# Emerging Market – Banks, Bonds, and Impact

## Green bond impact reporting practices of emerging market financial institutions

GB-TAP Green Bond Technical Assistance Program
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Environmental-Finance.com is an online news and analysis service established in 1999 to report on sustainable investment, green finance and the people and companies active in environmental markets. We have been covering the green bond market since its inception in 2007 and now offer a comprehensive database of labelled green, social and sustainability bonds. This Bond Database was recently expanded to accommodate green loans and sustainability-linked loans, in recognition of the growing importance of loans in the sustainable debt market.

For further information, please contact Ben Smith ben.smith@environmental-finance.com or Tony.Gibson@fieldgibsonmedia.com


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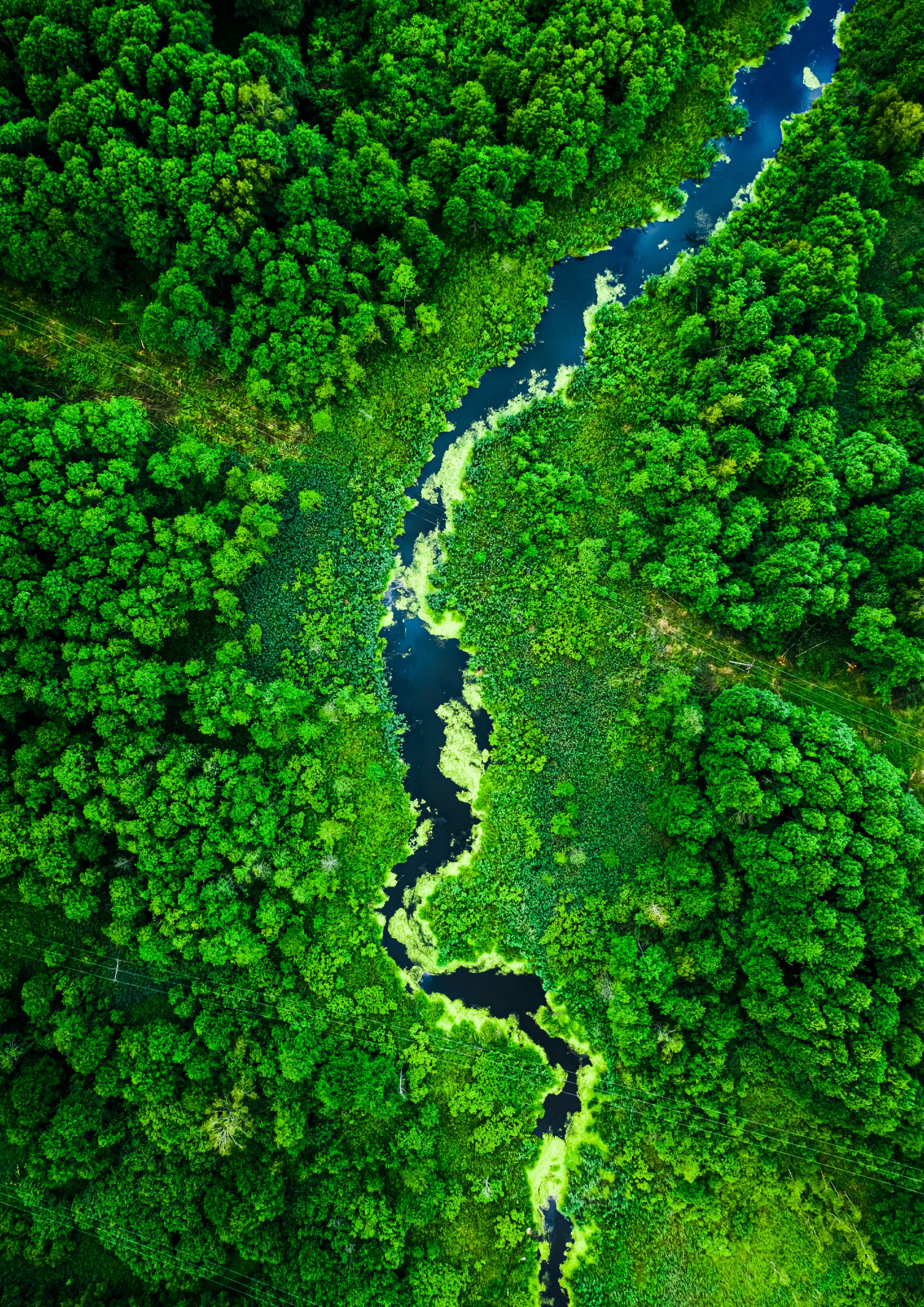
## Abbreviations and acronyms

| | |
|---|---|
| **EM** | Emerging markets |
| **FI** | Financial institution |
| **ICMA** | International Capital Market Association |
| **GBPs** | Green Bond Principles |
| **UN SDGs** | United Nations Sustainable Development Goals |
| **GSSS bonds** | Green, Social, Sustainability, Sustainability-linked bonds |
| **ESG** | Environmental, Social, Governance |
| **CBI** | Climate Bonds Initiative |
| **TCFD** | Task Force on Climate-related Financial Disclosures |
| **SFDR** | Sustainable Finance Disclosure Regulation |
| **COP** | Conference of the Parties (United Nations Climate Change Conference) |



# Emerging Market – Banks, Bonds, and Impact

Green bond impact reporting practices of emerging market financial institutions

# Executive Summary

We are pleased to introduce our report, in conjunction with IFC, on green bond issuance and the state of impact reporting by financial institutions (FIs) in emerging markets (EMs).

The report features exclusive research on which FIs have published impact reports, what practices they follow, and what their main challenges are.

Sustainable bond issuance continues to grow. In 2019, $563bn of sustainable bonds were issued. A year later, this had risen to $730bn, and by 2021 issuance broke the trillion-dollar mark at $1.3tn. Green bonds dominate sustainable bond issuance, with 62% of all time issuance (by value) according to *Environmental Finance Data*.

EMs have issued around 10% of the total number of sustainable bonds issued up to H1 2022, and 16% of the value. Although growth has been more modest than in developed markets, issuance has still risen from $54bn in 2020 to $155bn in 2021.

Though corporate green bonds represent the majority of the market, EM (ex-China) FIs are responsible for 27% of green bond issuance. Our analysis found that just over half of those FIs which issued a green bond published an impact report.

The quality of reporting varied significantly. Some were very short, just one page, while less than half included the methodology behind statements made. Others provided far more detail, with more than half providing impact data at a project level.

A number of factors can contribute to the varying levels of detail in an impact report, including the difficulties of collecting data from companies running the projects to which the proceeds of green bonds have been used, and the challenge of aggregating data provided using different metrics, with varying baselines.

It is still early days for EM FIs working in this space. But as reporting guidelines, standards and regulations on environmental and social investments ramp up in number and stringency globally, it is clear that those who are already publishing robust impact reports stand to gain competitively from their early experiences.

Impact reporting is the fourth key component of the Green Bond Principles (GBPs) and they are essential for the integrity of the market.

Others can catch up with the leaders by following best practices, such as ensuring their report is easily accessible to stakeholders; providing a clear methodology; and hiring external support to boost capacities.

# Key Findings

- Emerging market sustainable bond issuance is rapidly growing, up to $155bn in 2021 from $53bn in 2020. 83% (by number of bonds) was labelled green.
- Financial institutions represent 31% of green bond issuance (by number of bonds) in emerging markets including China.
- There have been 79 green bonds issued by 60 EM (ex-China) financial institution issuers from the first issuance in 2014 to H1 2021 (allowing for 12 month impact report lead time). Of the 60 issuers, 33 have produced some form of impact report.
- Financial institution green bond issuers face additional impact reporting challenges surrounding impact data gathering, aggregation and presentation as they do not have direct access to or control over project level data. These challenges are amplified in emerging markets by knowledge/awareness, and a lack of knowledge and human resource and poor environmental data disclosure regulation.
- There was a broad spectrum of impact reports produced by EM FI green bond issuers:
  - Reports ranged in length from 1-35 pages
  - Carbon emissions avoided ($tCO_2e$) metrics were the most commonly used (24 of 33 reports)
  - Less than half (15 out of 33) provided a methodological explanation of the impact data presented in the report
  - The most common level of impact data provided was at a project level (19 out of 33), while 14 out of 33 provided impact data at a bond level and one impact report provided impact data at aportfolio level
  - UN SDGs were referenced in 20 of the 33 reports analysed.
- Best practices demonstrated in the reports analysed and interviews conducted with investors included:
  - Choosing projects to fund based on their ability to provide impact data, and making provision of data part of the funding criteria
  - Hiring external support if internal reporting capabilities are limited
  - Providing a methodology and raw impact data where possible, including if and how data has been pro-rated to investment
  - Include project descriptions and case studies
  - Ensure the green bond impact report is readily available and easily accessible online, with contact details for a responsive representative to answer questions about the report.

# Methodology

The *EF* Bond Database was used to identify all EM FIs who had issued green bonds as of H1 2021 to allow for a 12-month impact reporting timeline. Impact reports by these issuers were then researched and analysed. Where no impact report could be found through desk research, issuers were contacted directly to request their impact report.

Data was manually extracted and formed the statistical basis for the analysis in this report.

It was challenging to engage with sufficient EM FIs to obtain qualitative insight for this report. Most contacted did not respond at all, which hinders transparency.

All 60 EM (ex-China) issuers were invited to be interviewed about their impact reporting practices, to provide qualitative context to the findings of the data analysis. Four issuers responded and were interviewed.

Five leading EM stock exchanges were invited to be interviewed for the report, while six prominent EM green bond investors were contacted to contribute to the report. One stock exchange and one investor responded and were interviewed.

# Introduction

This report analyses the green bond impact reporting practices of EM FI issuers. It includes in-depth analysis of issuance, issuers and impact reports and examination of the singular challenges that EM FI green bond issuers face when producing impact reports.

Impact reporting is crucial to the transparency and validity of green bonds and allows investors to assess the impacts of their investments and allocate future capital accordingly. There is growing pressure and expectation on green bond investors to report the impact of their investments to their beneficiaries. An increasing number of investors are collecting and aggregating impact data from across their investment portfolios, some will require the data in order to comply with regulations or voluntary initiatives.

To highlight the importance of green bond impact reporting, this introduction outlines the drive towards greater transparency and disclosure globally in the broader sustainable finance sector. A summary of sustainable bond issuance with focus on EM and FI issuance is included to provide context for the study.

## Global sustainable finance – disclosure regulations and initiatives

The regulatory backdrop for sustainable finance is highly dynamic, with an increasing number of countries, regulatory bodies, and stock markets tightening up rules on both issuance and transparency.

In addition, there is increasing awareness of the need to clarify ESG investing. Take-up of many voluntary initiatives has risen, including the Global Reporting Initiative (GRI); International Sustainability Standards Board (ISSB); the Sustainability Accounting Standards Board (SASB); and the Climate Disclosure Standards Board (CDSB) (now consolidated into the ISSB's work).

The Task Force on Climate-related Financial Disclosures (TCFD) has done much to put the risks of climate change to investment portfolios in the spotlight, and investors are increasingly asking for proof that projects they have invested in have achieved what they promised.

Countries including New Zealand, Japan, and the UK are now mandating TCFD-aligned reporting requirements for the private sector, including banks. The Swiss government undertook a consultation on whether to follow suit earlier this year. Meanwhile, the communique resulting from last year's G7 finance ministers' summit included support for "moving towards" mandatory climate disclosures. Though no timescales were included, the direction of travel is clear.

The European Commission in particular is regulating on sustainable finance. From 10 March 2021, the financial sector has had to disclose information on how ESG factors are integrated at both a company and product level under the Sustainable Finance Disclosure Regulation (SFDR).

In addition, its taxonomy classification system came into effect from 1 January 2022. It sets out to tackle "greenwashing" by identifying which of an organisation's economic activities, or those they invest in, can be deemed 'environmentally sustainable'.

Outside the EU, there are around 20 countries including Indonesia, Malaysia, South Africa and China considering or developing a similar taxonomy for sustainable investment.[1] They are working together as the International Platform for Sustainable Finance to share best practice and align approaches.

In the US, the Securities and Exchange Commission (SEC) in March proposed rule changes that would require registrants to publish certain climate-related disclosures, including information about climate-related risks, results of operations, and climate-related financial statement metrics.

All of this points to a tightening of requirements for disclosure globally It is no longer good enough to merely invest in "sustainable" projects, transparency is now required to demonstrate that the investments are achieving what they say they are. This, in turn, will feed appetites for information on the outcome of investments, backed up by credible data.

This trend mirrors an increasing backlash against

1 International Platform on Sustainable Finance – Common ground taxonomy (June 2022)

greenwashing among regulators, activist and campaign groups and consumers. Several corporates and an asset management firm are facing legal action over alleged greenwashing. These cases are being launched by campaign groups, and consumer and financial regulators keen to set precedents that the practice is unacceptable. Robust disclosure on the impacts of investments can support corporates and financial institutions issuing green bonds to reduce the risk of such accusations.

UN secretary general António Guterres has condemned the practice, stating: "We cannot afford slow movers, fake movers, or any form of greenwashing". The UN has set up a High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities, to be supported by full-time staff at its NewYork headquarters.

## Sustainable bonds – market summary

2021 saw sustainable bond issuance continue to soar. As Figure 1 shows, sustainable bond issuance value has been increasing year on year, from $563bn in 2019, $730bn in 2020, and breaking the trillion-dollar mark in 2021 with $1.3tn. H1 2022 data points to this being surpassed again in 2022.

All time global sustainable bond issuance, up until H1 2022, stands at 12,677 bonds with a value of $3.02tn. Figure 1 includes transition bonds which, even when aligned to ICMA's Transition Finance Handbook and recommendations, are not universally accepted by sustainable investors. Transition bonds are not very prevalent in the sustainable bond market; there have been 23 transition bonds issued between 2017 and H1 2022 totaling just over $9.5bn. All 23 bonds have second party opinions from external reviewers.

Green bonds dominate the sustainable bond market with 77% of global bond issuance by number of bonds, and 62% of total value of sustainable bonds. The Covid-19 pandemic stimulated a large increase in social bond issuance in 2021 and H1 2022.

Sustainable bond issuance is typically strongest in Q3 and Q4. Figures from H1 2022 are similar to H1 2021 and a similar, if not larger, total issuance figure can be expected in 2022.

Emerging market share of bonds issued is 10% of the global total (1,320 bonds). At a value of $494.62bn, they represent 16% of the total value of sustainable bonds issued.

In emerging markets, sustainable bond issuance value showed only modest year-on-year increases from 2017 to 2019. However, as Figure 2 and Table 1 outlines, the total value of sustainable bonds in these markets jumped from $54bn in 2020 to $155bn in 2021.

Green bonds are even more dominant in EMs, where they represent 83% of all sustainable bonds issued by number, and 74% by value (see Figure 3).

Sustainable bonds can be issued by corporates, FIs, governments (sovereigns), government agencies, and supranationals. In emerging markets, corporates are the most common type of issuer, with 58% of all bonds issued in emerging markets (excluding China), rising to 61% when China is included. However, FIs account for 31% of EM green bond issuance. Those in China dominate

## Sustainable bonds explained

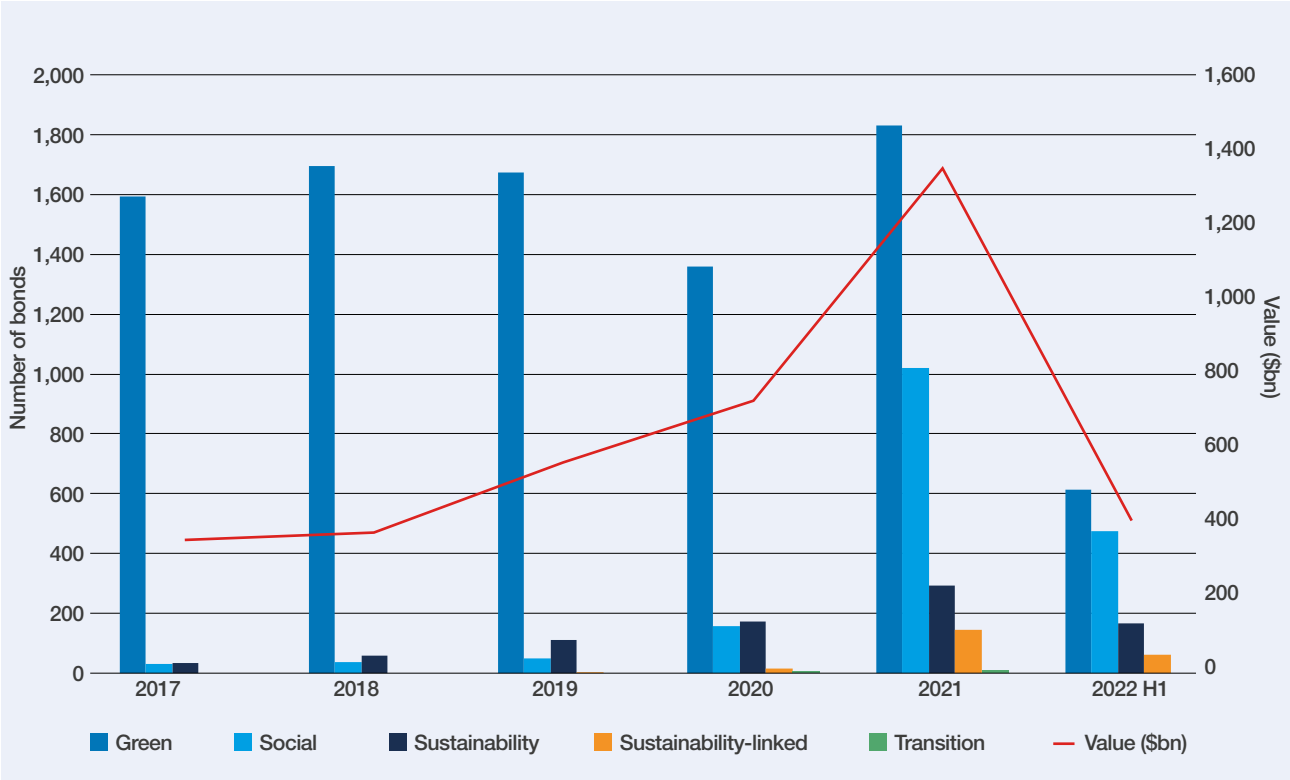
Sustainable bonds enable capital-raising and investment for new and existing projects with benefits for sustainability. Sustainable bonds are also referred to as GSSS+ bonds which stands for Green, Social, Sustainability, Sustainability-linked and other bonds such as transition and blue (see glossary for detailed definitions).

Some 98% of sustainable bonds are aligned to global guidelines known as the "Principles". These include Green Bond Principles (GBP), Social Bond Principles (SBP), Sustainability Bond Guidelines (SBG) and Sustainability-Linked Bond Principles (SLBP).

These voluntary guidelines recommend that issuers report on the use of the proceeds of sustainable bonds to promote transparency. They also clarify the process for issuing a green bond to enable investors, banks, underwriters and others to understand the detail of any given green bond.

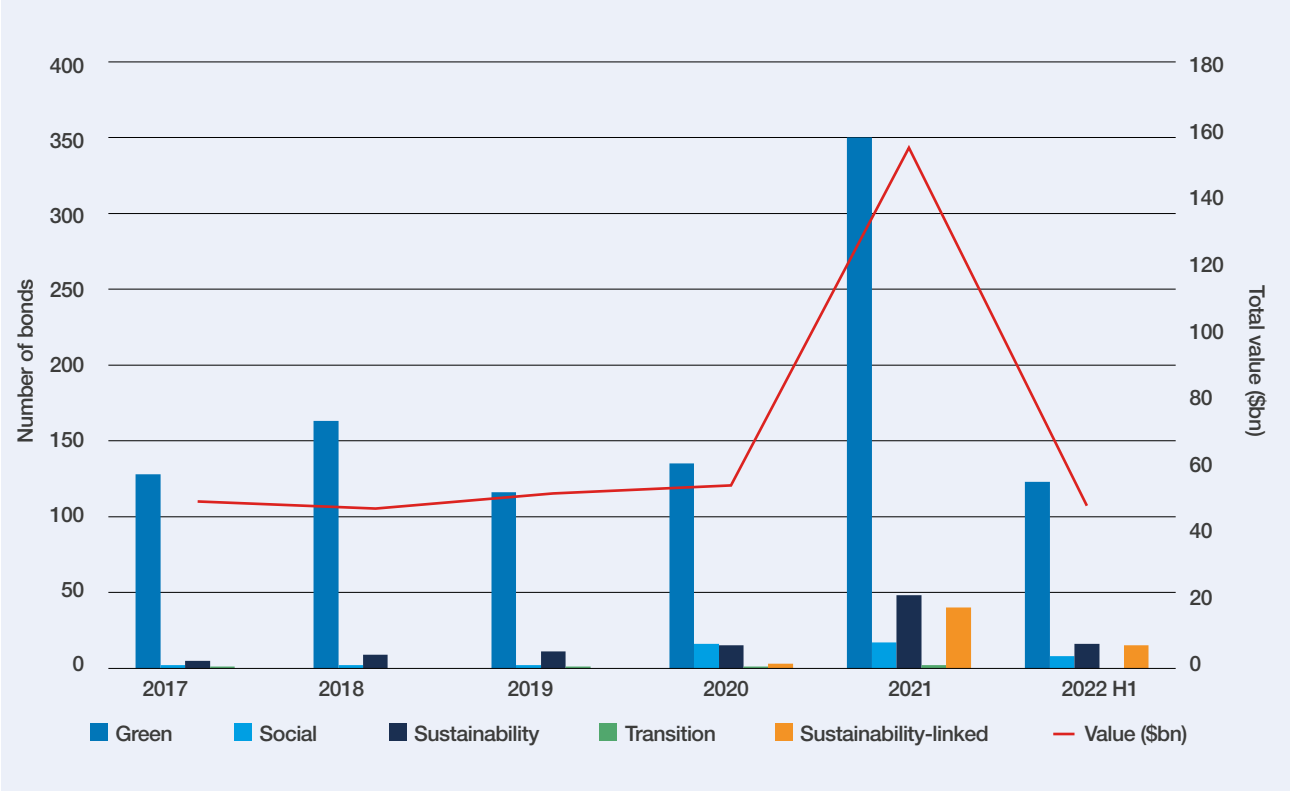
The Principles are continuously updated, with the latest published in June 2022 including new definitions for green securitization, updated key performance indicators for Sustainability-Linked Bonds, and new resources for climate transition finance.

## Figure 1: Global sustainable bond issuance – number of bonds and value by label




*Source: Environmental Finance Data*

## Figure 2: Emerging market sustainable bond issuance – number of bonds and value by label




*Source: Environmental Finance Data*

## Table 1: Emerging market annual issuance of sustainable bonds

| Year | Green bond | | Social bond | | Sustainability bond | | Sustainability-Linked bond | | Transition bond | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Value ($M) | Bonds | Value ($M) | Bonds | Value ($M) | Bonds | Value ($M) | Bonds | Value ($M) | Bonds |
| **2017** | 47,570 | 128 | 225 | 2 | 1,180 | 5 | | | 500 | 1 |
| **2018** | 45,467 | 163 | 133 | 2 | 1,860 | 9 | | | | |
| **2019** | 47,517 | 116 | 310 | 2 | 3,484 | 11 | | | 500 | 1 |
| **2020** | 40,545 | 135 | 7,480 | 16 | 5,874 | 15 | 1,850 | 3 | 350 | 1 |
| **2021** | 106,221 | 350 | 15,811 | 17 | 31,422 | 48 | 25,707 | 40 | 1,078 | 2 |
| **2022 H1** | 37,072 | 123 | 1,635 | 8 | 11,221 | 16 | 9,342 | 15 | | |

*Source: Environmental Finance Data*

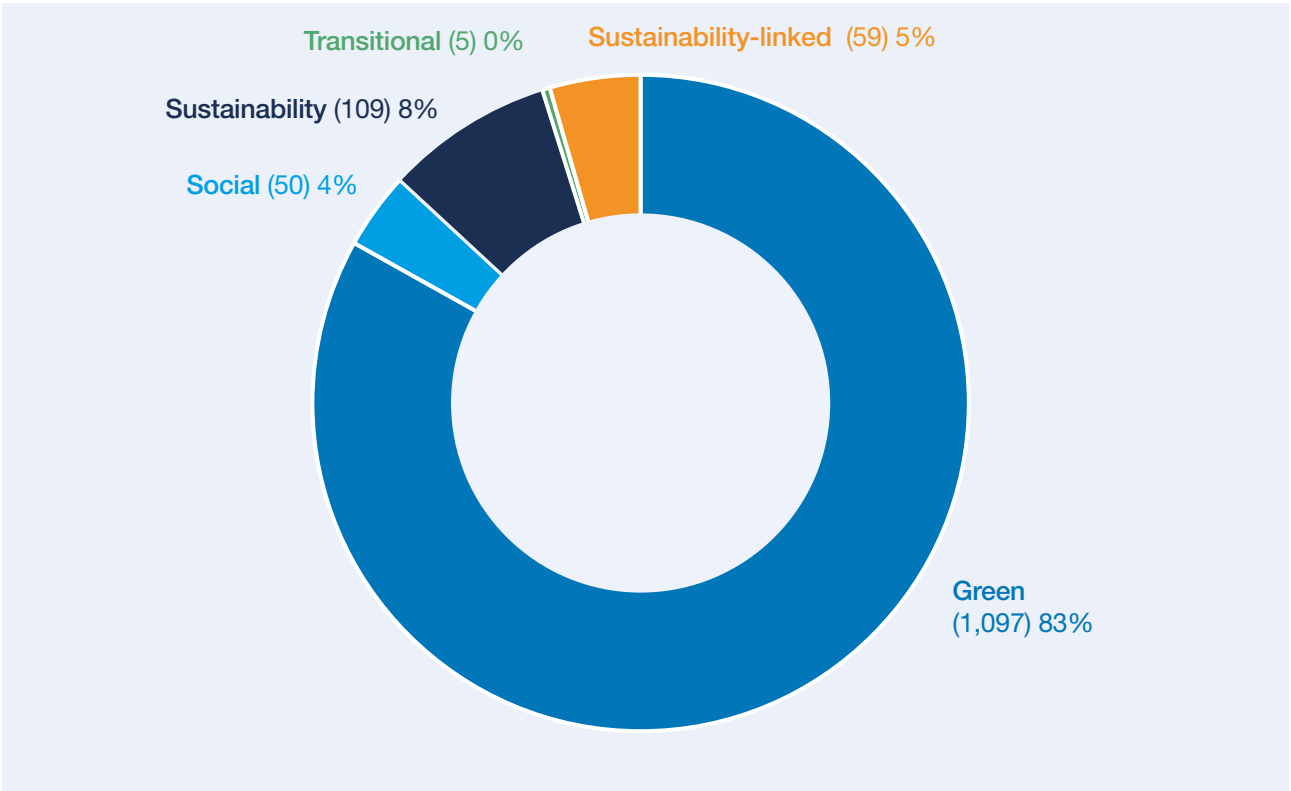
the proportion of bonds issued by value, issuing 39 over $1bn. When China is excluded, other EM FIs comprise 27% of green bond issuance, since average bond size is much smaller.

Figure 6 outlines the year-on-year issuance of EM (ex-China) FI green bonds against all other issuer types. EM FIs were early movers in green bond issuance and proportionally represented a larger part the early sustainable bond market in 2015-2019 before corporate issuers came to the fore from 2020 onwards.

The Chinese green bond market is distinct from other EM markets and presents challenges in summarising and assessing issuance and reporting data.

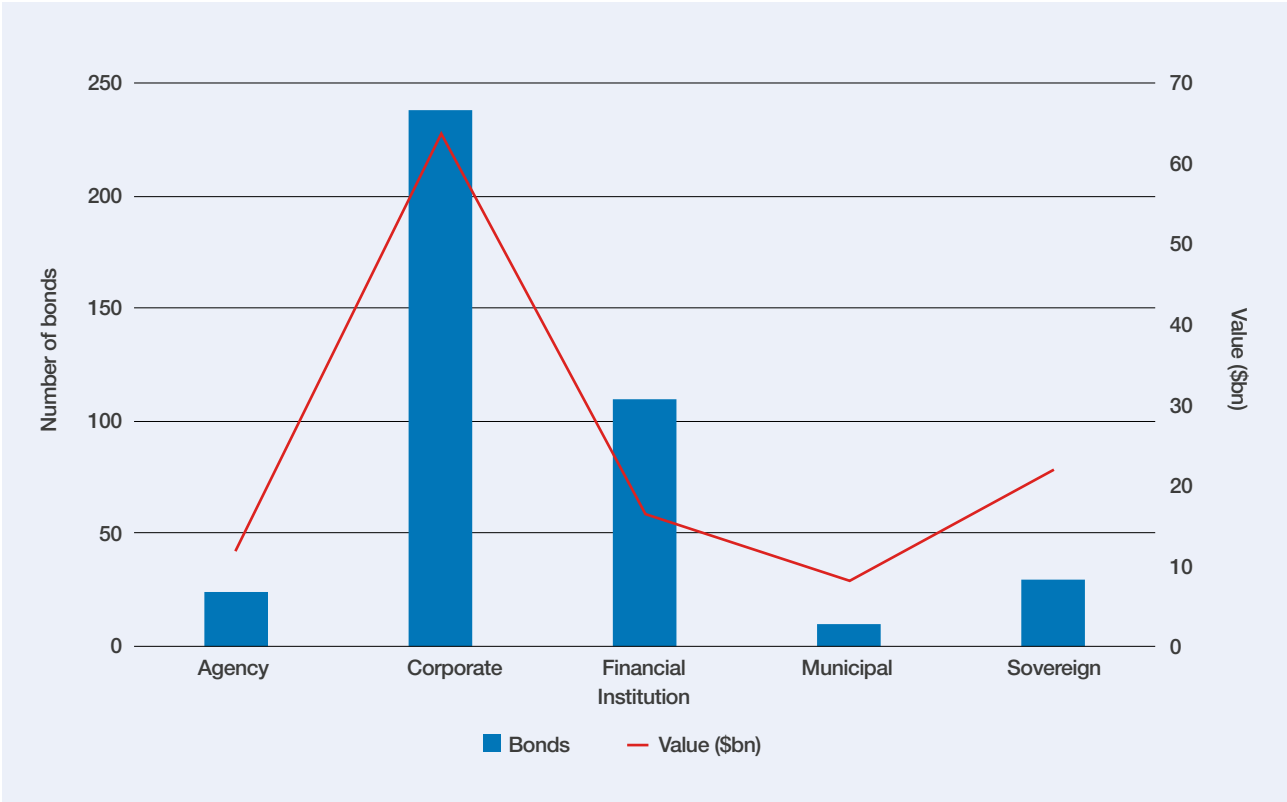
Domestic Chinese green bond labels do not fully align with international green bond standards, for example

## Figure 3: Emerging market sustainable bond issuance – number of bonds by label



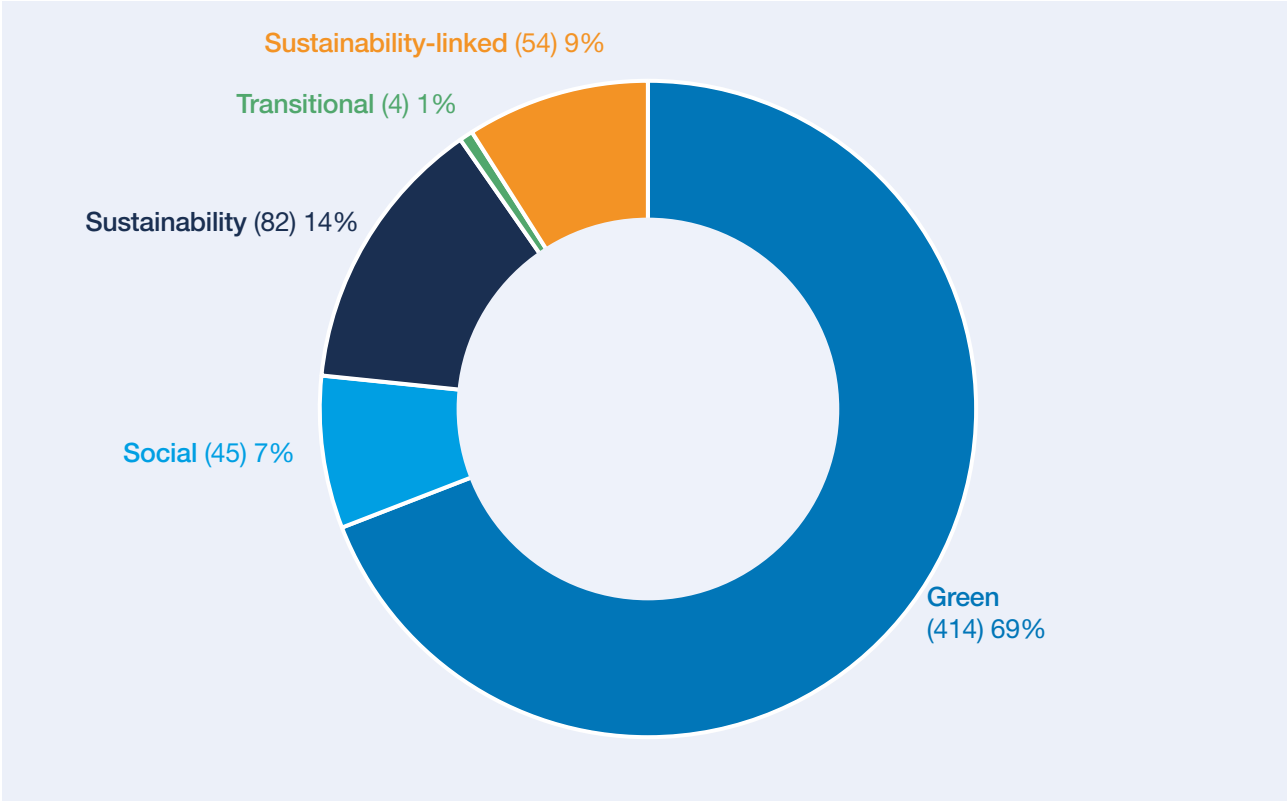

*Source: Environmental Finance Data. Date range market inception – H1 2022*

## Figure 4: Emerging market (ex China) green bonds – number of bonds and value by issuer type



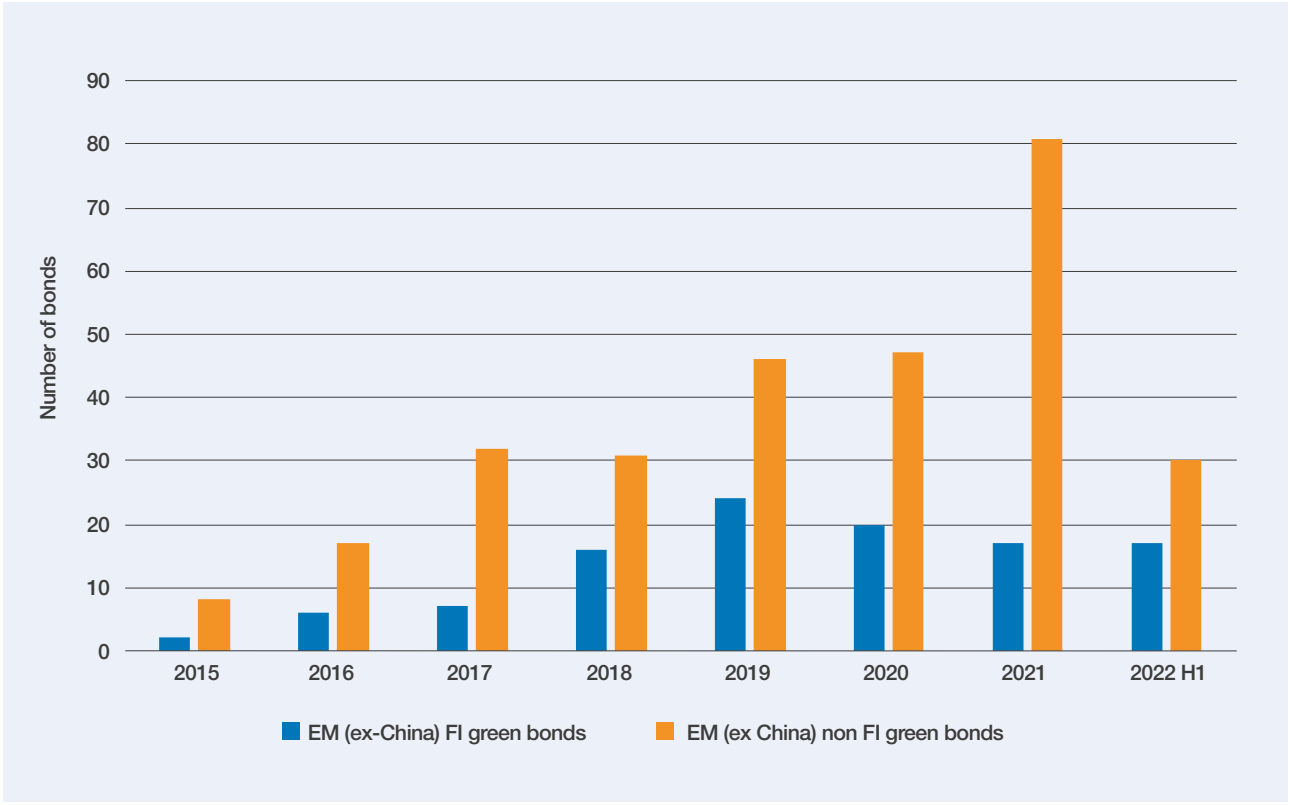

*Source: Environmental Finance Data. Date range market inception – H1 2022*

## Figure 5: Emerging market (ex China) green bonds – number of bonds by label



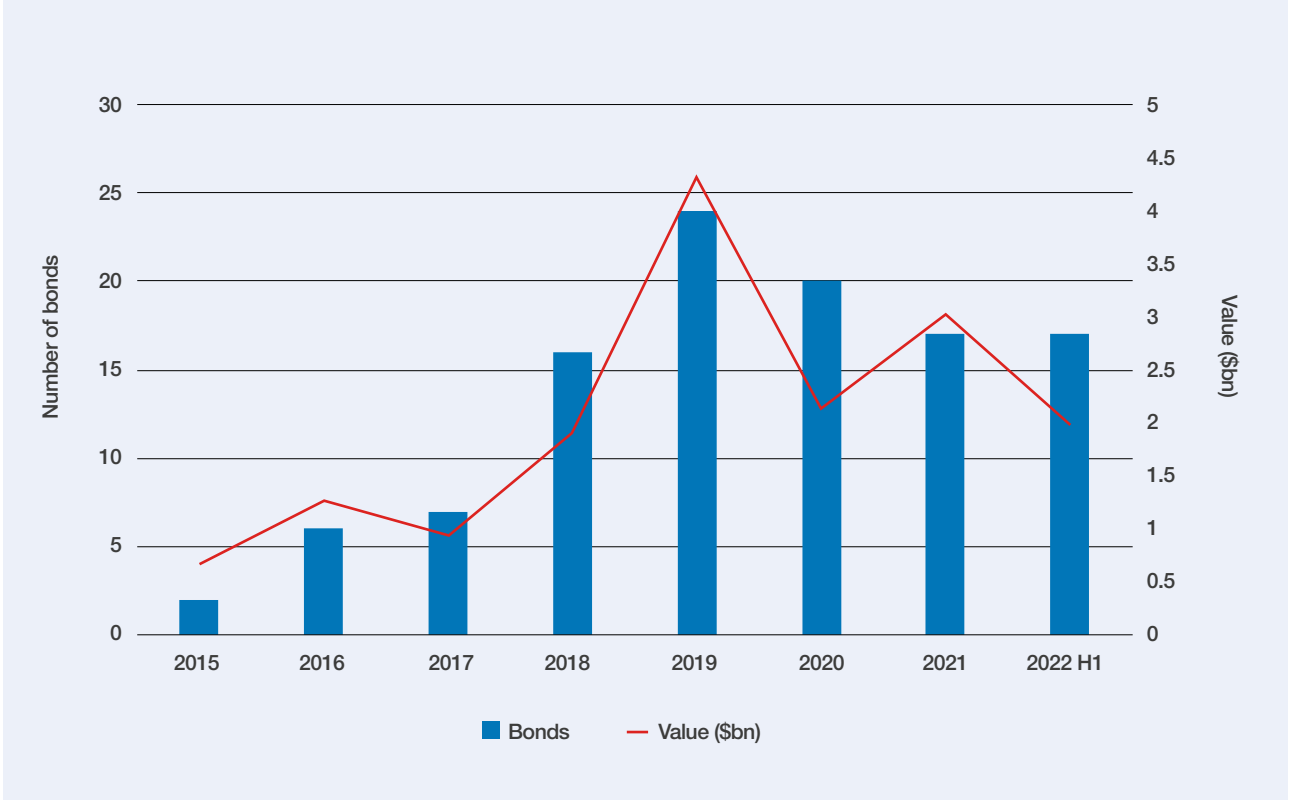

*Source: Environmental Finance Data. Date range market inception – H1 2022*

## Figure 6: Emerging market (ex China) green bonds – year-on-year number of bonds by issuer type




*Source: Environmental Finance Data.*

## Figure 7: Emerging market (ex China) FI green bonds – year-on-year number of bonds and value




*Source: Environmental Finance Data.*

what is categorised as a green use of proceeds and the requirement that 100% of the bond use of proceeds are green. Under current green bond definitions in China, some "clean coal" projects are still defined as green and non-green "working-capital" is a recognised use of proceeds.

There are at least seven different green bond labels used in China, covering different issuer types and sectors, regulated by four different authorities (see Annex Table 3 for details). According to the China International Capital Corporation (CICC), Chinese regulators have a variety of different definitions for green bonds and differ on the allocation and reporting requirements. This creates challenges to gathering and analysing financial institution green bond issuance and impact reports. [2]

There are steps being taken towards international harmonisation with the China Green Bond Principles published in August 2022 by the China National Association of Financial Market Institutional Investors (NAFMII) and the China Green Bond Standard Committee, however there are still discrepancies and Chinese FI green bonds have not been analysed separately in this report.

EM FIs (ex-China) issued fewer green bonds, and in lower value, in 2020 and 2021 than in their peak in 2019, before the Covid-19 pandemic. So far in 2022, there are signs of recovery, with the number of bonds issued in H1 equalling the total for 2021, and the total value not far below.

This compares with the trend in developed markets, where the number of bonds issued by FIs dipped slightly in 2020, while their value rose by a small margin. Bond issuance by both number and value rose sharply in 2021, from $37bn to $71bn, reaching higher levels than in 2019. So far, 2022 is set to equal or better 2021 in terms of both bonds issued and total value.

## Green Bond Impact Reporting – background, principles and guidance

Impact reporting is a key element of the green bond structure and provides transparency and the necessary quantification and qualification of the environmental benefits of the funded projects or assets.

Green bond impact reports are required by most voluntary principles, such as the Green Bond Principles (GBPs) (which over 90% of green bonds are aligned with) and the People's Bank of China Guidelines for Establishing the Green Financial System.

More specific guidance on allocation and impact reporting is provided in ICMA's Handbook - Harmonised Framework for Impact Report. First published in 2015, the recent update in June 2022 included new metrics for impact reporting for projects relating to management of living natural resources and land use, and for social projects; updated mapping to the United Nations' Sustainable Development Goals (SDGs); and a re-issuance checklist for green bonds.

There is also The Nordic Position Paper, a practical guide for public sector green bond issuers created by prominent issuers. The third edition was published in February 2020.

To augment the GBPs and Handbook, the Emerging Markets Investors Alliance (EMIA) published specific guidelines for EM issuers in its *EMIA Enhanced Labelled Bond Principles* (June 2021). The guidelines require stringent checks and verification of allocation and impact reporting to improve transparency and avoid allegations of greenwashing and are stricter than the GBPs. For example, projects to be financed should be chosen by a committee with independent oversight and the use of proceeds must be independently audited by an external verifier. The GBPs do not stipulate independent oversight and strongly recommend rather than require external review.

Current green bond impact reporting practices globally are far from up to scratch. *Environmental Finance*'s annual survey of green bond practices found that three quarters of investors said they thought impact reporting practices in the green bond market were inadequate.[3]

This had risen since the same survey was carried out in 2020, where two-thirds held this view, and could reflect higher expectations from investors and increased regulatory requirements rather than declining standards of reporting.

With more than half saying poor impact reporting and data were deterring them from making further investments, it is clear that impact reporting has a key role in growing green finance. In fact, more than nine out of ten investors said they regard impact reports from bond issuers and green bond funds as 'crucial'.

2 China Issuer Principles for Green Bonds (July 2022), Reuters

3 Green Bond Fund Impact Reporting Practices Study 2021, (January 2022), *Environmental Finance*, p.36

## Extract from the Green Bond Principles regarding impact reporting[4]

**Reporting**
"Issuers should make, and keep, readily available up to date information on the use of proceeds to be renewed annually until full allocation, and on a timely basis in case of material developments. The annual report should include a list of the projects to which green bond proceeds have been allocated, as well as a brief description of the projects, the amounts allocated, and their expected impact. Where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available, the GBP recommend that information is presented in generic terms or on an aggregated portfolio basis (eg percentage allocated to certain project categories).

Transparency is of particular value in communicating the expected and/or achieved impact of projects. The GBP recommend the use of qualitative performance indicators and, where feasible, quantitative performance measures and disclosure of the key underlying methodology and/or assumptions used in the quantitative determination. Issuers should refer to and adopt, where possible, the guidance and impact reporting templates provided in the Harmonised Framework for Impact Reporting.

The use of a summary, which reflects the main characteristics of a Green Bond or a Green Bond programme, and illustrates its key features in alignment with the four core components of the GBP, may help inform market participants. To that end, a template can be found in the sustainable finance section of ICMA's website which once completed can be made available online for market information."

4 Green Bond Principles, (June 2022), ICMA, p.6

# Green Bonds and Impact Reporting

## Why issue an impact report?

All green bonds that are aligned to the GBPs are required to produce reports. Reports should include a list and brief description of the projects to which the proceeds of the bond have been allocated, the amounts allocated, and their expected impact.

Impact reports are not required to provide actual results achieved in a specific year or reporting period, but rather an illustration of the expected environmental impacts or outcomes resulting from projects to which green bond proceeds have been allocated. Impact reports should be based on annual analyses per portfolio, project level or green project category, if possible.

The issuers use both qualitative and quantitative performance indicators, but the GBPs recommends that issuer makes methodologies and assumptions clear to improve transparency.

A green bond investor survey conducted by Environmental Finance in 2021 found that more than 70% of green bond funds cited poor impact data and low transparency as key challenges and potential headwinds for future green bond investment. Some 92% of investors surveyed cited environmental impact as their main green bond investment criteria, while 61% factored in impact reporting procedures when selecting bonds.

Comments from investors interviewed for this report backed up this finding. Impact investment fund LAGreen, which was launched at COP26 in November 2021, will follow an impact framework setting out its minimum requirements for bonds in which it invests.

The fund has the clear ambition to invest in bonds that produce and publish impact reports. Its chairperson, Johannes Scholl, said: "We need issuers to make impact data about their green bonds available for investors, since impact is core to our mission. Where needed, we can support the enhancement of their reporting capacity with technical assistance."

The first two bond investments made by the fund include commitments to report on use proceeds according to the GBPs and will deliver the necessary inputs for assessing the impact of the fund's investment.

Scholl believes that the availability of good-quality impact reports will be vital in consolidating green bonds as a successful tool for mobilizing financing on an ongoing basis. For this purpose, issuers will need to differentiate themselves through good, transparent and timely reporting. "We want green bonds to be more than a one-off exercise by the issuer, but rather a recurrent funding source that allows impactful investments to differentiate themselves in the market."

B3, the Brazilian Stock Exchange, does not require financial institutions to follow any specific framework in order to get green bonds registered at the exchange. However, its head of sustainability Cesar Sanches, believes that using recognised standards and principles is good practice. "Those standards and principles provide a consistent framework for green bond issuance," he said.

EM FI green bond issuers also spoke about the benefits they experienced from publishing an impact report for their green bond. Claire Hobbs, chief treasurer at Bank Windhoek, said that the impact report gave the bank and its bond credibility. It was also useful for investors as it provided "a happy end to the story" that an investor could then publicise to show it was making a difference. "If people invest their funds in a bank, they know that we pool that and lend it out, but they never know exactly who the bank has lent it to, and what difference it made. But our green bond was ring-fenced, so you could very much see what was generated from an investment and the difference it made," she said.

Marla Garin-Alvarez, vice president and head of sustainability at BDO Unibank, recalled that green bonds were very novel at the time of its own first issuance in 2017. "There were not a lot of takers in the country, or the region. But when we did the thematic bond with IFC and other banks the strong interest served as a catalyst for others to follow suit," she said.

# Challenges to EM FI Green Bond Impact Reporting

There are a variety of universal challenges faced by all green bond issuers, including Fis, when producing impact reports. Firstly, it requires that issuers have the practices and infrastructures to collect the relevant project level data. This can present difficulties in certain sectors and regions where environmental data is not consistently gathered.

Even when gathered internally, much of the project level data required is unstandardised, with little consistency in the metrics used, the reporting timescale and format, or in methodologies used for calculations.

The synthesis of project level data, alignment to regulations and voluntary principles, and the translation of output data into impact can prove challenging for issuers without the required resources and experience.

The importance of standardised data and material, and sector-specific metrics is clear. Industry handbooks and papers (such as the Handbook and Nordic Position Paper) seek to provide guidance on metrics and templates for more consistent impact reporting on a sector-by-sector basis.

While handbooks and guidance can help bring greater standardisation to impact reporting at a macro level, investors, funds and databases also have a role to play in guiding reporting practices on a micro level.

Issuer engagement by experienced green bond investors - in particular green bond funds with a large portfolio - can provide practical insight and advice to issuers. Investors and fund managers have a broad understanding of sector-level best practices through their exposure to numerous issuer impact reports.

They are therefore well-placed to communicate their preferences for impact reporting and metrics to issuers. Investors and fund managers frequently engage with issuers pre-and post-investment as part of their due diligence. While not all investors have the same investment priorities or impact goals, they can still drive standardisation around key metrics, methodologies and reporting formats. Investor selection of issuers based on impact reporting practices can strongly influence future issuance and reports.

There are a number of green bond funds focussed on EMs. These can play an important role in encouraging green bond impact reporting best practices. These funds include Amundi's Emerging Green One (EGO) fund, HSBC's Real Economy Green Investment Opportunity (REGIO), Blackrock's Emerging Market Fund, and German state-owned development bank KfW's LAGreen fund.

There is some guidance for databases. Published in June 2021, the Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds' Impact Reporting Databases provide recommendations on structure, security and data. The guidelines give outlines on how to collect and manage impact data on databases.

The unstandardised and unstructured nature of impact data creates challenges for databases for input, aggregation and output. Some databases rely on unvetted, issuer inputted data whilst others employ AI to scrape data from impact reports. Both approaches to data gathering can produce data reliability issues.

The differing baselines, methodologies and metrics used in impact data creates major comparability challenges and databases must clearly outline any homogenising benchmarks or equations used.

A move towards better standardised data reporting would benefit databases. They can play an important role in encouraging more standardised impact data reporting by referring issuers to the impact reporting handbooks and requesting data in the specified metrics.

## Data gathering

Before they can write an impact report, FI must first gather impact data from the companies that received the loan. Data gathering can be a complicated process and the funded projects may not have the data available, or might provide the data in an undesired metric or format. Some projects may be in different stages of development, have confidentiality issues, or not have the data collection

infrastructure in place to provide the data.

## Data aggregation

FI issuers must aggregate the data collected. If the projects funded come from a diverse range of sectors, FI issuers face aggregation challenges and they must either report across a wide range of metrics or find unifying metrics to assess diverse projects.

If all the projects funded by the financial institution green bond are in the same sector, such as renewable energy, it can be more straightforward to aggregate as the metrics should be the same or similar, though methodologies and baseline data can still differ, meaning that the FI needs to "convert" it in order to aggregate it. If the project is not 100% funded by the bond proceeds then the project impact must be pro-rated to the proportion of the project funded.

These challenges are magnified in emerging markets. Countries where projects are located generally lack environmental data disclosure regulation and country-specific data on GHG emissions, resulting in poorer data collecting infrastructure. Additionally, there are human capital issues, with a shortage of experienced environmental specialists able to gather and report the data both at project level and at the green bond issuing financial institution.

### Table 2: EM (ex-China) FI Green Bond Issuers (2015-H1 2021)

| FI issuer | Country | GBs | Value ($M) | Date of GB | Impact Report |
|---|---|---|---|---|---|
| Access Bank | Nigeria | 1 | 41.49 | 18/03/2019 | ✓ |
| Akbank | Turkey | 1 | 50 | 11/08/2020 | |
| Altum | Latvia | 1 | 23.32 | 11/10/2017 | ✓ |
| Ameriabank | Armenia | 2 | 64.32 | 14/02/2022, 26/11/2020 | ✗ |
| Axis Bank | India | 2 | 540 | 18/04/2019, 30/05/2016 | ✓ |
| Banco De Bogota | Colombia | 1 | 79.17 | 12/10/2020 | ✓ |
| Banco de Crédito e Inversiones | Chile | 1 | 54 | 17/03/2021 | ✗ |
| Banco Galicia | Argentina | 1 | 100 | 23/03/2018 | ✗ |
| Banco Nacional de Costa Rica | Costa Rica | 1 | 500 | 25/04/2016 | ✓ |
| Banco Pichincha | Ecuador | 1 | 150 | 20/12/2019 | |
| Banco Votorantim | Brazil | 1 | 50 | 19/03/2020 | ✗ |
| Bancolombia | Colombia | 2 | 220.60 | 07/12/2016, 18/07/2018 | |
| Bank for Agriculture and Agricultural Cooperatives | Thailand | 1 | 192.29 | 18/08/2020 | ✓ |
| Bank of the Philippine Islands | Philippines | 2 | 401.87 | 29/08/2019, 10/09/2019 | ✓ |
| Bank of Windhoek | Namibia | 1 | 4.59 | 06/12/2018 | ✓ |
| Bank Sinopac | Taiwan | 2 | 98.07 | 19/05/2017, 26/06/2019 | ✗ |
| BDO Unibank | Philippines | 1 | 150 | 08/12/2017 | ✓/✗[5] |
| BMCE Bank (Bank of Africa) | Morocco | 1 | 48.17 | 21/11/2016 | ✓ |
| BTG Pactual | Brazil | 2 | 550 | 30/11/2020, 11/01/2021 | ✓ |
| Capital Environment | Hong Kong | 1 | 250 | 11/09/2018 | ✗ |
| Center-Invest Bank | Russia | 1 | 3.91 | 15/11/2019 | ✓/✗[6] |
| China Banking Corporation | Philippines | 1 | 150 | 19/10/2018 | ✗ |
| Cofide | Peru | 1 | 42.27 | 28/03/2019 | ✓ |
| Damu Entrepreneurship Development Fund | Kazakhstan | 1 | 0.48 | 11/08/2020 | ✗ |
| Davivienda | Colombia | 1 | 151.22 | 25/04/2017 | ✓ |

5 Not publicly available
6 Not publicly available

| FI issuer | Country | GBs | Value ($M) | Date of GB | Impact Report |
|---|---|---|---|---|---|
| Development Bank of the Philippines | Philippines | 1 | 358.24 | 11/11/2019 | ✓ |
| E Sun Commercial bank | Taiwan | 3 | 138.12 | 19/05/2017, 24/04/2018, 19/03/2020 | ✗ |
| Export-Import Bank of India | India | 1 | 500 | 01/04/2015 | ✗ |
| First Abu Dhabi Bank[7] | United Arab Emirates | 4 | 1,026 | 11/06/2020, 28/01/2021, 03/09/2019 | ✓ |
| First Commercial Bank | Taiwan | 1 | 33.05 | 27/03/2020 | ✗ |
| Fondo Especial Para Financiamientos Agropecuarios | Mexico | 1 | 133.8 | 24/06/2020 | ✗ |
| Fransabank | Lebanon | 1 | 60 | 05/04/2018 | ✓ |
| Garanti BBVA | Turkey | 1 | 50 | 20/12/2019 | ✓ |
| Hua Nan Commercial Bank | Taiwan | 1 | 33.74 | 25/04/2018 | ✗ |
| Islamic Development Bank | Saudi Arabia | 1 | 1,101.59 | 27/11/2019 | ✓ |
| KGI Bank | Taiwan | 1 | 33.16 | 19/05/2017 | ✗ |
| Majid Al Futtaim | United Arab Emirates | 2 | 1,200 | 14/05/2019, 23/10/2019 | ✓ |
| Mega International Commercial Bank Co., Ltd. | Taiwan | 1 | 33.37 | 11/03/2020 | ✓ |
| Nedbank | South Africa | 1 | 116.74 | 30/04/2019 | ✓ |
| PKO Bank | Poland | 2 | 129.55 | 10/06/2019, 27/11/2019 | ✓ |
| Qatar National Bank | Qatar | 1 | 600 | 22/09/2020 | ✓ |
| RCBC | Philippines | 1 | 283.70 | 25/01/2019 | ✓ |
| Sarana Multi Infrastruktur | Indonesia | 1 | 34.74 | 06/07/2018 | ✓ |
| SID Bank | Slovenia | 1 | 85.12 | 06/07/2018 | ✓ |
| Societe Generale Taipei Branch | Taiwan | 2 | 149.72 | 10/07/2019, | ✗ |
| Standard Bank Group | South Africa | 1 | 200 | 02/03/2020 | ✓ |
| State Bank of India | India | 3 | 800 | 30/07/2018, 28/09/2018, 28/03/2020 | ✗ |
| Taipei Fubon Commercial Bank | Taiwan | 1 | 157.99 | 01/03/2018 | ✗ |
| Taishin International Commercial Bank | Taiwan | 1 | 20 | 05/07/2018 | ✗ |
| Taiwan Business Bank | Taiwan | 1 | 33.74 | 01/05/2018 | ✗ |
| Taiwan Cooperative Bank | Taiwan | 1 | 32.76 | 28/11/2019 | ✗ |
| Taiwan Shin Kong Commercial Bank Company | Taiwan | 1 | | 23/06/2021 | ✗ |
| Tatra banka | Slovakia | 1 | 361.38 | 23/04/2021 | ✓ |
| TMB Bank | Thailand | 1 | 60 | 05/06/2018 | ✗ |
| Turkiye is Bankasi | Turkey | 2 | 63 | 08/07/2019, 25/02/2021 | ✓ |
| Yapi Kredi | Turkey | 1 | 50 | 21/01/2020 | ✓ |
| Yes Bank | India | 3 | 259.46 | 24/02/2015, 27/09/2016, 29/12/2016 | ✓ |
| Yuanta Commercial Bank | Taiwan | 1 | 17.8 | 29/04/2021 | ✗ |
| Yushan Commercial Bank | Taiwan | 1 | 96.48 | 04/07/2019 | ✗ |
| Zhongyuan Bank | Hong Kong | 1 | 219.1 | 25/04/2018 | ✗ |

*Source: Environmental Finance Data*

7 First Abu Dhabi Bank data includes the 2017 National Bank of Abu Dhabi green bond due to 2016 merger of the banks

# EM FI Green Bond Impact Report Analysis

## Data context

We have researched all green bonds issued by FIs in global EMs (see Annex table 1 for full country list).

As there is usually a 12-month lead time between issuing a bond and publishing an impact report, this chapter focuses on EM (ex-China) FI green bond issuers from the date of their first green bond issuance to 30 June (H1) 2021.

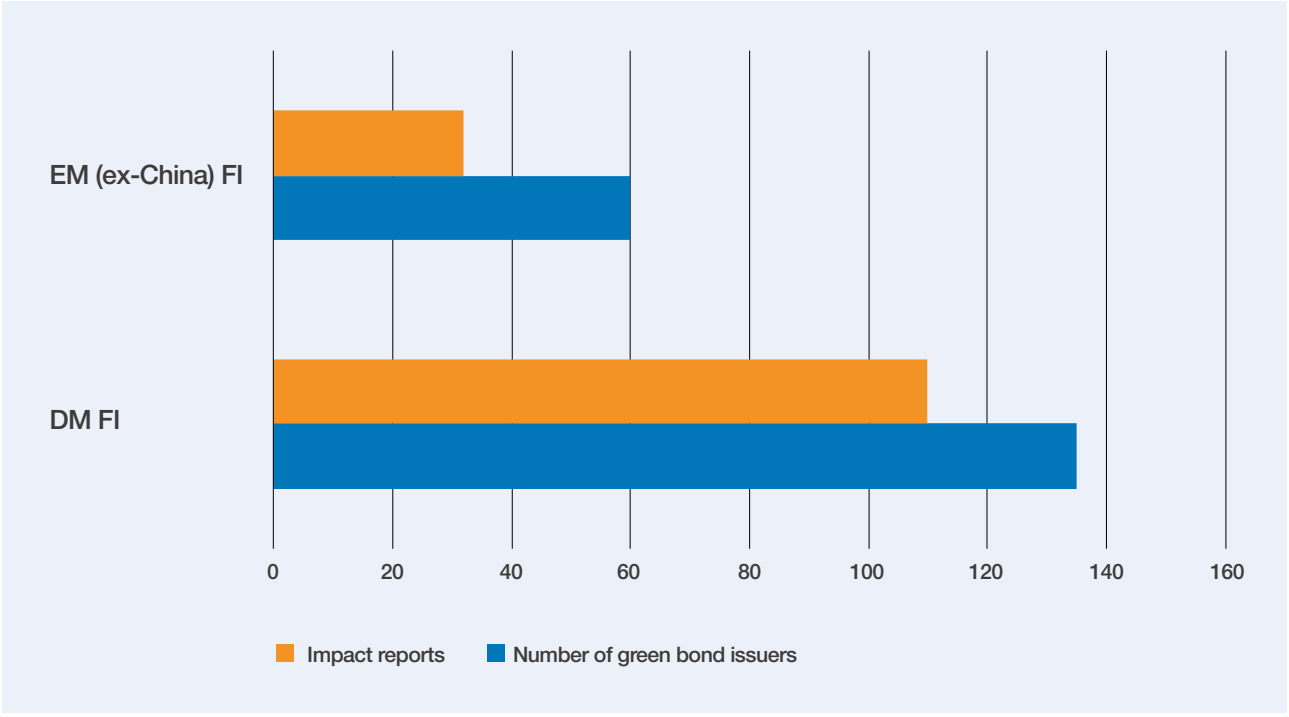
Some 24 EM (ex-China) FI issuers have issued 35 green bonds between 30 June 2021 and 30 June 2022 that have not entered the expected impact reporting period and have therefore not been included in the analysis. See Annex table 2 for details.

For this study, we have defined impact reports as any form of report with bond specific, quantified environmental impact. Three reports titled "allocation reports" qualify as impact reports by this definition and have been included in the analysis. One allocation report contains only allocation data with no indication of the environmental impacts and has not been included in the analysis.

There have been 79 green bonds issued by 60 EM (ex-China) FI issuers in the analysed time period. Of these, 33[8] issuers (53%) have published an impact report, three (5%) have allocation reports but not impact reports and 24[9] (40%) have not issued impact or allocation reports. More than 88% of these issuers (53) state adherence to the GBPs. However, 22 of those have not yet published impact reports as required by the principles.

As Figure 8 shows, this compares with 685 green bonds issued by 135 developed market FI issuers during the same period. Of these, 110 (82%) have published impact reports, and 25 (18%) have neither allocation nor impact reports.

**Figure 8: Emerging market (ex China) and developed market FI green bonds – number of issuers and impact reports**




*Source: Environmental Finance Data. Date range market inception – H1 2022*

8 This included impact reports from Center-Invest Bank and Damu Entrepreneurship Development Fund which have impact reports that are not publicly available but is sent directly to investors

9 This report analyses publicly available impact reports. Some private placement green bonds, such as the BDO Unibank 2017 bond, produce impact reports and send them privately to the investor.

## Table 3: Emerging Market (ex-China) FI Green Bond Impact Report Analysis

| issuer | Ease of finding (1-5, 1 being very easy to find) | Report date | Report title | Length (pages) | Allocation | Project descriptions | Case studies |
|---|---|---|---|---|---|---|---|
| Access Bank | 1 | Feb-21 | Green Bond Annual Impact Report | 32 | ✓ | ✓ | ✓ |
| Akbank | 1 | May-21 | Year End Sustainable Finance Allocation Report | 8 | ✓ | ✘ (project type but not specific project information - 50+ projects) | ✘ |
| Altum | 1 | Jun-21 | Altum Green Bonds Investor Report *and* Altum Green Bond Project-by-project report annex | 2+2 | ✓ | ✓ | ✓ |
| Axis Bank | 1 | Jan-22 | Green Bond impact report | 5 | ✓ | ✘ (project type but not specific project information) | ✓ |
| Banco De Bogota | 1 | Sep-21 | First Report of Use of Funds and Environmental Impact | 32 | ✓ | ✓ | ✓ |
| Banco Nacional de Costa Rica | 1 | Mar-21 | Green Bond report | 3 | ✓ | ✓ | ✘ |
| Banco Pichincha | 2 | May-21 | Green Bond Issuance Report | 3 | ✓ | ✘ (project type but not specific project information) | ✘ |
| Bancolombia | 2 | May-21 | Annual Report | 1 of 169 | ✘ | ✘ (project type but not specific project information) | ✘ |
| Bank for Agriculture and Agricultural Cooperatives | 1 | Aug-21 | Green Bond Report | 10 | ✓ | ✓ | ✓ |
| Bank of the Philippine Islands | 2 | Apr-21 | BPI Integrated Annual Report | 2 of 175 | ✓ | ✓ | ✘ |
| Bank of Windhoek | 1 | Mar-20 | Green Bond Impact Report | 24 | ✓ | ✓ | ✓ |
| BDO Unibank | 1 | Jun-19 | Stories of impact | 3 | ✘ | ✘ | ✘ |
| BMCE Bank (Bank of Africa) | 3 | Apr-21 | Green Bond Impact Report | 17 | ✓ - basic | ✓ | ✓ |
| BTG Pactual | 1 | Nov-21 | Green Financing Report | 20 | ✓ | ✘ (project type but not specific project information - 50+ projects) | ✓ |
| Cofide | 3 | Apr-22 | Bono Verde Informe (Green Bond Report) | 28 | ✓ | ✓ | ✓ |
| Davivienda | 2 | Mar-22 | Davivienda TFCD Report | 35 | ✘ | ✘ (project type but not specific project information) | ✓ |

| Mapped to UN SDGs | Methodology | Reporting period defined | Process for defining project eligibility for inclusion in the report | Integrated external review/ assurance | Reference to sustainability program | Reference to GB framework | Level of reporting (project/bond/ issuer) | Finance vs refinance |
|---|---|---|---|---|---|---|---|---|
| ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ | project | ✘ |
| ✘ | ✘ | ✓ | ✘ - "in accordance to framework" | ✓ | ✓ | ✓ | project | ✘ |
| ✓ | ✓ | ✓ | ✘ - "in accordance to framework" | ✘ | ✓ | ✓ | project | ✘ |
| ✘ | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | bond | ✘ |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | project | ✓ |
| ✘ | ✘ | ✓ | ✓ | ✘ | ✓ | ✘ | project | ✘ |
| ✘ | ✘ | ✘ | ✘ | ✘ | ✘ | ✘ | bond | ✓ |
| ✘ | ✘ | ✘ | ✘ | ✘ | ✓ | ✘ | bond | ✘ |
| ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | project | ✘ |
| ✓ | ✘ | ✓ | n/a all projects included | ✓ | ✓ | ✘ | project | ✘ |
| ✓ | ✘ (some methodological explanation in the footnotes) | ✓ | n/a - all projects included | ✓ | ✓ | ✓ | project | ✘ |
| ✘ | ✓ | ✓ | ✘ | ✓ | ✘ | ✘ | bond | ✘ |
| ✘ | ✓ | ✓ | n/a - all projects included | ✘ | ✓ | ✘ | project | ✘ |
| ✘ | ✘ | ✘ | ✘ | ✓ | ✓ | ✓ | bond | ✓ |
| ✓ | ✘ | ✓ | ✘ | ✓ | ✓ | ✓ | project | ✘ |
| ✓ | ✘ | ✓ | n/a - all projects included | ✘ | ✓ | ✘ | bond | ✘ |

| issuer | Ease of finding (1-5, 1 being very easy to find) | Report date | Report title | Length (pages) | Allocation | Project descriptions | Case studies |
|---|---|---|---|---|---|---|---|
| Development Bank of the Philippines | 1 | Nov-20 | DBP Asean Sustainability Bonds | 15 | ✓ | ✓ (project type but not specific project information) | ✓ |
| First Abu Dhabi Bank* | 1 | Jun-22 | FAB Green Bonds Report | 16 | ✓ | ✓ | ✓ |
| Fransabank | 2 | Jun-22 | Corporate Social Responsibility | 1 of 47 | ✓ | ✓ (project type but not specific project information) | ✘ |
| Garanti BBVA | 3 | Jan-22 | Green Bond Allocation and Impact Report, | 19 | ✓ | ✓ | ✘ |
| Islamic Development Bank | 2 | Dec-20 | Annual Impact Report on Debut Green Sukuk | 20 | ✓ | ✓ | ✘ |
| Majid Al Futtaim | 1 | Mar-22 | Green Sukuk Report | 12 | ✓ | ✓ | ✓ |
| Nedbank | 1 | Dec-20 | Nedbank Limited - Annual Impact Report | 4 | ✓ | ✓ | ✓ |
| PKO Bank | 2 | Dec-21 | PKO Bank Impact & Allocation Report | 2 | ✓ | ✘ | ✘ |
| Qatar National Bank | 1 | Sep-21 | Green Bond Impact Report | 11 | ✓ | ✓ (project type but not specific project information) | ✘ |
| RCBC | 1 | Apr-22 | Sustainability Bonds Impact Report | 37 | | ✓ (project type but not specific project information - 50+ projects) | ✓ |
| Sarana Multi Infrastruktur (SMI) | 1 | Mar-21 | Green Bond Report | 29 | ✓ | ✓ | ✓ |
| SID Bank | 1 | Apr-21 | SID Bank Green Bond Impact Report | 6 | ✓ | ✓ (project type but not specific project information) | ✘ |
| Standard Bank Group | 2 | Jul-05 | Standard Bank Group ESG Report | 4 of 96 | ✓ | ✓ (project type but not specific project information) | ✘ |
| Tatra Banka | 1 | Jan-22 | Green bond allocation and impact report | 17 | ✓ | ✓ | ✓ |
| Turkiye is Bankasi | 1 | Oct-21 | İşbank Green Bond Allocation & Impact Report | 3 | ✓ | ✓ | ✘ |
| Yapi Kredi | 2 | Jan-22 | Green Bond Allocation and Impact Report | 14 | ✓ | ✓ | ✘ |
| Yes Bank | 1 | Apr-21 | Green Bond Impact Report | 14 | ✓ | ✓ | ✓ |

| Mapped to UN SDGs | Methodology | Reporting period defined | Process for defining project eligibility for inclusion in the report | Integrated external review/ assurance | Reference to sustainability program | Reference to GB framework | Level of reporting (project/bond/ issuer) | Finance vs refinance |
|---|---|---|---|---|---|---|---|---|
| ✓ | ✘ | ✓ | n/a - all projects included | ✓ | ✓ | ✓ | project | ✘ |
| ✓ | ✓ | ✓ | n/a - all projects included | ✓ | ✓ | ✓ | bond/project | ✘ |
| ✓ | ✘ | ✓ | ✘ | ✓ | ✓ | ✘ | bond | ✘ |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | project | ✘ |
| ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ | project | ✓ |
| ✘ | ✓ | ✓ | n/a - all projects included | ✘ | ✓ | ✓ | project | ✓ |
| ✓ | ✘ | ✓ | n/a - all projects included | ✘ | ✘ | ✓ | project | ✘ |
| ✘ | ✓ | ✓ | n/a - all projects included | ✘ | ✘ | ✘ | bond | ✘ |
| ✓ | ✓ | ✓ | ✓ | ✘ | ✘ | ✘ | bond | ✘ |
| ✓ | ✘ | ✓ | n/a - all projects included | ✘ | ✓ | ✓ | bond/project | ✘ |
| ✓ | ✓ | ✓ | n/a - all projects included | ✓ | ✓ | ✓ | project | ✓ |
| ✓ | ✘ | ✓ | ✓ | ✘ | ✓ | ✓ | bond | ✘ |
| ✓ | ✘ | ✓ | n/a - all projects included | ✓ - hyperlinked | ✓ | ✓ | bond | ✘ |
| ✓ | ✓ | ✓ | ✓ | ✓ - hyperlinked | ✓ | ✘ | bond | ✘ |
| ✘ | ✘ | ✓ | ✓ | ✘ | ✘ | ✘ | project | ✘ |
| ✓ | ✓ | ✓ | n/a - all projects included | ✓ | ✓ | ✓ | project | ✓ |
| ✘ | ✘ | ✓ | n/a - all projects included | ✓ | ✓ | ✘ | project | ✘ |

*Source: Environmental Finance Data.*

## Data presentation

As Table 3 shows, there is very little standardisation in the content of an impact report. For example, only 14 out of 33 specify "impact report" in the title. There is a wide range of detail and reporting rigour – even comparing the most simplistic measure of length reveals a range of one to 35 pages.

Six out of 33 of the reports were integrated into annual or sustainability reports, and 15 integrated external assurances – which provide an independent assessment of the integrity the impact data. It is important to note that some issuers publish their assurances/external reviews as standalone reports.

Green bond investors are under increasing expectation to publish impact reports covering their investment portfolios. Report methodologies are essential for investors to be able to understand, scrutinise, and aggregate impact data. Less than half (15 out of 33) provided a methodological explanation of the impact data presented in the report. Impact data granularity differed amongst the analysed reports. The most common level of impact data provided was at a project level (19 out of 33), 14 out of 33 provided impact data at a bond level, and one impact report provided impact data at a portfolio level, across multiple green bonds.

All 33 of the analysed issuers with impact reports had a green or sustainable bond framework for issuing green bonds however only 20 of the 33 impact reports reference or link to these frameworks. A slightly higher proportion (27 out of 33) contextualise their green bond impact within their broader, issuer level, sustainability strategy.

A little over half (18 out of 33) of the impact reports used case studies to illustrate the types of projects that bond resources have been allocated to.

## Metrics

Our analysis found that the selection of metrics for impact reports is challenging and lacks standardisation. Sector-specific metrics recommended in guidance such as the Harmonised Handbook for Impact Reports (see Annex) are not universally adhered to by EM FIs.

The variety of metrics used in impact reports is often due to the fact that FIs are not directly in control of the metrics reported at project level, but must gather impact data from the companies and organisations running the projects funded by the green bond proceeds. In some cases, the organisations do not communicate their impact data and FIs must resort to searching publicly available project data. The type of metrics shown in Table 4 is dictated by the projects funded by FI green bonds.

FIs with diverse loan portfolios across numerous sectors face greater challenges collecting and reporting their impact. Green bonds used to fund one specific type of sustainable project, such as renewable energy face, fewer challenges when producing their impact report. This is because the metrics for renewable energy are well established and aggregating the different projects is more straightforward as they are reported in the same metric.

There is an ongoing debate around the additionality (projects which would not otherwise be funded without the green bond investment). Some prominent investors, such as Credit Suisse, argue that many green bonds do not provide real additional impact.[10] It can be argued that EM FI green bonds used to finance projects in emerging markets offer greater additionality than equivalent bonds from developed FI issuers as the projects funded are commonly in sectors and countries with lower sustainability performance than their developed counterparts.

There is some distinction, from an additionality perspective, made in the impact reports of EM FI issuers in their renewable energy metrics. Newly installed renewable energy capacity (MW) is reported separately to renewable energy generation funded (MW/h). 15 of the 33 impact reports analysed reference renewable capacity installed, and 18 of 33 report renewable energy generation financed. Eleven impact reports state both renewable energy metrics. Seven of the 33 impact reports specify whether the proceeds are used for refinancing existing projects or financing new projects across all sectors.

Carbon emissions metrics can be reported across a variety of projects and can be viewed as material for a wide range of outputs.

Carbon emissions avoided ($tCO_2e$) metrics were used in 24 of 33 reports, making it the most commonly-used metric – almost three times more common than absolute carbon emissions ($tCO_2eq/y$) metrics, which were used in just seven reports.

The two carbon emissions metrics differ in methodology. Carbon emissions reductions is an absolute metric and tracks the amount of carbon emissions produced year

10 'Additionality is the Lord Voldemort of sustainable investing', (August 2022), *Environmental Finance*

on year. Absolute reductions can clearly track the carbon emissions of an issuer or project but are less material for certain project types and new projects. The baseline used to measure the reduction in carbon emissions must be relevant to the project and country.

Carbon emissions avoided metrics use a benchmark, commonly regional, national or sectoral to estimate the carbon emissions avoided by the outputs of the project. This metric can contextualise the impact of a project, for example the positive impact of a renewable energy source replacing a fossil fuel source; however, the selection of a material benchmark is crucial to its accuracy. There are additional nuances regarding the negative impacts of the projects not being accounted for when using carbon emissions avoided metrics, for example any emissions in the construction/manufacturing/maintenance of the funded project.

FI green bond issuers could also consider including data on the allocation of loans by sector, geography, and impact. It could also be relevant to provide detail on the loan contract date, tenor and proportion. Of the 33 impact reports analysed, 20 currently give detailed breakdowns of the loans provided with the proceeds of the bond.

There are broader guidelines such as UN SDGs which lack granularity but can provide some macro comparability. Mapping impact to SDGs is not universally consistent and is open to interpretation. Some investors produce their own mapping of their investors rather than use the mapping provided by the issuer. Contributions to the UN SDGs were referenced in 20 of the reports.

Short project descriptions are recommended in the Handbook (see annex) and GBPs. 19 include brief descriptions of individual projects. Twelve reports provide broad project type information but not individual project descriptions (it is worth noting that at least three of these issuers had over 50 projects funded). Two of the 33 reports provide no project descriptions.

## Table 4: Emerging Market (ex-China) FI Green Bond Impact Report Metrics

| issuer | Report title | GHG/Carbon emissions reductions ($tCO_2eq/y$) | GHG/Carbon emissions avoided ($tCO_2e$) | Installed renewable energy capacity (MW) | Renewable energy generation (MWh/y) | Energy efficiency (MWH pa) |
|---|---|---|---|---|---|---|
| Access Bank | 2021 Green Bond Annual Impact Report | ● | | ● | ● | |
| Akbank | Year End Sustainable Finance Allocation Report | | | ● | | |
| Altum | Altum Green Bonds Investor Report *and* ALTUM Green Bond Project-by-project report annex | ● | | | | ● |
| Axis Bank | Green Bond impact report | | ● | | ● | |
| Banco De Bogota | First Report of Use of Funds and Environmental Impact | | ● | ● | ● | ● |
| Banco Nacional de Costa Rica | Green Bond report | | | ● | | |
| Banco Pichincha | Green Bond Issuance Report | | ● | | | ● |
| Bancolombia | Annual Report | | ● | ● | ● | |
| Bank for Agriculture and Agricultural Cooperatives | Green Bond Report | | | | ● | |
| Bank of the Philippine Islands | BPI Integrated Annual Report | ● | | | | ● |
| Bank of Windhoek | Green Bond Impact Report | | ● | ● | | |
| BDO Unibank | Stories of impact | | ● | | ● | |
| BMCE Bank (Bank of Africa) | Green Bond Impact Report | | ● | ● | ● | |
| BTG Pactual | Green Financing Report | | ● | ● | ● | |
| Cofide | Bono Verde Informe (Green Bond Report) | | ● | | ● | |
| Davivienda | Davivienda TFCD Report | | | | | ● |
| Development Bank of the Philippines | DBP Asean Sustainability Bonds | | ● | | | |
| First Abu Dhabi Bank* | FAB GREEN BONDS REPORT | ● | ● | | ● | ● |
| Fransabank | Corporate Social Responsibility | ● | | | | ● |
| Garanti BBVA | Green Bond Allocation and Impact Report, | | ● | ● | ● | |
| Islamic Development Bank | Annual Impact Report on Debut Green Sukuk | | ● | ● | ● | ● |
| Majid Al Futtaim | GREEN SUKUK REPORT | | ● | | | ● |
| Nedbank | Nedbank Limited - Annual Impact Report | | ● (per million invested) | | | |
| PKO Bank | PKO Bank Impact & Allocation Report | | ● | | | ● |
| Qatar National Bank | Green Bond Impact Report | | ● (per million invested) | | | ● |

| Green buildings (M2) | Water - treated/ reduced (M3) | Waste reduction (tons) | Biodiversity (various) | Land protected (hectares) | Number of people impacted | Loans breakdown | Real world equivalencies | Other |
|---|---|---|---|---|---|---|---|---|
| | | | | ● | ● | ● | | |
| | | | | | | ● | | |
| | | | | | | ● | | |
| | | | | | | ● | | |
| ● | ● | ● | | | | ● | | ● - finance vs refinance and number of electric vehicles |
| | | | | | | ● | | |
| ● | ● | | | | ● | ● | | |
| ● | | | | | | ● | | |
| | | | ● | ● | | ● | | ● - number of new trees, production of safe or organic food |
| ● | | | | | | ● | | |
| | | | | | ● | ● | ● | |
| | | | | | | | ● | |
| | ● | | ● | | ● | | | ● |
| | ● | | | | ● | ● | | |
| | | | | | | ● | | ● - year-on-year energy production and carbon emissions data |
| ● | | | | | | ● | | |
| | ● | | | | | ● | | |
| | ● | | | | | | | |
| | | | | | | ● | | |
| | | | | | | | | |
| | ● | | | ● | ● | | | ● - climate resilience and jobs, diseases reduced, irrigation, sewerage network, railway track |
| ● | ● | | | | | | | ● - financing vs refinancing |
| | | | | | | | | |
| | | | | | | | | |
| | ● | | | | | ● | | ● - impact report written by S&P Global, metrics given in annual and lifetime |

| issuer | Report title | GHG/Carbon emissions reductions ($tCO_2eq/y$) | GHG/Carbon emissions avoided ($tCO_2e$) | Installed renewable energy capacity (MW) | Renewable energy generation (MWh/y) | Energy efficiency (MWH pa) |
|---|---|---|---|---|---|---|
| RCBC | Sustainability Bonds Impact Report | | ● | ● | ● | ● |
| Sarana Multi Infrastruktur (SMI) | Green Bond Report | | ● | ● | ● | |
| SID Bank | SID Bank Green Bond Impact Report | ● | | | ● | ● |
| Standard Bank Group | Standard Bank Group ESG Report | | ● | ● | | |
| Tatra Banka | Green bond allocation and impact report | ● | ● | | | ● |
| Turkiye is Bankasi | İşbank Green Bond Allocation & Impact Report | | ● | ● | ● | |
| Yapi Kredi | Green Bond Allocation and Impact Report | | ● | ● | ● | |
| Yes Bank | Green Bond Impact Report | | ● | | ● | |

| Green buildings (M2) | Water - treated/ reduced (M3) | Waste reduction (tons) | Biodiversity (various) | Land protected (hectares) | Number of people impacted | Loans breakdown | Real world equivalencies | Other |
|---|---|---|---|---|---|---|---|---|
| | ● | | | | ● | ● | | ● - clean transportation (number of passengers) |
| | | | | | ● | | | ● - employemnet, decrease in impoarts, training |
| | ● | ● | | | | | | ● - clean transport, sustainable sourcing |
| | | | | | | | | ● - jobs created |
| ● | | | | | | ● | ● | ● - clean transport, property type, regional allocation breakdown by sector |
| | | | | | | ● | | ● |
| | | | | | | | | ● |
| | | | | | ● | | ● | ● - GHG avoided, social impact, fossil fuels avoided |
| | | | | | | | | |

*Source: Environmental Finance Data.*

# EM FI Green Bond Issuer – Impact Reporting Experiences

*Environmental Finance* interviewed a number of EM FI green bond issuers to find out more about their experiences, both when issuing the green bond, and when producing impact reports.

In 2018, Namibia's Bank Windhoek issued a green bond for NAD66 million (US$3.98 million) – the first such bond to be issued by a commercial bank in southern Africa. Two local asset managers invested in the bond, with the proceeds allocated to seven solar energy projects.

IFC and ICMA provided all the support the bank needed to issue the bond, according to Claire Hobbs, the bank's chief treasurer. But when it came to reporting, the bank discovered that there was no-one in Namibia with the necessary experience to help them. It turned to KPMG in South Africa, after which it was relatively straightforward, she says.

"KPMG wanted to be associated with the first green bond in Namibia, so they were keen to help us. It wasn't such a painful process after all, it was more just understanding what was required to verify that the money we had paid out funded those solar projects," she said.

Hobbs believes that FIs face different challenges to other green bond issuers. "We're regulated differently, so we need to make sure that we comply with whatever our central bank and regulators require of us, and the stock exchange we're listed on. As a bank, you've got everybody's eyes on you, so we had to be careful that we weren't doing anything that was going to lead to a regulator questioning what we were doing. We had to ensure we were allowed to do what we did and deliver on the promises we made in our green bond framework."

At Tatra Banka, internal capacity to issue a green bond was not a problem. The Slovakian bank is part of Raiffeisen Bank International (RBI), which had already issued its own green bond, explained Pavol Kiralvarga, debt capital markets specialist at Tatra banka.

"Our head office issued a green bond before we did, so there was already some knowledge, and we cooperated well within the group. Sustainalytics performed a review of the framework, and published a second party opinion on it," he said.

The bank's main concern was to ensure that there would be sufficient assets that were green enough to be eligible for proceeds from the green bond, for which the proceeds needed to be used within three years of issuance. By January 2022, the bank had identified over €485 million of green assets, mainly green building projects – a natural choice for the bank's green bond due to its strong position in the real estate sector, and had fully allocated bond proceeds to green projects within one year, he said.

Tatra banka set up an ESG team during the issuance of the bond, so the task of impact and allocation reporting fell under its umbrella. The bank's sustainability manager Tomáš Kvašňovský and ESG senior product manager Danka Daubnerová worked together on the report, using the same methodology as that previously employed by RBI. The impact report was authenticated by Slovakia's Institute of Circular Economy, while KPMG verified that its loans had been approved by the bank's green bond committee, and that the loans were disbursed as stated in its register.

Compiling all the data and producing the report took around two months, Kvašňovský estimated. The most challenging task was collecting the data, since the bank's clients, who were running the projects funded through the green bond, had no legal duty to provide the data, according to Daubnerová.

Fortunately, Slovakia does have regulation on collecting data on the energy consumption of buildings, which helped Tatra banka find some of the data for its green bond report. However, it was relatively time-consuming, since the team had to conduct its own search for information that was publicly-available, rather than just request it from clients.

The bank has since included data collection as a condition of starting the loan granting process, so that it can be sure the data will be available for future, Daubnerová said. Kvašňovský agrees that FIs face a disadvantage in green

bond reporting that corporate issuers do not, in that they rely completely on their clients for data collection. But he hopes this will change with the EU's Corporate Sustainability Reporting Directive (CSRD), which will require all large companies to report on sustainability.

For Filipino FI BDO Unibank, capacity for monitoring and reporting on its green bond was not an issue, as it already had a sustainability finance desk. Around five employees from the team worked on the report, which was submitted privately to IFC, the sole investor in its green bond.

Some of the data from the impact report, including energy generation from renewable energy projects, greenhouse gas avoidance and the number of households supplied, has been included in the bank's publicly-available sustainability report.

It is considering including all of the data from impact reports into its sustainability report in the future, according to Garin-Alvarez.

Having issued its first green bond in 2017, and a blue bond in May 2022, both through an investment from IFC, BDO Unibank is hoping to issue further bonds, in larger amounts and for public investment, said Luis S. Reyes, its head of investor relations and corporate planning.

Other EM FIs who have not yet produced an impact report are already preparing the ground for the future. One such bank is Taiwan's E.Sun Bank. It issued the country's first green bonds in 2017, and its sustainability bonds now amount to 13% of total bonds issued. The proceeds have been lent to projects including renewable energy, greenhouse gas reduction, and water resource conservation, as well as social projects such as affordable housing.

The country's government has not yet mandated impact reporting, but Sarah Chen, the bank's executive vice president of the bank's treasury division, believes it is just a matter of time. "We think about the impact issue - it is not necessary in Taiwan, but we believe it will be in the future so we will keep a close eye on it," she said. "Most corporations in Taiwan have begun to issue their ESG or sustainability report," she added.

E.Sun Bank already checks its portfolio to make sure its targets match ESG requirements set by the country's authority. The bank is also ramping up its internal sustainability expertise, including through the use of online courses. "We have a sustainability committee on our board, and have people engaged in sustainability issues in every division. We will keep a close eye on global trends," she said.

# Best Practices – take aways from EM FI green bond impact report analysis

The GBPs and Handbook have their own set of principles and recommendations for impact reporting, which are listed in full in the annex to this report. However, research undertaken for this report suggests other areas for best practice. While there is no single "correct" process that should be followed when producing an impact report, there are some best practices that ensure a higher quality report:

## Pre reporting

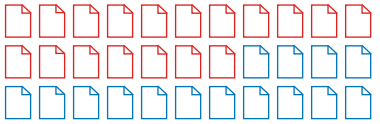
**Green bond/green finance framework** – developing a green bond framework that is aligned with recognised principles (such as the GBPs) and is externally reviewed by a second party opinion provider adds to the transparency and legitimacy of green bond issuance and impact reporting. Frameworks define which project categories will be considered for bond proceed allocation and which metrics will be used to report impacts. Predetermining these factors in a framework enables issuers to set up the internal systems for data collection.

**Pre allocation communication** – communicating impact data and metric expectations to potential recipients of the bonds' proceeds can streamline the data gathering and synthesis process. Determining this before issuance can help the issuer set up the internal infrastructure to collect and process data. For example, Tatra banka now includes data collecting mechanisms in its loan granting process.

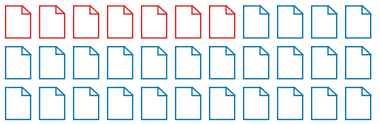
**Resourcing the impact reporting process** – ensuring that sufficient resources and time are dedicated to the data gathering and report writing process supports timely, rigorous impact reporting. If internal capabilities are limited, FIs should consider third-party external support of impact data gathering and reporting, such as the Qatar National Bank (QNB) green bond impact report which was produced by S&P Global in collaboration with QNB, while the Bank of Windhoek was supported by KPMG in its impact reporting

**Timely reporting** – ensuring the data and report are published within around 12 months from issuing the bond creates transparency and legitimacy with both current and potential investors. Reports should be published annually, regardless of the disbursement of the proceeds, and any unallocated funds, and how they are invested in the interim, should be reported alongside impact in the annual allocation report. There should also be additional reports outside the annual schedule if major changes to the portfolio occur, for example if a project pays out prematurely, to ensure transparency.

## Reporting and metrics

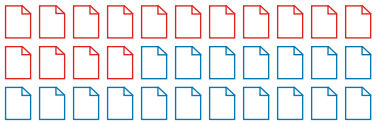



**Data granularity** – reporting impact at a project level, rather than bond or portfolio level, provides additional insights to investors on exactly which projects yielded specific impacts. Of the 33 ex-China impact reports analysed, 18 included project-level impact data, while the remainder report bond-level impact only.




**Finance vs refinancing** – differentiate and report the allocation of proceeds to financing of new projects and refinancing of existing projects. This provides additional context and detail for investors and can allow for better understanding of the impact and additionality of the data provided. However, it was not found to be common practice in the reports analysed, with only seven of the 33 reports specifying this information.

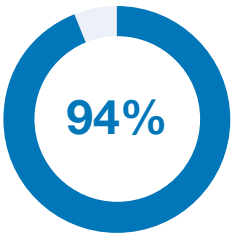
**Methodology** – an accurate methodology explaining how the impact data was calculated is invaluable to investors and improves the transparency and validity of the impact report. Investors require transparent methodologies in order to aggregate impact data across various investments. It can include how the data was gathered, from what source, if it has been pro-rated, and how it was validated. The methodology should also include what percentage of the green bond's proceeds is covered by each metric, and any equations and factors used to calculate impact figures, such as carbon intensity or carbon emissions avoided.



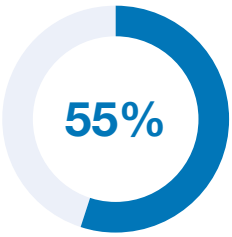

It is essential to provide the benchmarks used for any calculations to allow investors to understand the figures and potentially recalculate to a standardised benchmark for their portfolio. Less than half of the impact reports analysed (15) had methodologies. In those that did, there was variation in length and detail from a couple of lines on how the data was gathered to multiple pages containing explanations and equations for how data was calculated.

**Accessible format** – reports should be easy to find on issuer's website and should stand alone rather than be integrated into an annual or sustainability report. Data should be available in interactive formats rather than pdf where possible, to enable investors to aggregate data more easily. All of the analysed impact reports were in inaccessible pdf format. This is an impact reporting norm however some leading issuers are starting to provide data in Excel format.

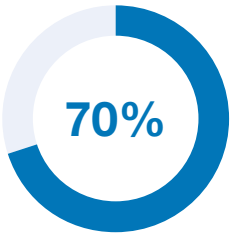
**Annexes containing raw impact data** – the majority of impact data in the FI green bond impact reports analysed have been aggregated from individual projects. Providing the raw data (where possible) allows investors to assess the validity of the impact metrics reports and make it easier for them to aggregate impacts across their investment portfolio.



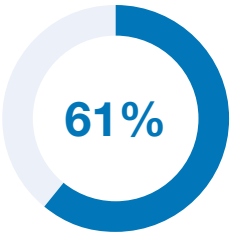

of reports include product descriptions



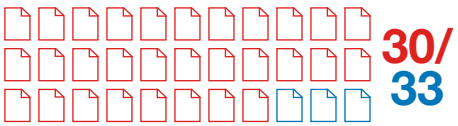

of reports include case studies




of investors interested in SDGS




of reports included SDG alignment




**Project descriptions** – a brief overview of each project or company funded using the proceeds of the bond provides additional insights for investors. If privacy or number of projects prohibits this, an outline of the project sectors and/or types can help investors understand the impact of their investment across different sectors or specific impacts. Of the 33 EM FI impact reports analysed, 31 incorporate individual or sector descriptions, allocation and impact.

**Case studies** – can provide additional insight and context to the impact data and encourages the report writers to engage further with projects selected. They can communicate impact to investors who are less focussed on data. Case studies were included in 18 of the 33 analysed impact reports.

**Metric selection** – these should be standardised where possible (for example, by using the *Handbook – Harmonized Framework for Impact Reporting* recommended metrics), material, and lend themselves to aggregation. For example, metrics defining carbon intensity are more effective than those pertaining to absolute emissions, or carbon emissions avoided. They are more comparable and easily aggregated, meaning that investors can analyse investments across their portfolio.

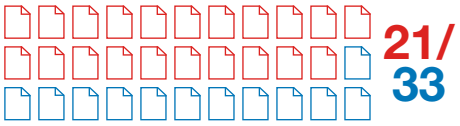
**UN SDG contributions** – mapping impact to the UN SDGs contextualises the data and, while the SDGs lack granularity, they allow investors to draw high-level aggregation of their investments. Over 70% of the green bond investors surveyed by *Environmental Finance* in 2021 were interested in the UN SDG contributions of the bonds in their portfolio.[11] 20 of the 33 analysed impact reports mapped their UN SDG contributions.

**Real world equivalencies** – one of the challenges of impact reporting is the need to cater to different levels of investor engagement. Highly engaged investors will look for granular data. However, to communicate with those who are less engaged, reports can use real world equivalencies such as number of fossil fuel cars off the road, smart phones charged, or homes powered to illustrate the impact of projects funded through the green bond. Four of the impact reports assessed for this report feature real world equivalencies. These can be straightforward to calculate using the United States Environmental Protection Agency (EPA) website.

**Language** – reports should be written in a language that all investors can understand. The majority of impact reports analysed (30/33) were written in English. Two reports had both domestic language of the issuer and an English translation side by side.

11 Green Bond Fund Impact Reporting Practices - 2021 (January 2022), *Environmental Finance*, p. 35

## Post-reporting





**Clearly listed and easy to find on website** – the impact report should be posted on the issuer website and well publicised. Of the impact reports analysed, 21 were easy to find and well sign-posted on the issuer websites. Integrating green bond impact data into an annual sustainability report (as six of the issuers analysed here did) makes the information more challenging to locate. If integrated into an annual or sustainability report, green bond impact data should also be clearly stated in the list of content and/or made available as a standalone document to provide easier access.

**Direct investor outreach** – email the report to investors and invite them to an interactive presentation with the report writers to allow them to ask questions about the report and methodology. This creates transparency and a feedback loop to improve future reporting. This is not a common market practice, but some prominent developed market issuers and green bond funds are setting up open days and webinars to facilitate bond investor feedback and interaction.

**Clear contact point or person for the impact report** – to improve interactions with investors and stakeholders, it is important to have a clear point of contact for any enquiries about the impact report. It is important to included a named contact person for generic info@ email addresses. It is crucial that the mailbox is checked regularly and emailed are replied to in a timely manner to ensure transparency and additional clarification or information is available to investors on request.

# Investors View

Investors interviewed for this report stressed the importance of this point. "Transparency about the methodology and the assumption behind the baselines is the most important element in the impact report, regardless of whether you record tonnes of $CO_2$ emissions saved or sequestered," said Johannes Scholl, Chairperson of the Board of Directors of LAGreen, and Head of Division at German development bank KfW.

"One of our biggest challenges as a green bond investor is aggregating the data from different issuances, since the underlying methodologies and assumptions may differ" he added.

The format the report is available in can also make a difference, according to Scholl. Many issuers produce them as pdfs, but having the raw data available in an Excel spreadsheet or similar means that it can be fed into data hubs, such as the Green Bond Transparency Platform, and the LGX DataHub run by the Luxembourg Stock Exchange.

# Glossary

## Green Bonds

Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible green projects and which are aligned with the four core components of the Green Bond Principles (GBPs).

## Green Bond Principles (GBP)

The Green Bond Principles (GBPs) are voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond. The GBPs have four core components:

- Use of proceeds
- Process for project evaluation and selection
- Management of proceeds
- Reporting

The 2021 edition included two key recommendations regarding Green Bond Frameworks and External Reviews

## Greenhouse Gases (GHGs)

The UN identifies seven main greenhouse gases (GHGs) that are major drivers of climate change: carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride ($SF_6$) and nitrogen trifluoride ($NF_3$).

As $CO_2$ is by far the most common GHG caused by human activity, it is sometimes used as a shorthand expression for all greenhouse gases, and can also be expressed as $CO_2e$ where this is the case.

## International Capital Market Association (ICMA)

ICMA is a not-for-profit association representing more than 600 organisations in 65 countries. These include private and public sector issuers, banks and securities houses, asset managers and other investors, capital market infrastructure providers, central banks, law firms and others.

ICMA serves as the secretariat of the Green Bond Principles (and the related Social Bond Principles, Sustainability Bond Guidelines and Sustainability-Linked Bond Principles).

## Paris Agreement on climate change

The Paris Agreement is a binding UN agreement to strengthen the global response to climate change by keeping the average global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C.

It was agreed at the annual UN climate change summit in Paris in 2015 and entered into force in November 2016.

## Social Bonds

Social Bonds are 'use of proceeds' bonds that raise funds for new and existing projects that address or mitigate a specific social issue and/or seek to achieve positive social outcomes for a particular target group, such as those living below the poverty line, people with disabilities, migrants and the undereducated.

## Social Bond Principles

Like the GBP, the Social Bond Principles (SBPs) are voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the social bond market. They have the same four components as the GBPs.

## Sustainable Development Goals (SDGs)

The 17 SDGs were adopted by the United Nations in 2015 as the cornerstone of its 2030 Agenda for Sustainable Development. They acknowledge that many environmental and social objectives are interlinked and are increasingly being referenced by companies and investors in their impact reports.

The goals are:

- No poverty
- Zero hunger
- Good health and well-being
- Quality education

- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduced inequality
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Peace and justice strong institutions
- Partnerships to achieve the goal

## Sustainability Bonds

Sustainability bonds are bonds whose proceeds will be used to finance or re-finance a combination of green and social projects. To be labelled as sustainability bonds, they must align with the four core components of the GBPs and SBPs with the former being especially relevant to underlying green projects and the latter to underlying social projects.

## Sustainability Bond Guidelines

These voluntary guidelines were issued to help ensure the integrity of the fast-growing market for sustainability bonds. The four core components of the GBPs and SBPs and their recommendations on the use of external reviews and impact reporting also apply to sustainability bonds.

## Sustainability-Linked Bonds

Sustainability-linked bonds (SLBs), unlike green, social or sustainability bonds, are typically not 'use-of-proceeds' instruments. Rather, proceeds can be used for the issuer's general corporate purposes. It is a forward-looking performance-based instrument where the issuer explicitly commits to future improvements in sustainability performance within a predefined time. It has a built-in financial and/or structural incentive (coupon, maturity or repayment amount).

There are a few instances of bonds being issued with both use-of-proceeds and sustainability-linked features, labelled "Green and Sustainability-Linked" or "Social and Sustainability-Linked". These bonds may have green or social use-of-proceeds combined with a sustainability-linked KPIs tracking overall sustainability performance targets.

## Sustainability-Linked Bond Principles

The Sustainability-Linked Bond Principles (SLBPs) provide guidelines for structuring, disclosure and reporting. The SLBPs have five core components:

- Selection of KPIs
- Calibration of SPTs
- Bond characteristics
- Reporting
- Verification

## Transition Bonds

Transition bonds are a new class of bonds, the proceeds of which are used to fund a firm's transition towards a reduced environmental impact or to reduce their carbon emissions. The proceeds can be used exclusively to finance new and/or existing eligible transition projects. Transition bonds are commonly issued by higher emitting or issuers with poorer sustainability performance. Transition bonds can combine specific use of proceeds structure with an overall commitment to improve sustainability performance. Transition bond use of proceeds can differ from green bond use of proceeds.

ICMA published the Climate Transition Handbook in December 2020 to provide guidance for issuers.

There are four key elements to the disclosure recommendations:

1. Issuer's climate transition strategy and governance;
2. Business model environmental materiality;
3. Climate transition strategy to be 'science-based' including targets and pathways; and,
4. Implementation transparency

There is expectation that issuers will make time related commitments to net zero and temperature warming scenarios.

# Annex

## Annex Table 1 - Emerging market countries (IFC list)

| | | |
|---|---|---|
| Afghanistan | Ghana | Palau |
| Albania | Grenada | Panama |
| Algeria | Guam | Papua New Guinea |
| Angola | Guatemala | Paraguay |
| Antigua and Barbuda | Guinea | Peru |
| Argentina | Guinea-Bissau | Philippines |
| Armenia | Guyana | Poland |
| Azerbaijan | Haiti | Puerto Rico |
| Bahamas, The | Honduras | Qatar |
| Bahrain | Hong Kong SAR, China | Romania |
| Bangladesh | Hungary | Russian Federation |
| Barbados | India | Rwanda |
| Belarus | Indonesia | Samoa |
| Belize | Iran, Islamic Rep. | São Tomé and Principe |
| Benin | Iraq | Saudi Arabia |
| Bhutan | Israel | Senegal |
| Bolivia | Jamaica | Serbia |
| Bosnia and Herzegovina | Jordan | Seychelles |
| Botswana | Kazakhstan | Sierra Leone |
| Brazil | Kenya | Slovak Republic |
| Brunei Darussalam | Kiribati | Slovenia |
| Bulgaria | Kosovo | Solomon Islands |
| Burkina Faso | Kuwait | Somalia |
| Burundi | Kyrgyz Republic | South Africa |
| Cabo Verde | Lao PDR | South Sudan |
| Cambodia | Latvia | Sri Lanka |
| Cameroon | Lebanon | St. Kitts and Nevis |
| Central African Republic | Lesotho | St. Lucia |
| Chad | Liberia | St. Vincent and the Grenadines |
| Chile | Libya | Sudan |
| China | Lithuania | Suriname |
| Colombia | Macao SAR, China | Syrian Arab Republic |
| Comoros | Madagascar | Taiwan, China |
| Congo, Dem. Rep. | Malawi | Tajikistan |
| Congo, Rep. | Malaysia | Tanzania |
| Costa Rica | Maldives | Thailand |
| Côte d'Ivoire | Mali | Timor-Leste |
| Croatia | Marshall Islands | Togo |
| Cuba | Mauritania | Tonga |
| Cyprus | Mauritius | Trinidad and Tobago |

| | | |
|---|---|---|
| Czech Republic | Mexico | Tunisia |
| Djibouti | Micronesia, Fed. Sts. | Turkey |
| Dominica | Moldova | Turkmenistan |
| Dominican Republic | Mongolia | Tuvalu |
| Ecuador | Montenegro | Uganda |
| Egypt, Arab Rep. | Morocco | Ukraine |
| El Salvador | Mozambique | United Arab Emirates |
| Equatorial Guinea | Myanmar | Uruguay |
| Eritrea | Namibia | Uzbekistan |
| Estonia | Nauru | Vanuatu |
| Eswatini | Nepal | Venezuela, RB |
| Ethiopia | Nicaragua | Vietnam |
| Faroe Islands | Niger | West Bank and Gaza |
| Fiji | Nigeria | Yemen, Rep. |
| Gabon | North Macedonia | Zambia |
| Gambia, The | Oman | Zimbabwe |
| Georgia | Pakistan | |

## Annex Table 2 – Recent (30/06/21 - 30/06/22) EM FI Green Bond Issuance

| Issuer | Country | Value | Currency | Dollar value | Settlement date |
|---|---|---|---|---|---|
| ABSA | South Africa | 1,098 | South Africa Rand | 68.84 | 27/06/2022 |
| ABSA | South Africa | 1,032 | South Africa Rand | 64.7 | 27/06/2022 |
| ABSA | South Africa | 439 | South Africa Rand | 27.52 | 27/06/2022 |
| Access Bank | Nigeria | 50 | United States Dollar | 50 | 03/05/2022 |
| Ameriabank | Armenia | 8 | United States Dollar | 8 | 14/02/2022 |
| Ameriabank | Armenia | 3,000 | Armenian Dram | 5.94 | 14/02/2022 |
| Banca Comerciala Romana | Romania | 500 | Romania New Leu | 117.06 | 14/10/2021 |
| Banca Comerciala Romana | Romania | 702 | Romania New Leu | 149.1 | 14/06/2022 |
| Banco de Crédito del Peru | Peru | 30 | United States Dollar | 30 | 27/06/2022 |
| Banco de Crédito del Peru | Peru | 30 | United States Dollar | 30 | 27/06/2022 |
| Banco de Crédito e Inversiones | Chile | 200 | Switzerland Franc | 218 | 26/01/2022 |
| Banco de Crédito e Inversiones | Chile | 10 | United States Dollar | 10 | 10/03/2022 |
| Bank Negara Indonesia | Indonesia | 4,000,000 | Indonesia Rupiah | 273.5 | 13/06/2022 |
| Bank of China (Johannesburg Branch) | South Africa | 300 | United States Dollar | 300 | 16/02/2022 |
| Bank of Taiwan | Taiwan | 1,000 | Taiwan New Dollar | 35.88 | 27/08/2021 |
| Bank Sinopac | Taiwan | 2,000 | Taiwan New Dollar | 67.12 | 08/04/2022 |
| Ceska sporitelna AS | Czech Republic | 500 | Euro | 593.56 | 13/09/2021 |
| CIB | Egypt | 100 | United States Dollar | 100 | 03/08/2021 |
| First Abu Dhabi Bank | United Arab Emirates | 30 | United States Dollar | 30 | 03/11/2021 |
| First Abu Dhabi Bank | United Arab Emirates | 200 | Switzerland Franc | 215.58 | 17/11/2021 |
| First Abu Dhabi Bank | United Arab Emirates | 500 | United States Dollar | 500 | 02/03/2022 |
| First Abu Dhabi Bank | United Arab Emirates | 20 | United States Dollar | 20 | 22/03/2022 |
| First Abu Dhabi Bank | United Arab Emirates | 500 | Euro | 556.79 | 07/04/2022 |
| Hong Leong Bank Berhad | Malaysia | 900 | Malaysia Ringgit | 206.18 | 29/04/2022 |
| Hua Nan Commercial Bank | Taiwan | 1,000 | Taiwan New Dollar | 35.6 | 28/07/2021 |
| Itau Unibanco Holding | Brazil | 62.5 | United States Dollar | 62.5 | 14/04/2022 |
| K&H Jelzalogbank Zrt. | Hungary | 15,000 | Hungary Forint | 43.5 | 27/04/2022 |
| Majid Al Futtaim | United Arab Emirates | 500 | United States Dollar | 500 | 30/06/2022 |
| mBank | Poland | 500 | Euro | 590.65 | 20/09/2021 |
| Nedbank | South Africa | 125 | South Africa Rand | 8.42 | 29/07/2021 |
| Raiffeisen Bank Romania | Romania | 525 | Romania New Leu | 113.3 | 15/06/2022 |
| Sicredi | Brazil | 100 | United States Dollar | 100 | 25/01/2022 |
| Slovenska Sporitelna | Slovakia | 30.2 | Euro | 35.04 | 29/10/2021 |
| Slovenska Sporitelna | Slovakia | 19.8 | Euro | 22.46 | 25/01/2022 |
| Taipei Fubon Commercial Bank | Taiwan | 1,000 | Taiwan New Dollar | 33.9 | 04/05/2022 |
| Taiwan Shin Kong Commercial Bank Company Ltd. | Taiwan | 1,000 | Taiwan New Dollar | 33.81 | 23/06/2022 |

*Source: Environmental Finance Data.*

## Handbook - Harmonized Framework for Impact reporting – Core principles and recommendations for reporting[12]

### Core Principles and Recommendations for Reporting

1. Reporting is a core component of the GBP, and green bond issuers are required to report on both the use of green bond proceeds, as well as their expected environmental impacts at least on an annual basis.
2. Issuers are recommended to define and disclose the period and process for including projects in their report. There are several options for choosing when to add/remove projects to/from the report. Some of these options are described below. Projects can be added/removed to/from an impact report either directly, or indirectly via adding/removing them to/from a portfolio when reporting on a portfolio level.
   - Projects can be added to the report once the issuer has approved and determined a project as eligible, or once green bond proceeds have been allocated to eligible disbursements.
   - Projects can be removed from a report when no allocations to eligible disbursements have taken place in the reporting period, or after the underlying loans have been repaid. As part of its due diligence in monitoring projects included in its green bond programme, an issuer may elect to remove a project from its green bond programme, in which case it could cease reporting on such a project until a subsequent decision to restore the project's eligibility
3. It is recommended that the report indicates the total signed amount and the amount of green bond proceeds allocated to eligible disbursements. It would also be beneficial for issuers to show additional information such as the year of signing (or other measures to describe the seasoning of a portfolio) or project stage from a financing point of view (such as signed, disbursed, repaying).
4. A defining characteristic of green bonds is that the issuance proceeds (or an amount equal to the proceeds) are to be allocated only to those projects that meet the issuer's predefined eligibility criteria. Issuers are encouraged to put in place a formal internal process for the allocation of proceeds linked to their lending and investment operations for Green Projects and to report on the allocation of proceeds. Issuers are encouraged to explain the key characteristics of the approach they select for their allocations and to provide reference to external audit/verification, when applicable, regarding their allocation criteria.
5. Depending on the process put in place for the allocation of proceeds, it is recommended that issuers either provide a list of projects to which green bond proceeds have been allocated, or report solely on a portfolio level. The latter might be necessary if confidentiality considerations restrict the detail that can be disclosed, or useful if a large number of small-sized projects is financed by a green bond (e.g. green bonds financing a loan programme). Issuers are encouraged to explain the key characteristics of the approach they select for their report.
6. Depending on the way in which proceeds are allocated, there can be differences in the approach to impact reporting. If allocations are to individual projects, it is recommended that the report:
   - Identifies the specific projects and clearly defines, for each project, the total project results (including financing from all financiers) with information about the total project size and/or the issuer's share of total financing (project-by-project report); and/or
   - Aggregates project-by-project results including only the pro-rated share (as a percentage of the issuer's share of the total financing) of the total projects' results (portfolio report based on project-by-project allocations). If allocations are to a portfolio of projects, issuers typically report on the overall results of the portfolio (portfolio report based on portfolio allocations). Issuers are however encouraged to also report the pro-rated share of the overall results.
7. The impact report should illustrate the expected environmental impacts or outcomes made possible as a result of projects to which green bond proceeds have been allocated. It should be based on ex-ante estimates (developed prior to project implementation) of expected annual results for a representative year once a project is completed and operating at normal capacity. In the case of reporting on a portfolio level, ex-ante estimates can be based on the annual analyses per portfolio and, if several categories are financed, per category, if possible. The method of estimating the impacts should be made transparent. As the report would include the estimated results of projects that are still in the construction or implementation phase, there is no guarantee that these results will ultimately materialise. The reporting is thus not intended to provide actual results achieved in a specific year or

12 Handbook Harmonised Framework for Impact Reporting (June 2022), ICMA, pp.8 -10

reporting period.

8. It could also be beneficial to report the estimated lifetime results and/or a project's economic life (in years) to provide users with a basis for understanding the impact of the project over its lifetime. A simple multiplication of the project's economic life by the estimated annual impact may not always provide a good estimate of the lifetime impact results, because this would not take into account ramp-up and ramp-down phases of the project life cycle. Also, in some project types, it may be difficult to aggregate all the measures being implemented at a project site given the heterogeneous nature of processes and/or equipment.
9. In case the issuer samples ex-post verification of specific projects, it is recommended that the relevant results are included in the reporting. An important consideration in estimating impact indicators is that they are often based on a number of assumptions. While technical experts aim to make sound and conservative assumptions that are reasonable based on the information available at the time, the actual environmental impact of the projects may diverge from initial projections. For example, social, economic, technical, political and legal changes can cause deviations from projections. In any case, transparency on the assumptions would clarify the reasons behind divergences between ex-ante and ex-post assessments.
10. To facilitate comparison of project results, it is suggested that issuers aim to report on at least a limited number of sector specific core indicators for projects included in their green bond programmes. This document proposes sector specific core indicators for all but one of the GBP project categories in Chapter IV of the handbook. However, other indicators might be deemed relevant as well.
11. For the calculation of indicators, where there is no single commonly-used standard, issuers may follow their own methodologies while making these available to investors. For the calculation of greenhouse gas (GHG) emissions reduced/avoided, for instance, there are a number of calculation methodologies both within and across institutions. While there are on-going efforts to harmonise GHG accounting methodologies for relevant sectors among a broad group of IFIs, given the current differences in calculation approaches, reporting GHG emission data based on a uniform, consistent and published methodology remains a challenge. Issuers are encouraged to provide full transparency on the applicable GHG accounting methodology and assumptions, which can be referenced.
12. Investors should be aware that comparing projects, sectors, or whole portfolios is difficult because general assumptions on inputs in calculations, like grid factors and calculation methods, also vary significantly. In addition, the cost structures between countries also vary, so that developing cost-efficiency calculations (results per unit of amount invested in eligible projects) could place smaller countries with limited economies of scale at a disadvantage and will not take into consideration country-specific context.
13. Issuers may elect, for consistency reasons, to convert units reported for individual projects. This should be based on a standard conversion factor to facilitate comparison and aggregation for example converting tons of coal equivalent (TCE) to megawatt hours (MWh), with appropriate disclosure of the conversion approach. However, complex recalculations that are not publically disclosed in project documentation, such as re-estimating GHG emissions based on consistent baseline assumptions, should be avoided. Handbook – Harmonised Framework for Impact Reporting June 2022
14. Issuers are encouraged to be transparent about projects with partial eligibility. Some projects may have components that meet the issuer's green bond eligibility criteria and other components that do not. Issuers should disclose whether and to what extent they accept partial eligibility. Should an issuer use criteria that require allocating green bond proceeds to a project with partial eligibility, then it is recommended to explain all assumptions about which component each disbursement relates to (e.g. if it is assumed that disbursements are first made to the 'green' component, or pro-rated between the 'green' and 'other' components). In addition, issuers may also report the portion of the total project that is green bond eligible.
15. The Green Bond Principles highlights the value of qualitative reporting as well as quantitative. This should not only allow a better understanding of the context in which the project's impact is expected to be achieved, but should also provide an understanding of the management of any risks that have been identified.
16. In case the expected impacts or outcomes of different project components (such as for example energy efficiency (EE) and renewable energy (RE) components of the same project) may not be reported separately, issuers may attribute the results to each component based on their relative share in the related financing, disclosing the attribution approach. Alternatively, issuers could combine the reporting metrics for both sectors into a single table (option 2 in the reference reporting templates).
17. Issuers should be transparent on how they report all green bond-related cash-flows in one currency when they allocate green bond proceeds and report on the

projects to which green bond proceeds have been allocated.

18. Issuers may facilitate the smooth collection and/or transfer of data by investors through using the reporting templates in Chapter V of this handbook and/or through uploading impact data on impact reporting databases. The Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds' Impact Reporting Databases were released in June 2021 and include advice for issuers on engagement with database providers."

## Annex Table 3 – Domestic Chinese Green Bond Labels

| Green Bond Type | Supervisory Authority |
|---|---|
| Green Finance Bond | People's Bank of China |
| Green Corporate Bond | China Securities Regulatory Commission |
| Green Enterprise Bond | National Development and Reform Commissions |
| Green Debt Financing Instrument | National Association of Financial Market Institutional Investors |
| Green Panda Bond | National Association of Financial Market Institutional Investors |
| Green Asset Backed Bond | China Securities Regulatory Commission |
| Green Overseas Chinese Bond | Aligned to the Green Bond Principles |

GB-TAP Green Bond Technical Assistance Program

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