by instrument type (US\$ bn)



Source: Climate Bonds Initiative, S&P Global Ratings

For green bonds, banks and companies represented just 1% of issuance in 2013; that grew to 45% in 2019.¹²

"The market is in an evolving and creative phase," comments Carmen Nuzzo, head of

fixed income at the UN-supported Principles for Responsible Investment (PRI). Not only has it expanded and diversified by issuer type, it has become more diverse in terms of product (Figure 1 and box on green fixed income).

¹¹ Working Paper: *Climate Change Investment Framework AIIB Asia Climate Bond Portfolio Case Study*, December 2019 (DRAFT)

¹² "Led By Green Bonds, The Sustainable Debt Market Looks To Surge Ahead", S&P Global Ratings, February 13 2020. <https://www.spglobal.com/ratings/en/research/articles/200213-led-by-green-bonds-the-sustainable-debt-market-looks-to-surge-ahead-11347081>

Asia, ESG and green bonds

Investors have put some US\$17.5trn out of US\$79trn of total assets under management (AUM) globally¹³ into funds with ESG criteria. But regional distribution is uneven. In particular, East Asia trails behind with just 5% of AUM invested in sustainable projects compared with about 30% in North America.

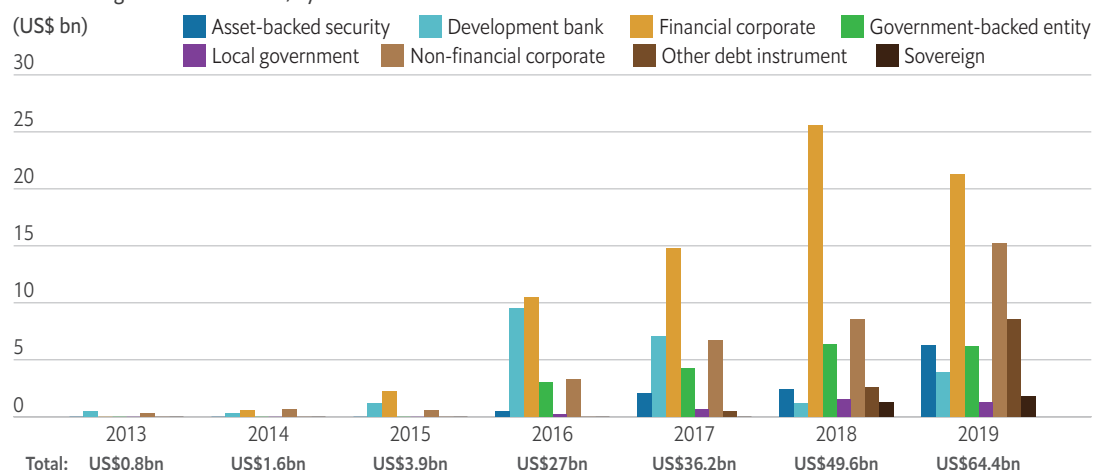
That imbalance is shifting. Large AOs, such as Japan's Government Pension Investment Fund (GPIF) and MUFG Bank—both among the world's largest in their categories—are adopting wide-scale ESG criteria. And they are encouraging others to follow suit. “The push by GPIF to promote ESG integration into the investment process from analysis to investment decision has prompted many local

asset managers to set up clear frameworks to achieve this goal,” says Ms Nuzzo. For example, MUFG Bank announced last year that it would no longer invest in coal-fired power generation projects.¹⁴

In the hands of sustainability-conscious AOs, green fixed income is a potent tool, and Asia has seen a rapid increase. Volumes shot up from less than US\$1bn in 2013 (with a very narrow issuer base) to US\$64.4bn for green bonds alone in 2019 (the market's largest green component). The jump was across a broad variety of sectors (Figure 2). The US, China and France together accounted for 44% of global green bond issuance in 2019 with China in the number two slot: its US\$31.3bn represents almost half the total for the Asia-Pacific (APAC) region.¹⁵

Figure 2: More depth and diversity

Asia-Pacific green bond issuance, by sector



Source: Climate Bonds Initiative/Moody's

¹³ Estimate from Boston Consulting Group and the US SIF Foundation, cited in the Financial Times, February 26th 2020. <https://www.ft.com/content/e969217c-f001-11e9-a55a-30afa498db1b?segmentId=47561bcd-230d-6768-b4a1-deb6edc93a7b>

¹⁴ Helene Li, Curtis Chin, “Asia can overtake the west in sustainable investing”, *Financial Times*, February 26th 2020. <https://www.ft.com/content/e969217c-f001-11e9-a55a-30afa498db1b?segmentId=47561bcd-230d-6768-b4a1-deb6edc93a7b>

¹⁵ “2019 Green Bond Market Summary”, *Climate Bonds Initiative*, February 2020. https://www.climatebonds.net/files/reports/2019_annual_highlights-final.pdf

Is it enough?

“No,” says Ben Caldecott, an academic expert in environmental finance, “because while finance is a necessary condition, it is not a sufficient one”. He adds that market alignment and measures such as comprehensive regulatory and policy frameworks are still needed to address climate urgency.

Green fixed income growth, though significant, is still small compared to the overall market. The gap between global issuance of about US\$300bn and requirements of up to US\$3trn per year in emerging markets¹⁶ is substantial.

“Given the situation that the world is not consistent with the 2°C scenario of the Paris Agreement, we expect that green bonds need further improvements in both quantity and quality,” explains Toshihiro Nakashima, managing executive officer of Nippon Life Insurance in Japan.



We expect that green bonds need further improvements in both quantity and quality.

Toshihiro Nakashima, managing executive officer, Nippon Life Insurance, Japan

Others see the impact as stretching well beyond the arithmetic of issuance volumes. “How do you measure the impact of green bonds?” asks the World Bank’s Heike Reichelt. “Is it the volume of issuance of such bonds, or how they have catalysed a change in investor and issuer behaviour?” As a long time veteran of the green bond market, Ms Reichelt argues that, while the portion of green-labelled debt is small in terms of the total bond market volume, the effected change—for both investors and issuers—has been much more meaningful. Ms Reichelt notes that “especially for issuers not already focused on achieving a positive impact through their activities, using a labelled bond and the rigour and transparency this brings” has been very helpful.

“It’s really the change in investor behaviour that matters most,” Ms Reichelt says. She considers green bonds to have been an important driver behind the change in sustainable investment strategies. “It’s been a process of evolution to revolution, with the revolution being investors on the one hand looking beyond narrow definitions to the entire business of an issuer and on the other hand looking beyond the labelled bonds they purchase to their entire portfolio and considering impact for all their investments.”

Her view aligns with that of rating agency Moody’s, which reports that while the fallout from the coronavirus has dampened near-term prospects for emerging market (EM)

¹⁶ “World Investment Report 2014: Investing in the SDGs”, *United Nations Conference on Trade and Development*, May 2014. https://unctad.org/en/PublicationsLibrary/wir2014_en.pdf

sustainable bonds, “an increased focus on issuers’ ESG credentials points to a favourable issuance outlook for EM sustainable debt over the coming years”.¹⁷

While noting that “in terms of scale, the needle hasn’t moved meaningfully,” Matthew

Kuchtyak, a Moody’s ESG and sustainable finance analyst, agrees that the dynamic has opened up a series of conversations between issuers and investors that didn’t exist before. He highlights that “the green credentials of issuers” can be key to what investors find attractive.



¹⁷ “Deepening ESG focus in emerging markets will spur growth in sustainable debt”, *Moody’s Investors Service*, March 17th 2020. https://www.moody.com/research/Moodys-Greater-focus-on-ESG-in-emerging-markets-will-spur--PBC_1218293

Obstacles



It's really the change in investor behaviour that matters most.

Heike Reichelt, head of investor relations and new products, World Bank

"There's a growing interest in Asia, but it still lags," says Bertrand Jabouley, Standard & Poor's (S&P) senior credit analyst and financial risk expert, "because among other constraints, per capita GDP in many Asian countries is still fairly low, and there is a correlation between

the level of economic development and the interest in ESG considerations".

Mervyn Tang, global head of ESG research at Fitch, a credit rating agency, holds a similar view. He links green uptake to existing national infrastructures. "APAC is by far the biggest coal power generator. So while we're seeing support for renewables in countries such as China and Indonesia it's going hand-in-hand with increases in fossil fuel power generation." He notes that, while renewables are growing fast, this is still off a relatively small base. And, while Japan's MUFG bank, along with many Australian banks, has pulled out of coal projects, Chinese banks have often replaced them.

Figure 3: China still dominates but Asia is broadening Asian green bond issuance (US\$m)

	2015	2016	2017	2018	2019
China	\$1,295	\$21,211	\$22,245	\$31,030	\$31,400
Hong Kong (China)	\$0	\$1,206	\$618	\$2,692	\$2,550
India	\$1,151	\$1,570	\$3,804	\$700	\$3,073
Indonesia	\$0	\$0	\$0	\$1,975	\$750
Japan	\$840	\$1,098	\$3,338	\$4,174	\$7,216
Malaysia	\$0	\$0	\$755	\$223	\$660
Philippines	\$0	\$226	\$150	\$150	\$1,498
Singapore	\$0	\$0	\$571	\$1,341	\$2,649
South Korea	\$0	\$900	\$650	\$2,077	\$3,576
Taiwan	\$0	\$0	\$172	\$447	\$1,018
Thailand	\$0	\$0	\$0	\$213	\$734
Vietnam	\$0	\$27	\$0	\$0	\$0

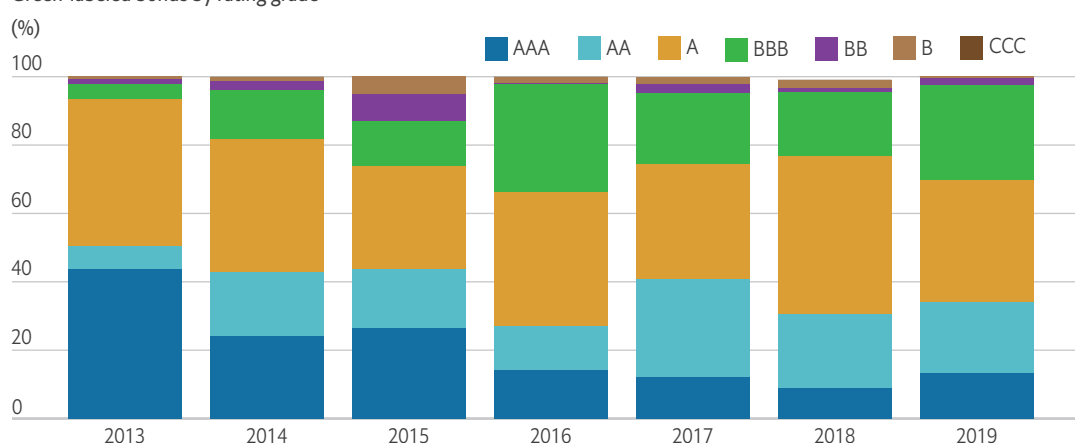
Source: Moody's

Outside of China, there's relatively little green fixed income issuance in Asia (Figure 3). China's volume is more than four times that of Asia's

second-biggest market, Japan, and almost ten times that of third-place South Korea. Vietnam, meanwhile, has yet to get off the starting blocks.

Figure 4: Green overwhelmingly investment graded (AAA to BBB)

Green-labeled bonds by rating grade



Source: Capital IQ; S&P Global Ratings (only S&P rated bonds)

A positive sign is that 2019 saw a proliferation of issuance from other countries, including India, Indonesia and the Philippines. A growing raft of national legislation supports the trend, including Indonesia's 2014 Roadmap for Sustainable Finance and the Malaysian Securities Commission's 2019 Sustainable and Responsible Investment Roadmap.

The impact of covid-19 on the trend is as yet unknown.

Still, non-governmental green fixed income issuance hangs overwhelmingly in investment grade (IG) columns, with little activity in high-yield categories (Figure 4). APAC's green asset-backed security (ABS) issuance only reached US\$6.2bn in 2019, though that's up from zero in as recently as 2015 (Figure 2).

In private debt, data from Preqin, an alternative assets tracker, shows Asian ESG-focused funds raised US\$4.2bn in 2019—with US\$3bn coming from just one fund. But sums could

grow as global funds keep a portion of assets in Asia. Clearly, private green fixed income is a considerably smaller market in Asia than its public peer.

While market perceptions are that governments, agencies or supranational organisations are the most common issuers of green instruments, facts are changing fast. Banks and corporations went from 1% of green bond issuance in 2013 to 45% in 2019. Plus, financial institutions are primary drivers of social bonds globally. They accounted for 64% of 2019's US\$17bn in issuance. Geographic diversity is taking hold too. On a country basis, Japan leads with 25% of social bond issuance globally, which is significantly higher than the nation's 3% share in green bonds.¹⁸

Limited global appetite for Asia's green fixed income could be constraining growth. Small, shallow and illiquid capital markets that still characterise parts of the region are likely to

¹⁸ Green, social and sustainability bond issuance to hit record \$400 billion in 2020, *Moody's Investors Service*, 3 February 2020. https://www.moody.com/research/Moodys-Green-social-and-sustainability-bond-issuance-to-jump-24--PBC_1212910

inhibit developed-market uptake. According to a survey of European investors, the most common restrictions on emerging-market green bonds are credit rating (69%), currency (65%) and deal size (58%).¹⁹

“The reality stands that the speed of global asset allocation into the Chinese market has been slow,” explains Ping An’s Mr Chai. Based on the insurer’s direct experience of talking to asset owners in Europe or the US, he also notes that China’s green-bond allocation often ranges from 0-3% of what would be typical in developed-market ESG fixed-income portfolios. “Even the most seasoned ESG investors in developed markets are generally underweight or unexposed in China green bonds,” he says.

Eddie Yue, chief executive of the Hong Kong Monetary Authority (HKMA), which acts in a central bank capacity for the special administrative region, views the market through multiple lenses—regulator, investor and market facilitator. He considers the inhibitors to more green bond uptake for each group to be:

For issuers:

- Lack of awareness or expertise; concerns about the issuance process itself and costs borne by potential issuers; confusion and fatigue of issuers; and lack of pricing incentives.

For investors:

- The same lack of awareness or expertise; lack of green contractual protection against so-called greenwashing for investors; transparency of the bond; and limited range.

Mr Chai raises similar concerns for why global investors have little exposure to the Chinese green bond market: inconsistent green definitions; uncertainties around reporting and inadequate monitoring of proceeds from issuance; a general lack of experience in investing in China’s onshore bond market; and non-inclusion of Chinese bonds in major global fixed-income indices. Although, he notes that the latter is dissipating as major benchmarks have started partial inclusion.

Mr Yue, Mr Chai and most of our interviewees identify a number of challenges still to be faced, including greenwashing, taxonomy and non-beneficial pricing.

Greenwashing

False labelling of businesses or projects as sustainable is a constant problem. All interviewees shared this concern. Richard Sheng, secretary of the board and brand director of Ping An Insurance (Group) Company of China, Ltd., says “many investors rightfully have had doubts about what’s ‘so green’ about certain projects”.



Many investors rightfully have had doubts about what’s ‘so green’ about certain projects.

Richard Sheng, secretary of the board and brand director of Ping An Insurance (Group) Company of China, Ltd.

¹⁹ Cited in: “Deepening ESG focus in emerging markets will spur growth in sustainable debt”, *Moody’s Investors Service*, March 17th 2020. https://www.moody.com/research/Moodys-Greater-focus-on-ESG-in-emerging-markets-will-spur-PBC_1218293

One possible greenwashing example is Indonesia's first green bond issuance in 2018. The Norwegian climate research institute Cicero subsequently commented that: "There is a possibility that some [of Indonesia's] eligible green projects include an element of deforestation."²⁰

Stefen Shin, principal investment officer for capital markets and structured products investment operations at the Asian Infrastructure Investment Bank (AIIB), also sees greenwashing as a critical issue. "Green bonds don't tell the investor where the issuer is going strategically; they tell you about a portion of the balance sheet but not the overall state of the company. There needs to be scope for an issuer to communicate what their strategic vision is." He believes change is coming but that "this will take some time".

Most of our interviewees stressed that increasing transparency, ensuring dedicated use of proceeds and robust third-party validation could address concerns. In our 2019 *Sustainable and Actionable* report we also noted a dearth of external reviews: Chinese entities issuing green debt instruments on the onshore interbank market were less likely to be externally reviewed.²¹

HKMA's Mr Yue believes that the quality of issuance matters more than the quantity, adding that "investors need transparency... in order to know where their capital is going". This is something that is increasingly being addressed through evolving regulation.

Lack of common taxonomy

Linked to regulation is the absence of any overarching taxonomy—meaning there are difficulties in determining what exactly "green" denotes, as Mr Chai observes. AIIB, amongst others, has pointed out that current standards make it difficult for investors to easily select issuers aligned with the Paris Agreement.²²

"There's no standard for issuers to communicate to the market about their intentions," says Mr Shin, although he adds that the Task Force on Climate-related Financial Disclosures (TCFD) is looking into this. Troublingly, while most green fixed income must be independently verified, the verifiers



There's no standard for issuers to communicate to the market about their intentions.

Stefen Shin, principal investment officer for capital markets and structured products investment operations, Asian Infrastructure Investment Bank

are not bound by any particular rules in the environmental finance market.

Non-beneficial pricing

Our interviewees often identified pricing as an issue—from the greater cost involved in issuing a green bond to the absence of pricing advantage over conventional bonds. For a first-time issuer, green bonds are more difficult to roll out, says Mr Shin. "You need third-party

²⁰ FT, 14 May 2018

²¹ "Sustainable and Actionable: A study of asset-owner priorities for ESG investing in Asia", *Economist Intelligence Unit*, 2019. <https://eiuperspectives.economist.com/sustainability/sustainable-and-actionable-study-asset-owner-priorities-esg-investing-asia>

²² Working Paper Climate Change Investment Framework AIIB Asia Climate Bond Portfolio Case Study December 2019 (DRAFT)

verification and more information, plus they are less liquid in the secondary market.” In general, issuers throughout APAC are able to raise finance through conventional instruments, adds S&P’s Mr Jabouley, which raises a question of the economic incentives for issuers to jump through additional green-bond hoops.

Because of these limitations, Mr Caldecott is highly sceptical of the ability of a conventional green bond to be a game-changer, arguing that a green “use of proceeds” bond “makes very little difference” as there is little or no cost of capital benefit to the issuer. What’s more, there is little or no climate-risk management or hedging benefit to the owner as many of the issuers are fossil-fuel companies—which loops back to the issue of greenwashing.

“This type of bond has next to no impact on the real economy,” says Mr Caldecott. Instead, he endorses bonds that have embedded cost advantages, such as sustainability-linked bonds.

The problem boils down to the nature of green fixed income itself. Risk profiles are a function of the issuer’s overall credit risk. This means green-labelled bonds can’t offer investors a more competitive risk/return profile compared to an issuer’s conventional bonds.²³

Mr Sheng also points to relatively low liquidity as a long-standing detractor, although he believes this will change as the market expands. “We will reach a new supply and demand equilibrium,” he says.

“More and more investors understand that

climate risk is increasingly important when evaluating credit deterioration and default risk,” says Sandra Carlisle, senior responsible investing specialist at HSBC Global Asset Management, the asset management arm of the global bank. “However, what we haven’t yet seen in the public debt markets, outside the green bond market, is climate risk reflected meaningfully in credit spreads, such as where issuers can borrow in the market.” At the same time, Liew Tzu Mi—chief investment officer for fixed income at GIC, a sovereign wealth fund—notes that “given the existing demand-supply imbalance, green bonds are typically priced a lot tighter than non-green counterparts issued by the same entity”.

Given that the security and default risk remain the same for a green bond as for a conventional one, says Mr Kuchtyak at Moody’s, “we do hear that this remains a constraint for some investors”. Nevertheless, he adds, “not all benefits will show up in the pricing”. Investors also benefit from enhanced disclosure and stronger communication between investor and issuer. “It’s not just about the projects, but how



It’s not just about the projects, but how those projects are connected to a business’s broader trajectory.

Matthew Kuchtyak, assistant vice president of ESG risk, Moody’s Investors Service

²³ Working Paper Climate Change Investment Framework AIIB Asia Climate Bond Portfolio Case Study December 2019 (DRAFT)

Data dilemmas

Data quality is a persistent issue for the green fixed income market and will likely continue to plague investors.

In 2019, we reported that Asia's OAs "cited concerns about thin and poor-quality data preventing informed investment decisions". This remains the case today, but focus on the issue suggests rapid developments from numerous sources towards a solution.

"The issue is twofold," says Nippon Life's Mr Nakashima. "Evaluation based on information from a single vendor is volatile and, as a result, it is difficult to evaluate based only on the final evaluation by external vendor ratings, et cetera."

The problem of data, therefore, breaks down into which provider to use, how good their data is and what they are actually rating—something which is far from a given.

Too many providers, too much data

"The profusion of data providers with different classifications and standards has made it more challenging for investors to make clear, consistent comparisons, which underscores the importance of high-quality data," says Ms Liew. The estimated 600 ESG data providers present a problem. Taking into account thousands of different metrics from hundreds of providers can be a disincentive for companies to issue green securities, and for issuers it also means more time and money if they wish to be rated.

What exactly is being rated is also unclear: is it an entity's ESG credentials or its credit risk exposure to ESG factors? Ms Nuzzo says there is "huge confusion" in the market between the two: "Both are helpful tools for investors, but they measure different things."

For fixed income, credit rating agencies assess the material impact ESG factors may have on probability of default. But most ESG scores profile an issuer (not the individual issue); they do not necessarily capture the financial implications of factors.

"Another important difference is that credit-rating agencies are regulated; ESG ratings agencies aren't," says Ms Nuzzo.

ESG scores are, in effect, black boxes and vary depending on underlying components and methodology, which is not always disclosed. "This poses a problem for investors as well as for issuers because the scores can be quite different depending on which ESG service provider one chooses," Ms Nuzzo explains.

In response, some investors have started to create their own in-house ESG scores—an avenue mostly only open to larger investors. "We are also investing significant resources in big data so that we can quickly analyse, interpret and interrogate available information to help us spot ESG risks and opportunities," Ms Carlisle of HSBC explains. "Data is only part of the puzzle and it is not a substitute for research and analysis."

AIIB advises investors that when evaluating a data provider, the quality of methodology and intelligibility of output are crucial. Methodological assumptions should be as simple as possible, relying on trusted third-party models when assessing climate scenarios, and output variables must be clear and easy to use.²⁴

Aside from being inconsistent or incomplete, Ms Carlisle also notes that "current data is largely backwards looking." In tandem with

this view, *Green Intelligence*—a previous Economist Intelligence Unit report on ESG data in Asia—found that limitations are most apparent when it comes to using historical data to determine future behaviour.²⁵

Apples to oranges, hydro to coal

Using data to compare qualitatively different projects is a massive issue, says Mr Caldecott. “How do you compare project A to Project B, company A to company B, on environmental risks and impacts?” He believes that this is a particular issue for Asia as a large proportion of emissions come from the region and many companies either don’t disclose or disclose poorly.

Plus, regulations themselves on emissions or other factors vary across borders; although rising temperatures won’t recognise those distinctions.

How should investors measure the effect of similar projects in different regions? “Start from different baselines,” says Ms Reichelt. “The climate impact of a solar project in a country that gets all its existing power from hydroelectric generation will have a different effect from a comparable one in a country that’s dependent on coal.” Effects are different in different regions, she says, investors can’t just focus on cleaner regions “because, in the end, it’s all one world”.



It can’t be just a feel-good factor.

Michael Ferguson, sustainable finance Americas team leader, Standard & Poor’s

Markets seem to be coalescing around a set of information that’s required, “although what’s available varies widely,” says S&P’s director of sustainable finance Michael Ferguson. “In certain areas,” he explains, “such as greenhouse gas emissions, there’s fairly well-understood metrics, whereas in other areas, especially the social, that’s not the case”. Much here can depend on what the agency itself unearths as opposed to a company’s own disclosures.

In general, large credit ratings agencies are becoming more transparent about how ESG issues affect companies’ ability to service debt. Fitch looks at the relevance of ESG issues to credit ratings, not an assessment of sustainability per se, according to Mr Tang. “We look at such factors as how exposed the issuer is to climate change, supply chain risks and other ESG factors that impact on credit risk.”

Ultimately, the issue of data, for investors, boils down to materiality: measurable, relevant financial impacts. “It can’t be just a feel-good factor,” says Mr Ferguson, “investors need to know how this will impact their risk/reward profile”.

²⁴ Working Paper Climate Change Investment Framework AIIB Asia Climate Bond Portfolio Case Study December 2019 (DRAFT)

²⁵ Green intelligence: Asia’s ESG investing, data integrity and technology, *Economist Intelligence Unit*, 2019. <https://eiu.perspectives.economist.com/financial-services/green-intelligence-asias-esg-investing-data-integrity-and-technology>

Regulation drives green fixed income uptake in Asia's largest market

China continues to dominate Asia's green bond market, though in 2019 year-on-year issuance was materially flat at US\$31.3bn: an increase of just 1% from the previous year.

Nevertheless, how and to what degree China adopts ESG policies has a massive impact. The government has made sustainable finance a pillar of economic development, including with Belt-and-Road projects.

"Favourable government mandates and regulatory measures are usually the most effective drivers in China's financial market," says Richard Sheng, secretary of the board and brand director of Ping An Insurance (Group) Company of China, Ltd.

By way of example, green bond issuance surged following the introduction of the People's Bank of China (PBoC) and the National Development and Reform Commission guidelines in 2015. Following issuance of just US\$0.2bn and US\$1.3bn in 2014 and 2015 respectively, Chinese green bond volumes jumped to US\$21.2bn in 2016. The number of Chinese financial institutions and companies signing up to the Principles for Responsible Investment (PRI) reached 22 in 2018, a three-fold

increase from the previous year according to the organisation's 2019 annual report.

The People's Bank of China Project Catalogue is targeting green bond issuers and providing support for those who can use it to identify a green bond project to ensure environmental benefits. As further support to the market, the PBoC was the first central bank to accept green collateral when banks borrow. The country's large industrial banks are important issuers: they are mandated to support both sustainable development and a transition from "brown" industries.

China's current five-year plan sees environmental protection as a major economic growth driver while its National Action Plan on Climate Change is the main legislative framework integrating climate change into the Environmental Protection Law. Clearer disclosure is a reinforcing factor and an increasingly muscular regulatory framework backs these measures. Forced re-allocation of chemical plants away from urban areas has been one result, along with a reduction in their numbers, while emission taxes and limits for pollutants have also been introduced.

Green incentive

Green options do not just need a level playing field to take a larger share of the market; they need a leg up. Without offering issuers an inherently lower cost of capital, there's no great incentive to opt for green options rather than unlabelled ones.

"The hurdle rate of these investments will have to be lowered," says Fitch's Mr Tang. Doing so, he says, could involve government intervention or other supports, such as public-private partnership initiatives. Regulations, such as carbon pricing, can change the economic viability of sustainable activities too.

Incentivising uptake to push green fixed income into the "enough" category falls into two broad areas: creation of a beneficial regulatory environment and embedding financial advantages within the products themselves.

"Looking ahead," says Mr Yue, "HKMA expects new forms of sustainable debt financing to continue to evolve to address existing market limitations". Transition bonds and sustainability-linked bonds or loans are the examples he highlights. "These help to facilitate issuers with different projects to participate in sustainable finance and also provide investors with more investment choices."



HKMA expects new forms of sustainable debt financing to continue to evolve.

Eddie Yue, chief executive, Hong Kong Monetary Authority

Regulatory incentives

Although Asia has been slower than some regions—notably Europe—in enacting regulations, regulatory action has been vital to defining and driving the market. "Asian governments and regulators increasingly support requirements around data and transparency," notes Mr Caldecott.

According to the International Energy Agency, the enhanced importance of regulators in Asia is because "there has been less 'bottom-up' demand from investors across most emerging markets for sustainable finance instruments as compared with demand in developed economies. As a result, national policy leadership is of paramount importance".²⁶

"Market participants in Asia (including local credit ratings agencies) are expecting regulators to be the drivers of change, which is a different attitude from what we're seeing in the West," notes Ms Nuzzo.

Although Europe has led taxonomy determination, China has followed with its own principles. These differ in certain respects but push in the same general direction. For example, China's National Development and Reform Commission has issued an Industry Guiding Catalogue based on China's ecological civilisation plan while the People's Bank of China has endorsed a green bond Project Catalogue to guide issuers.²⁷

"A more comprehensive taxonomy for what constitutes sustainable activities is happening in places such as Europe and China, but there's no global taxonomy," says Fitch's Mr Tang.

²⁶ "World Energy Outlook 2019", International Energy Agency, November 2019. <https://www.iea.org/reports/world-energy-outlook-2019>

²⁷ "Comparing China's Green Bond Endorsed Project Catalogue and the Green Industry Guiding Catalogue with the EU Sustainable Finance Taxonomy (Part 1)", Climate Bonds Initiative, September 2019. https://www.climatebonds.net/files/reports/comparing_chinas_green_definitions_with_the_eu_sustainable_finance_taxonomy_part_1_en_final.pdf

He also points to examples of best practice such as the subsidy of issuance costs in Hong Kong and Singapore. Nippon Life's Mr Nakashima and Moody's Mr Kuchtyak also highlight various subsidy systems which are helping to promote sustainable investing. However, such regulatory initiatives are unevenly distributed.

Ms Liew cites the People's Bank of China accepting green bonds as collateral and offering a lower lending rate when banks borrow from it as an example of a way to encourage sustainable investing in fixed income. Within China, "local governments have been announcing financial rewards and tax benefits for green bonds", says Mr Sheng. He cites the example of Jiangsu province where the provincial government granted a 30% interest subsidy towards green bond and green asset-backed securities. This was on top of cash rewards for each green bond issuance for third party guarantors and a risk compensation mechanism to third party guarantors of aggregate green loans tailored to small and medium-sized enterprises.

"The People's Bank of China has been a leader for some time, and Malaysia, Singapore and Thailand play prominent roles. On the other hand, Indonesia and the Philippines need to catch up," Mr Caldecott notes.

Variable coupons

Another green incentive is in the structure of bonds themselves. Real-world KPIs, says Mr Caldecott, are "the next step in the green bond evolution—tying the cost of capital to environmental performance".

One specific example is sustainability-linked bonds where the coupon depends on whether the issuer has met predetermined objectives, such as reducing energy use. "This means the investor can share some of that reduction in credit risk with the issuer," says Mr Caldecott, "creating a win-win where the issuer secures a lower cost of capital and the investor makes more money".

Such instruments, he says, have potential to play a powerful role. As yet, there has only been one issue – by European energy company Enel, with a €2.5bn (US\$2.7bn) last year, which was heavily oversubscribed. If the SDG-linked targets are not achieved, a step-up mechanism will be applied, increasing the rate by 25 basis points.

Not everyone is overly enthused by this. Ms Nuzzo describes it as "a controversial issuance" since bond proceeds are not ringfenced to specific projects. But she nevertheless sees it as a welcome innovation as it encourages companies to set clear targets.

What more could be done?

Due to the illiquidity of many of Asia's green fixed income markets, multilateral and supranational agencies (such as development banks) are likely to remain important sponsors of sustainable finance development. According to Moody's, their activity will take the form of anchor investments, technical guidance and issuer incentives.²⁸

While Mr Caldecott concedes that there is a strong case for supporting markets, he argues that it should only be done "where it makes a difference", such as with sustainability-linked

²⁸ "Deepening ESG focus in emerging markets will spur growth in sustainable debt", *Moody's Investors Service*, March 17th 2020. https://www.moody's.com/research/Moodys-Greater-focus-on-ESG-in-emerging-markets-will-spur--PBC_1218293

bonds as opposed to use-of-proceeds. “One potential approach could be to get development banks to take first-loss on project bonds because of the strong public-good benefits of the specific projects,” he says. He also notes lower development of alternative finance markets affords relatively high importance to banks in Asia and expects more securitisation in this area. Banks can securitise low-carbon

infrastructure projects to get them off their books, freeing up balance sheet capabilities.

In addition, GIC’s Liew Tzu Mi recommends covenants and/or step-up provisions that could be written into bond documentation. She believes this would “help bolster investor confidence in the stated sustainability targets and avoid ‘green-washing’ perceptions”.



Conclusion: from green labels to green debt

“Climate change is not a risk, but a reality,” says Ms Liew. “Companies will need to more-holistically manage the risks and opportunities for the sustainability of their businesses.” So great is the challenge, believes Ms Carlisle, that “to address the urgency of climate change the US\$100trn bond market should be mobilised instead of creating a separate green bond market”.



To address the urgency of climate change the US\$100trn bond market should be mobilised.

Sandra Carlisle, senior responsible investing specialist, HSBC Global Asset Management

To that end, a more precise and globally consistent taxonomy would help debt issuers and investors alike to frame goals as well as fit within them. New standards may call for new debt instruments, some designed specifically for small and medium sized-enterprises and others to support pathways that help “brown” industries lower greenhouse gas emissions. That is the spirit of the Paris Agreement: mitigate, adapt and transition.

Simplified and transparent ratings methodologies could make things easier, allowing market participants to judge who is aligned with the Paris objectives and, more importantly, who is actually moving the needle. If the goal is to reward good actors, investors need better ways to know who those are.

More can be done with technology. Data has been a confounding piece of the ESG puzzle. Technology has, at least in part, made abundant data possible; it should now be brought to bear on transforming these data pools into something less daunting and more gainful.

Company-level data could be better utilised for decision-making on the investor side. New technology uses could also give investors the ability to see where, for example, deforestation is happening, and who is responsible for it within a supply chain. Mr Caldecott explains: “We are doing a lot of work on geospatial data and analysis—what we call spatial finance”. He says this “could transform the decisions that investors make”. The World Bank’s Heike Reichelt agrees that such approaches “will make a big impact”. If nothing else, these solutions give the world’s largest and most influential investors—the asset owners—a chance to see harmonised efforts in action as well as giving them the confidence to make changes whenever they discover shortfalls.

Debt options that diversify away from the narrow objectives associated with green labels are one sign that the market is already changing. Transition bonds (which have particular relevance to Asia’s carbon-intensive industries) and sustainability-linked bonds (which embed ESG incentives into their structure) are two examples of new ways of linking finance to the SDGs.

The principal value for labelled green bonds, Ms Reichelt believes, has been in “motivating a change in behaviour, incentivising investors to look more closely at what they are funding and, more broadly, to see how their investments can make a difference beyond their portfolios”.

“HKMA expects such diversification momentum to continue,” says Mr Yue. “Many more new forms of sustainable debt financing will be made available.”

Green bonds have helped but should not be regarded as the only tool in the shed, warns Mr Shin at AIIB. He lauds them as “a good innovation, and a small step forwards for capital markets”. However, he adds, “20 years from now, we’ll be saying that green bonds were important, but they will be gone. The market will have moved on”.

Consensus from the asset owners and market stakeholders interviewed for this report is that green bonds have been important to the market but are not enough to meet today’s challenges. More is needed to achieve the wider goals of ESG investing. The positive side is that there’s recognition that green goals, as they relate to fixed income markets, are starting to be achieved. Perhaps more importantly, the green credentials of issuers—ie company-level data—is becoming what investors seek to review as well as what they find attractive in an issuance.

Case in point, in its statement on sustainability, Singapore’s sovereign wealth fund, GIC, asserts

“this relationship between sustainability and long-term returns will become stronger over time, as markets price in externalities such as a company’s environmental impact into valuations and as regulators, consumers, and businesses become more ESG-conscious.”

While the Paris Agreement sounded an alarm, it also plays a harmonising role. For the next stage of addressing Asia’s climate and social challenges, the aim should be for less box-ticking and more sustainable action. Progress depends on better linkage between goals and quantifiable KPIs, and on highlighting ESG credentials at the company level.

In short, the future is less about green labels, and more about making debt green.



Climate change is not a risk, but a reality.

Liew Tzu Mi, chief investment officer (fixed income), sustainability committee chair, GIC



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