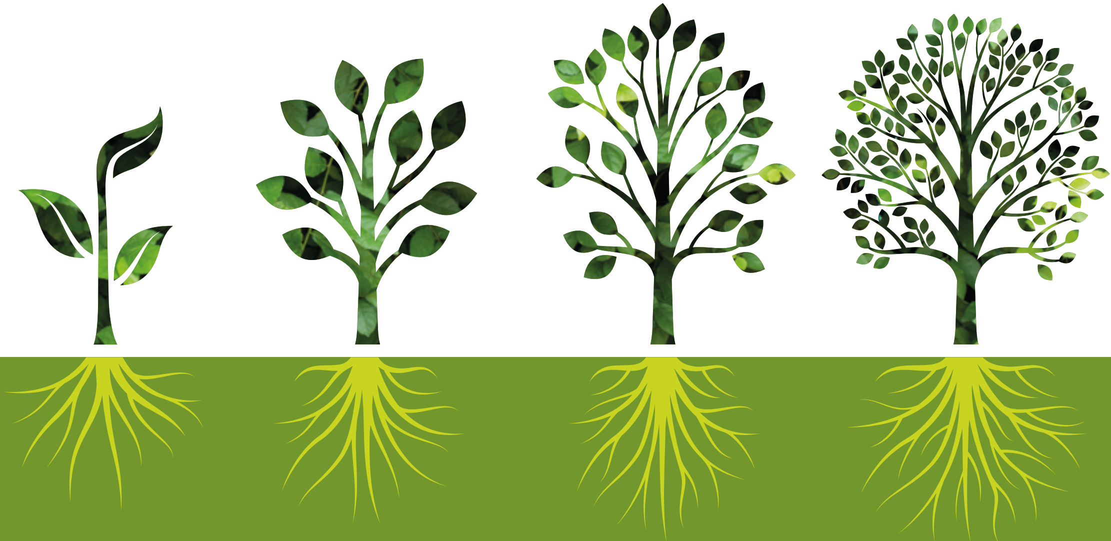
AMUNDI PLANET EMERGING GREEN ONE

Annual Impact Report 2022



Amundi
ASSET MANAGEMENT

This report is produced by Amundi Asset Management (Amundi), portfolio manager of Amundi Planet Emerging Green One.

All figures reflecting extra-financial characteristics of the portfolio rely on the holdings as of Dec. 31, 2022. Reference to portfolio holdings should not be considered a recommendation to buy or sell any security, and securities are subject to risk.

The accuracy, completeness, and relevance of the information provided are not guaranteed. It has been prepared by reference to sources considered to be reliable and may be amended without prior notice. The financial or statistical projections, assessments, and analyses presented are provided solely to assist the reader in assessing the factors described in this document. They are based on sources considered reliable and on methodologies that are not mutually exclusive.

Acknowledgements

Amundi would like to thank all of the contributors, internal and external reviewers, and interviewees for their time and immensely valuable support producing this report. Special thanks to the relevant personnel at Amundi and IFC who made the production of this report possible with their important advice and inputs (Amundi: Jean-Jacques Barberis, Timothee Jaulin, Eric Dussoubs, Quentin Albert, Séverine Alloy, Sylvia Chen, Sergei Strigo, Maxim Vydrine, Jesper Pedersen, and Maria Yvoni Ouziel; IFC: Anup Jagwani, Carolyne Danilla, Francisco Avendano, Haruko Koide, Hongze Guo, Kaikham Onedamdy, Nicolas Douillet, Nikolas Westfield, Patricia Nunez Benitez, and Yang Li Epstein).

Amundi is grateful to the Fund's committed investors from around the world for making this ambitious project possible.

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2022 HIGHLIGHTS

Fund portfolio

39 green bonds in the portfolio throughout 2022[1]

80.9%[2] % of portfolio allocated to green bonds

15[3] emerging countries with green projects financed

263.7 tCO_2e
avoided emissions per €1 million invested per year based on the Fund's total investments[4]

686.4 tCO_2e
avoided emissions per €1 million invested per year based on the Fund's green bond investments[5]

€1.1 billion
invested by AP EGO Fund in green bonds[6]

351,204[7] tCO_2e
annual avoided emissions
Equivalent to 75,700 passenger cars taken off the road for one year[8]

Technical Assistance Program
(cumulatively in 2018[9], 2019[10], 2020, 2021, 2022)

895
participants (42% female[11])

323
financial institutions

65
emerging countries[12]

84 GSS[13] issuances[14]
representing US$6.0 billion from 29 financial institutions trained by the Technical Assistance Program across 31 emerging markets[15]

1. 39 green bonds were cumulatively held by AP EGO Fund over the course of 2022. The Fund started 2022 with 30 green bonds; nine were purchased and six matured or were sold during the year. As of Dec. 31, 2022, there were 33 green bonds in the Fund.
2. As of Dec. 31, 2022, based on a mark-to-market valuation.
3. Data includes countries where projects are being financed. These countries include the Arab Republic of Egypt, Brazil, Chile, China, India, Kuwait, Morocco, Pakistan, Peru, the Philippines, Qatar, Saudi Arabia, Thailand, Türkiye, and the United Arab Emirates.
4. tCO2e = tons of carbon dioxide equivalent. The numerator is annual total GHG emission avoided of the green bonds in the portfolio that reported GHG avoidance information. The denominator is the fund's total assets under management (AUM), which include nongreen bonds. Data is as of Dec. 31, 2022.
5. The numerator is the same as in footnote 4. However, the denominator is different. It is the sum of the market values of a subset of green bonds in the portfolio that reported GHG avoidance information. Nongreen bonds as well as green bonds that do not have GHG avoidance information were excluded from the denominator.
6. The total amount of issuances of the green bonds which AP EGO invested is €7.7 billion, which means that AP EGO invested 14% of total issuances.
7. Data reflects annual GHG avoidance of all the green bonds in the portfolio with publicly available GHG impact data, including outstanding matured and sold bonds. For the six bonds sold or matured, the impact data has been prorated for the days of holding in 2022.
8. See https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.
9. 2018 data was added; in previous reports, data from 2018 was not included.
10. 2019 first-half-of-year (H1) data was added; in previous reports, data from 2019 H1 was not included.
11. Result from 2022: 441 participants (36.2% female), 173 financial institutions, and 53 countries.
12. Countries from Latin America and the Caribbean, Europe and Central Asia, East Asia and Pacific, Middle East and North Africa, South Asia, and Sub-Saharan Africa.
13. GSS = green, social, and sustainability.
14. Issuances from 2019 through 2022.
15. The emerging market countries were in Africa, Asia, Eastern Europe, Central Asia, Latin America, and the Middle East. Result from 2022: 18 green bonds with a total value of US$1.4 billion and 22 social and sustainability bonds with a total value of US$1.1 billion.

FOREWORD

AMUNDI ASSET MANAGEMENT

Yerlan Syzdykov, Global Head of Emerging Markets

"2022 proved to be a particularly eventful year, beginning with geopolitical turmoil in Europe, evolving through drastic monetary policy tightening, and closing with the earlier-than-expected reopening of China's economy. The conflict between the Russian Federation and Ukraine—and its immediate consequences on global energy prices—emphasized the importance of energy transition. Moreover, the actions of central banks to tame inflation pressures contributed to an overall rise in interest rates and a difficult public bond market throughout the year, in terms of both issuance and performance.

In this context, the Amundi Planet Emerging Green One (AP EGO) Fund continued to play its role as a driving force in financing a sustainable economy in emerging countries. Despite challenging market conditions, the Amundi Planet EGO Fund maintained its "greening" path, with an allocation of more than 80% in emerging market (EM) green bonds at the end of 2022, which is well above the targeted 50%. Notably, we were able to participate in new issuances from first-time issuers of EM green bonds, including from Peru. To date, of the 30 issuers held in the Fund, there are 15 first-time issuers of green bonds, which highlights AP EGO's commitment to expanding financing for climate investments.

The 2022 Annual Impact Report includes three engagement case studies that describe how Amundi nurtures constructive dialogue with issuers to strengthen their commitments toward environmental, social, and governance (ESG) and reporting practices. We look forward to continuing this fruitful dialogue with issuers and to helping stimulate the issuance of green bonds in emerging markets alongside the IFC".

INTERNATIONAL FINANCE CORPORATION

Vivek Pathak, Director, Climate Business Department

"The low-carbon transition is accelerating. According to the International Energy Agency, clean energy projects received US$1.4 trillion in financing in 2022, more than the amount that financed new oil and gas projects. Sustaining similar momentum beyond the energy sector will require a massive scale-up of green and climate investments across all sectors of the economy—and particularly in hard-to-abate industrial sectors.

The domestic financial sector, and particularly the market for sustainable bonds in developing countries, is critical to expanding climate financing locally. This is where the strength of the Amundi Planet Emerging Green One Fund comes in. AP EGO works on two levels, collaborating with institutional investors to maintain strict criteria for the selection of green bonds globally and working with local institutions to increase the quality and quantity of sustainable bond issuance in emerging markets.

This report highlights some of the key accomplishments of the AP EGO Fund in 2022. AP EGO included 39 green bonds in its portfolio throughout 2022. At the same time, financial institutions that attended trainings from IFC's Green Bond Technical Assistance Program issued or helped arrange 18 green bonds with a total value of US$1.4 billion and 22 social and sustainability bonds with a total value of US$1.1 billion.

Green bonds faced challenging market conditions in 2022 as higher interest rates weighed on credit markets. With the global green bond market expected to rebound in 2023, green bonds will remain a crucial element in the push toward low-carbon development. This will give Amundi and IFC a chance to deepen their partnership and to drive continued impact".

ABBREVIATIONS AND ACRONYMS

Amundi: Amundi: Amundi Asset Management
AP EGO: Amundi Planet Emerging Green One
BCI: Banco de Crédito e Inversiones
CAFI: Climate Assessment for Financial Institutions
CBI: Climate Bonds Initiative
CMB: China Merchants Bank
COP27: Conference of the Parties of the UN Framework Convention on Climate Change
DNSH: Do no significant harm
EE: Energy efficiency
EM: Emerging market
ESG: Environmental, social, and governance
ESMS: IFC Environmental and Social Management System
ESPOL: Escuela Superior Politécnica del Litoral
FI: Financial institutions
G10: Group of 10
GB: Green bond
GB-TAP: Green Bond Technical Assistance Program
GCBP: Green Cornerstone Bond Program
GHG: Greenhouse gases
GSS: Green, social, and sustainability bonds
ICMA: International Capital Market Association
IFC: International Finance Corporation
MALENA: Machine Learning ESG Analyst
MW: Megawatt
PCAF: Partnership for Carbon Accounting Financials
RE: Renewable energy
SDGs: Sustainable Development Goals
SMEs: Small and medium enterprises
SSE: Stockholm School of Economics
TBSK: Tatra Banka AS
tCO_2e: Tons of carbon dioxide equivalent
UN: United Nations

INTRODUCTION

In 2017, IFC developed the concept of the Green Cornerstone Bond Program (GCBP), a fixed income fund dedicated to investing in green bonds in emerging markets (EMs). The concept came from mounting evidence about the impact of climate change and the lack of any scalable investment solutions, especially in relation to developing economies. Following a competitive international tender offer, Amundi was selected by IFC as its partner for implementing an innovative solution, consisting of a fund-the Amundi Planet Emerging Green One (AP EGO or "the Fund-with additional support from IFC's Green Bond Technical Assistance Program (GB-TAP or "the Program"). The partnership provides an innovative platform that combines extensive expertise in asset management (Amundi) with private sector development in EMs (IFC) to help developing economies achieve long-term sustainable growth.

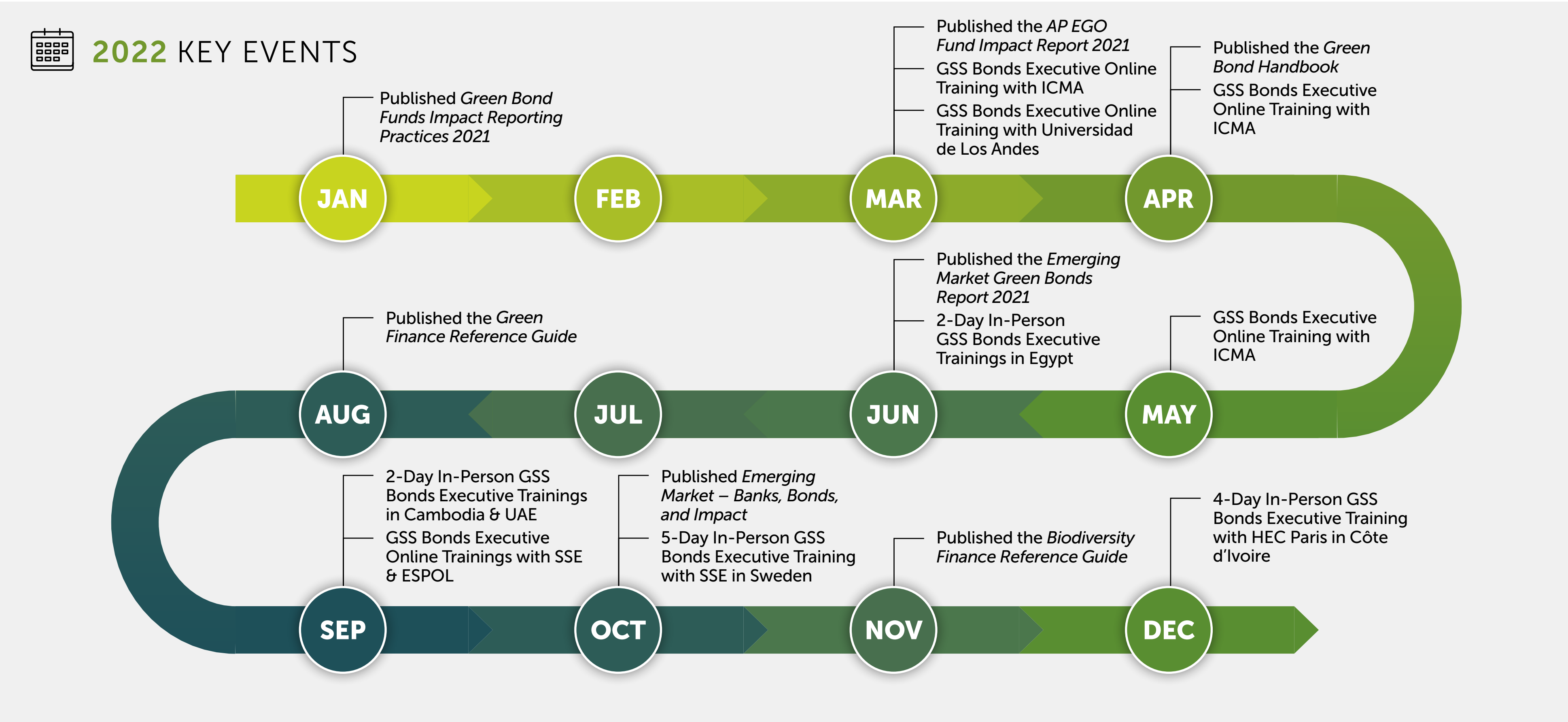
Based on the belief that institutional investors have both the capacity and appetite to deploy significant amounts of capital in EMs, the Amundi-IFC partnership aims to offer them an opportunity to invest substantial amounts. Amundi believes investors are attracted to EM yields and want to make a positive impact on the transition to cleaner sources of energy in countries with the largest financing needs.

AP EGO is a layered fund with a credit enhancement mechanism. Amundi launched the Fund in March 2018, with US$1.4 billion assets under management, with the aim of deepening local capital markets and expanding financing for climate investments. Three features highlight the Fund as a landmark for green finance:

- Size: The largest green bond fund seeking to deploy US$1.4 billion into EM green bonds over its lifetime
- Focus: The first green bond fund solely focused on EM financial institution green bonds
- Mechanism: The first comprehensive sustainable capital markets program combining a demand and a supply mechanism

The Fund stands as a sign of confidence in the green bond market, especially in EMs, and encourages more investors to gain exposure. On the one hand, the Fund's strict criteria for green bond selection challenges issuers to uphold best practices. On the other, IFC's GB-TAP helps local financial institutions issue green bonds. The partnership drives EMs to build functioning and sustainable debt capital markets as part of a wider ecosystem involving regulators and stock exchanges, as well as investment banks. The Fund published its Annual Impact Report 2021 last year, which covered the impact of AP EGO investments and activities that support EM green bond issuance. The Fund's fifth annual impact report builds on last year's publication and represents a landmark impact report for green bond funds.

KEY ACHIEVEMENTS OF THE PARTNERSHIP IN 2022



1. Amundi and IFC jointly published two reports, continuing to showcase the partnership's thought leadership on the EM green bond market.

- <u>The *Amundi Planet Emerging Green One (AP EGO) Fund Annual Impact Report 2021*</u> was published in March 2022. The Fund's fourth annual impact report discussed the impact of AP EGO investments as well as the Green Bond Technical Assistance Program (GB-TAP) activities aimed at supporting emerging market green bond issuances. The report analyzed the Fund's environmental, social, and governance (ESG) performance and presented the climate impact (through greenhouse gas [GHG] emissions reduction) of the Fund's portfolio.
- <u>The *Emerging Market Green Bonds Report 2021*</u> was published in June 2022. The report found that the volume of green bond issuances rebounded in 2021, more than doubling the issuance volume in 2020 to US$95 billion. In 2021, a total of 35 EM countries issued green

bonds, seven of which were first-time issuers. It also discussed that robust investor appetite and supportive policy environments will remain critical to continue building momentum, especially given the existing inflationary pressures and supply chain disruptions that have been exacerbated by the war in Ukraine.

2. The Green Bond Technical Assistance Program (GB-TAP) returned to in-person trainings for EM financial institutions, stimulating green bond issuances in emerging markets. In 2022, the GB-TAP had its most active year to date, delivering the highest number of trainings yet.

- In 2022, the GB-TAP made its long-awaited return to in-person trainings as pandemic-related travel restrictions began to ease. A flagship Green, Social, and Sustainability (GSS) Bonds Executive Training was delivered in partnership with the Stockholm School of Economics (SSE) in Sweden in October 2022. Then, in December 2022, the GB-TAP teamed up with HEC Paris to offer an in-person training in French in Côte D'Ivoire, expanding training opportunities for bankers in Africa (see **First GB-TAP In-Person Training in French** on page 25).
- The GB-TAP also held two-day, in-person trainings in several regions. In advance of COP27, two such trainings were delivered in the Arab Republic of Egypt, followed by one in the United Arab Emirates and another in Cambodia during the Global SME Forum.
- The GB-TAP continued to offer online trainings in partnership with the International Capital Market Association (ICMA) and through several partner universities (Universidad de Los Andes, Escuela Superior Politécnica del Litoral [ESPOL], and SSE).

3. Amundi rolled out issuer engagement, empowered by collaboration and capacity building through the Amundi-IFC partnership.

- Amundi's objective for issuer engagement is to impact capital markets by advocating best practices and elevating impact reporting standards in emerging markets. Amundi hopes to use its voice as the largest asset manager in Europe to guide EM issuers on these topics. In the long term, Amundi aspires to encourage these issuers to consider and commit to net zero goals and develop strategies to invest in more green projects.
- In 2022, Amundi's ESG team rolled out issuer engagement plans. The team identified high-priority banks from the Fund's green bond portfolio and reached out to them individually to provide feedback on areas for improvements. Examples of engagement activities are discussed in the **Engagement Case Studies** on page 20.
- At the same time, Amundi and IFC created several working groups to exchange innovative ideas and best practices and to share resources and tools, such as the Machine Learning ESG Analyst (MALENA), the Environmental and Social Management System (ESMS) Diagnostic Tool, the ESG Book, and the Climate Assessment for Financial Institutions (CAFI) tool. Amundi and IFC started exploring the use cases for these tools to further support Amundi's issuer engagement efforts.

4. Amundi and IFC renewed and strengthened their partnership with the return of in-person meetings.

- After three-years of pandemic, Amundi and IFC teams resumed in-person meetings, which proved to be more effective than virtual settings and greatly enriched collaboration. A key objective of the Amundi-IFC partnership is to further enhance Amundi's technical knowledge by addressing topics and issues specific to emerging markets, which is IFC's area of expertise. Over the past five years, IFC and Amundi have worked together in the areas of ESG, impact reporting, and technical assistance to emerging market issuers. In 2022, IFC offered Amundi teams in-person trainings on macroanalysis of emerging markets and ESG risk analysis of EM financial institutions. In addition, during the visit to IFC, IFC- Amundi working groups made progress on their joint initiatives.

5. The GB-TAP published three market guides to disseminate best practices in issuing green bonds.

- The *Green Bond Handbook: A Step-by-Step Guide to Issuing a Green Bond* was published in April 2022. The handbook is a practical guide for potential issuers on how to prepare for a successful green bond issuance.
- The ***Green Finance Reference Guide*** (GFRG) was published in August 2022. The GFRG is intended for three audiences (issuers, external reviewers, and investors) and provides reference points to the principles and guidelines published by ICMA and other authorities. It will be updated annually.
- The ***Biodiversity Finance Reference Guide*** (BFRG) was published in November 2022. The BFRG helps practitioners identify investments that protect and rehabilitate biodiversity and ecosystems.
- (For more details on these publications, see **Enhancing Issuer Reporting** on page 23.)

PORTFOLIO CHARACTERISTICS AND IMPACT REVIEW

ESG PERFORMANCE

The portfolio[16] had an overall average ESG rating of D+ as of December 2022, compared with an average ESG rating of D at the end of 2021. The improvement was the result of new purchases of higher ESG-rated issuers and upgrades of ESG ratings of issuers held in the portfolio.

ESG Criteria

The criteria are extra-financial metrics used to assess the ESG practices of companies, national governments, and local authorities.

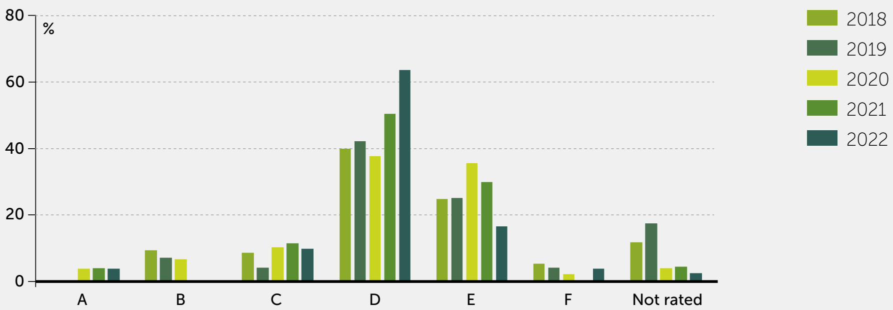
"E" for environment (including energy and gas consumption levels, and water and waste management).

"S" for social/society (including respect for human rights, and health and safety in the workplace).

"G" for governance (including independence of board of directors, and respect for shareholder rights).

Rating scale form A (best score) to **G** (worst score)

ESG Breakdown - Rating Evolution



Source: Amundi, Fund data as of Dec. 31, 2022, based on a mark-to-market basis.
Note: Includes corporate and green bond quasi-sovereign debt. We identified a minor adjustment required for the methodology followed in 2021. The adjustment has resulted in minor modifications in the 2021 ESG data, most notably the allocation to A-rated issuers for 2021 increasing to 3.92%. No further adjustments were necessary for previous years.»

16. We are taking into consideration only corporate and green bond quasi-sovereign debt for this calculation.

Séverine Alloy
Amundi Asset Management
ESG Analyst

"Although transparency is key for the green, social, and sustainability bonds market, the adoption of best practices by issuers remains a challenge. Research by Environmental Finance indicates that only half of the emerging markets financial institutions (excluding China) that issued a green bond have published an impact report. However, the need for issuers to communicate on ESG matters is becoming more and more critical for several reasons: (a) regulation, which is increasingly pushing companies to disclose more and more information on their ESG practices; (b) higher legal risk, with more controversies emerging as companies are being sued or even fined for greenwashing; (c) higher disclosure requirements from clients for better-quality and more-detailed ESG communication that translates into greater ESG data needs from asset managers; and (d) higher financial risk as investors could reallocate from issuers with poor ESG data. This is why Amundi's Engagement, at this stage, pays specific attention to disclosure as illustrated in our case studies below.

Regulations that make data disclosure mandatory are helpful because they force companies to improve their internal ESG practices. In order to adapt in a more regulated world, we believe that banks should agree with clients on the set of ESG data to be provided every year during the initiation of their loan granting process. Banks should also have an ESG assessment for all new financing (climate risk, Do No Significant Harm [DNSH], and Minimal Social Safeguards [MSS]) to stay in the race, as granting loans with no ESG consideration is now considered obsolete.

In the previous report, we highlighted how essential engagement was in the EM market. Through engagement, we are able to increase the transparency of issuers by explaining to them what we need and why. Often, issuers do not understand investors' expectations from an allocation and impact report or may not have the in-house resources to provide the requested data. We understand that this is not greenwashing, yet the lack of transparency does raise concerns. Our role is to continue engaging with issuers to encourage them to improve their ESG communication, as we believe that, for investors, transparency is no longer a "nice to have" but rather a "must have." Through interaction with issuers, we gain a better understanding of how data on the allocation and impact report is computed and we are, therefore, better positioned to communicate at the Fund level. It is important to reiterate that investors need clear, granular, and easy-to-source information on how cash raised from green, social, and sustainability bond issuances has been utilized."

The issuers in the Fund's portfolio are diversified across emerging markets and Amundi ESG ratings[17]. The following is an overview of the regional allocations.

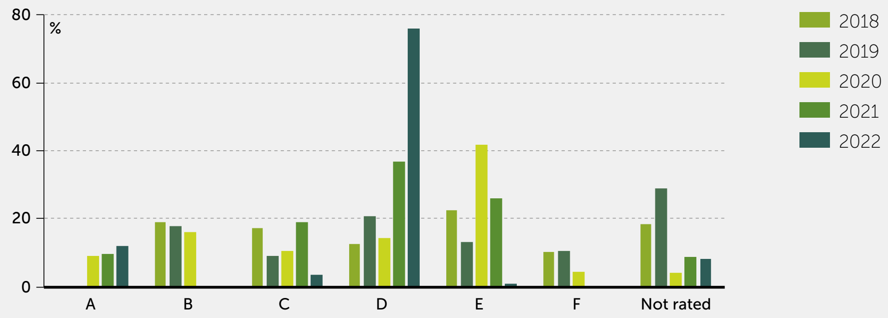
EMERGING MARKET REGIONAL BREAKDOWN BY ESG RATING

For the 2018–22 period, the overall coverage of ESG ratings has improved, as illustrated by the lower Not Rated component in all three regions in the graphs below.

The analysis of the regional ESG ratings between 2021 and 2022 highlights the following:

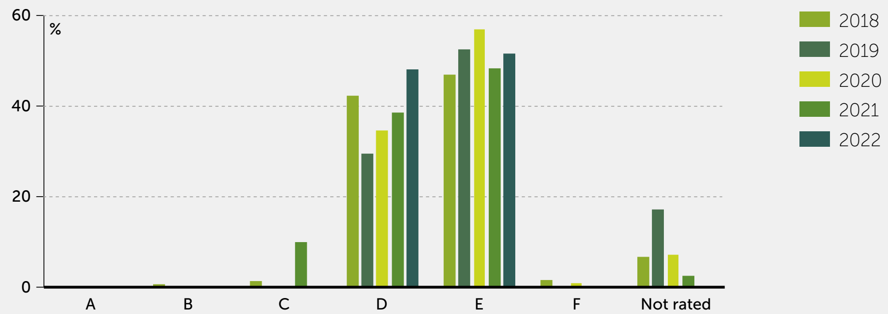
- **In Latin America and the Caribbean,** ESG ratings showed some improvement on purchases and upgrades, with a significantly lower percentage of lower-rated issuers and an increased percentage of better-rated issuers.

Latin America and the Caribbean



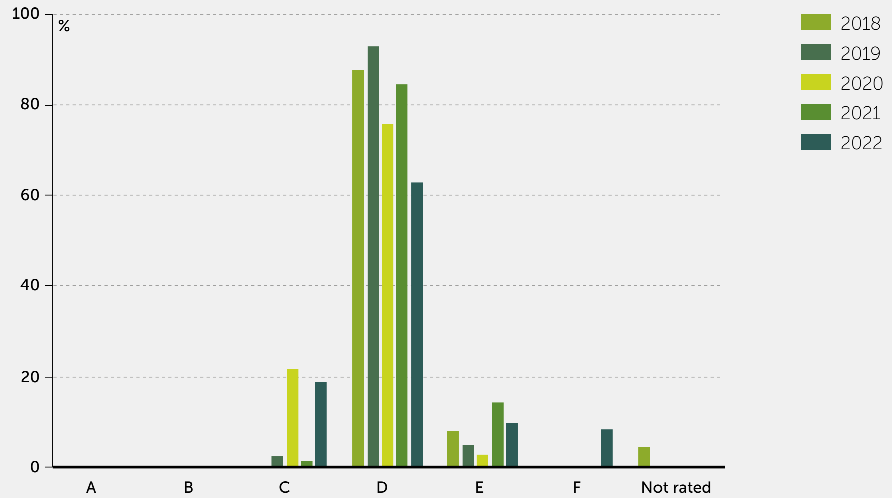
- **In Asia,** there was a slight deterioration in ESG ratings, with a higher exposure to lower-rated issuers owing to some downgrades in issuer ratings and maturity or sale of green bonds held, that were based in the region.

Asia



- **In Europe,** Middle East, and Africa, the ESG ratings picture is mixed. The percentage of better-rated issuers is higher because of upgrades and new purchases. On the other side, an F-rated issuer was purchased. Amundi believes that the issuer has an improving ESG strategy, as the issuer has set interim targets to achieve end goals and has put in place several social initiatives and projects, including supporting small businesses, microfinance, and other community activities.

Europe, Middle East and Africa



Source: Amundi, Fund data as of Dec. 31, 2022, based on a mark-to-market basis.
Note: 2018 data includes only the corporate bonds in the portfolio. 2019–22 data includes corporate and quasi-sovereign bonds in the portfolio.

17. The ESG rating scale is based on a rating scale from A to G (where A is the best). G-rated issuers (worst issuers) are excluded from the investment universe of the Fund.

EMERGING MARKETS GREEN BOND MARKET DEVELOPMENT

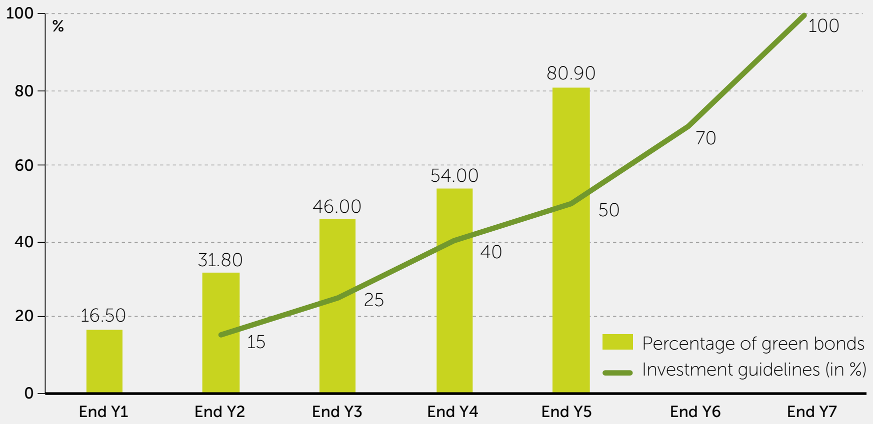
Of the **30 issuers** in the AP EGO Fund Portfolio, there are **15 first-time issuers of green bonds across 10 countries. Eight of those first-time issuers' green bonds** were invested through private placements (for example, Türkiye and Peru).

Among these 30 issuers in the portfolio, **seven banks and one nonbank financial institution** participated in the GB-TAP's Green, Social, and Sustainability (GSS) Bonds Executive Training.

EMERGING MARKETS GREEN BOND ALLOCATION LEVELS

Allocation to green bonds progressed at a steady pace in 2022 and remained well above the 50% targeted allocation for Year 5.

Green bond ramp-up progress



Number of green bonds in portfolio: 39

Weight of green bonds in the portfolio: 80.90%

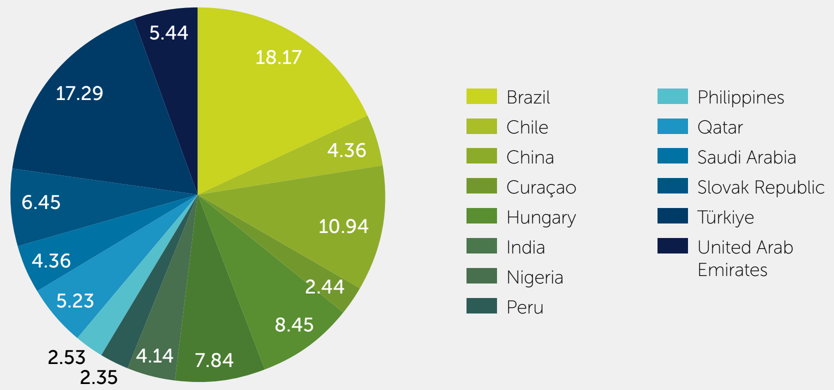
Amundi, Data as of Dec. 31, 2022, based on a mark-to-market valuation. Note: 39 green bonds were cumulatively held by AP EGO Fund over the course of 2022. The Fund started 2022 with 30 green bonds; nine were purchased and six matured or were sold during the year. As of Dec. 31, 2022, there were 33 green bonds in the Fund.

RECORDED IMPACT

When 2022 began, the AP EGO Fund had 30 green bonds. Throughout the year, nine green bonds were purchased, and six green bonds matured or were sold. As of Dec. 31, 2022, there were 33 bonds in the Fund. The report reflects Fund allocations associated with all 39 green bonds and prorated impacts based on the holding period. The geographical distribution by issuers' headquarters covers 14 countries/regions, with Hungary, Nigeria, Peru, Saudi Arabia, the Slovak Republic, and Curaçao as the countries/regions added to the portfolio in 2022. The countries' share in the portfolio is illustrated in the following chart.

2022 Green Bond Allocation Breakdown by Issuer Headquarter Location

(in %)

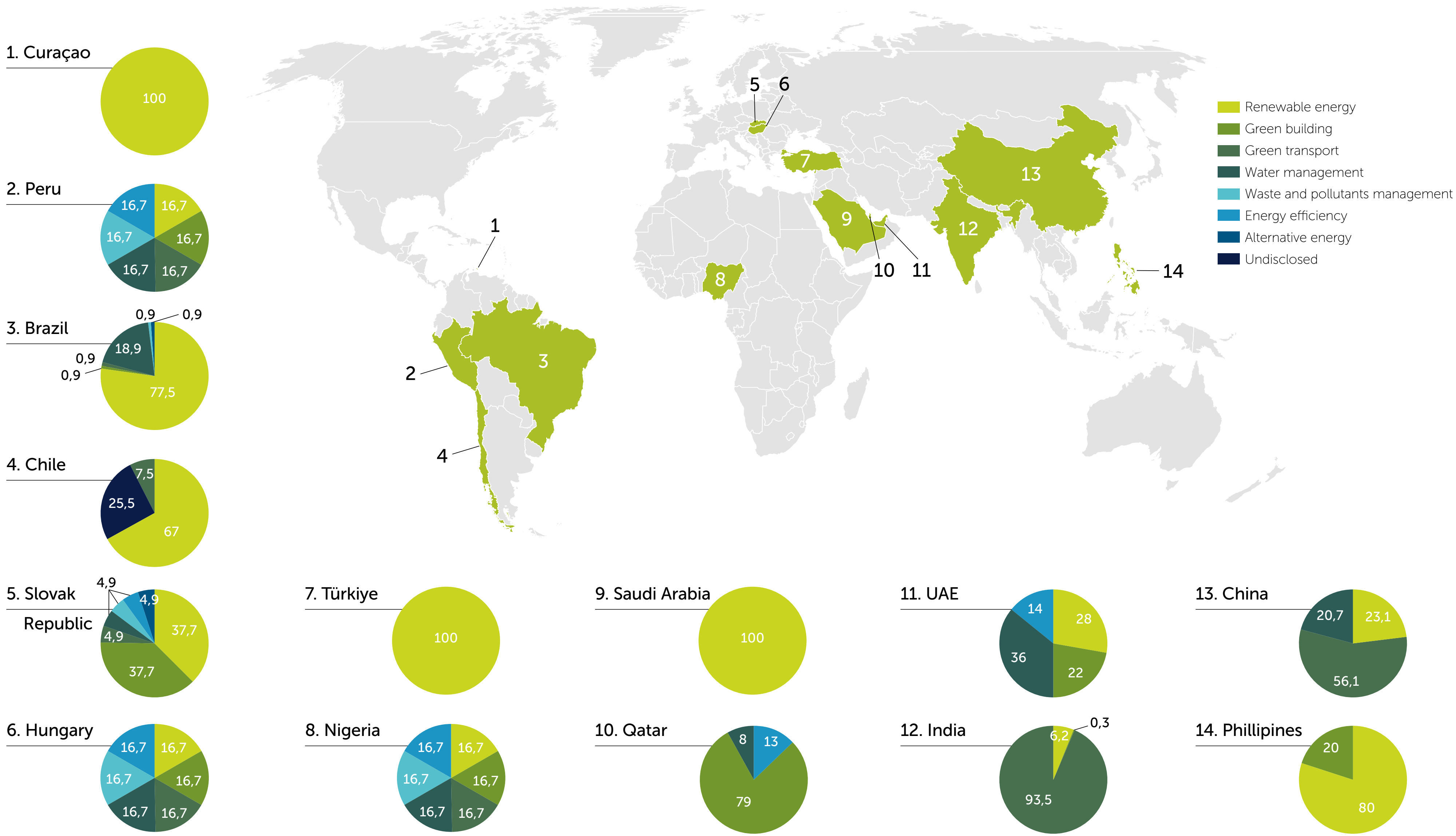


Source: Amundi, Data as of Dec. 31, 2022, based on a mark-to-market valuation.

In terms of sector coverage, the use of proceeds is concentrated in seven sectors: renewable energy (RE), green transport, green building, water management, waste and pollutants management, energy efficiency (EE), and alternative energy. In addition, the percentage of undisclosed use of proceeds in each region is reported. The following figure reflects sector coverage for green bonds in the portfolio as of Dec. 31, 2022.

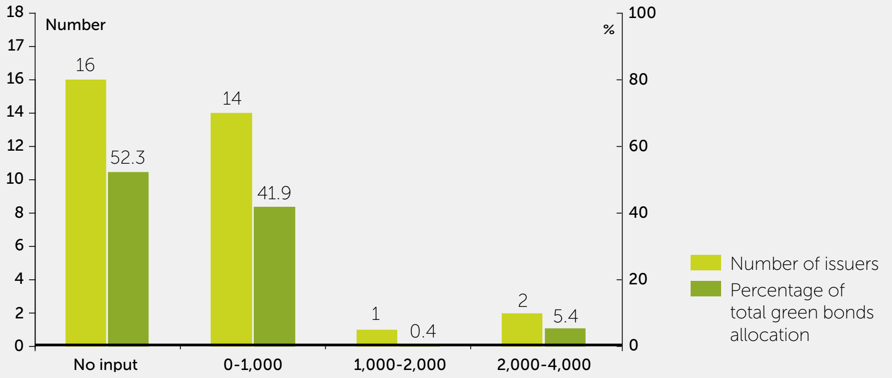
Note: 39 green bonds were cumulatively held by AP EGO Fund over the course of 2022. The Fund started 2022 with 30 green bonds; nine were purchased and six matured or were sold during the year. As of Dec. 31, 2022, there were 33 green bonds in the Fund.

Breakdown of Use of Proceeds by Country/Region and Sector (in %)



Source: Amundi, Data as of Dec. 31, 2022, based on a mark-to-market valuation).
Updated on Feb 21, 2023

Breakdown of Avoided Emissions per Bond



Source: Amundi, Fund data as of Dec. 31, 2022, based on a mark-to-market basis.

Total tons of avoided GHG emissions:
351,204 tCO_2e[18] for the full AP EGO portfolio.

Total tons of avoided GHG emissions per €1 million invested per year:
263.7 tCO_2e[19] for the full AP EGO portfolio.

17 bonds out of the total 33 green bonds in the portfolio published GHG emission avoidance information as part of their annual impact reports. These reports became the basis for the calculation of the avoided emissions. Three additional bonds published allocation reports to illustrate their use of proceeds but did not reflect impact performance information. The other 13 bonds have not yet published impact reports: nine of those bonds correspond to new issuances in 2022 while the other four bonds were issued before 2022. Of those four bonds, two have not published impact information to date, and two published impact reports before 2022. Notably, GHG avoidances for both the full portfolio (including nongreen) and the green-bond-only portfolio are calculated below. As AP EGO's green bonds portfolio ramps up, the total GHG avoidance at both the full portfolio level and the green-bond-only portfolio level will change accordingly. The methodological approach has been updated to reflect cases in which the impact report has been released only once since a bond was issued; however, it has not deviated from what was applied in the 2021 Annual Impact Report. For transparency purposes, a more detailed description of the calculation process has been included in appendix A.

18. Data reflects annual GHG avoidance of all the green bonds in the portfolio with publicly available GHG impact data, including outstanding matured and sold bonds. For the six bonds sold/matured, the impact data has been prorated for the days of holding in 2022.
19. Data is calculated on the basis of the total annual GHG avoidance of all the green bonds in the portfolio that have GHG avoidance information publicly available and the size of the AP EGO Fund as of Dec. 31, 2022.

Green Bond Portfolio Insight

Year Invested	Issuer	Amount Issued (US$ million)	% held by Fund	% of Green Bond Portfolio[a]	Region	GHG emission avoided (tCO_2e/year)	Use of Proceeds	Contribution to SDGs
2022	ABU DHABI COMMERCIAL BNK	500	2,5%	1,0%	United Arab Emirates	NA	RE, green buildings, sustainable water and wastewater treatment, clean transportation, EE, pollution prevention and control, environmentally sustainable management of living natural resources and land	6,7,11,12,13,15
2022	ACCESS BANK PLC	50	95,0%	4,0%	Nigeria	NA	RE, green buildings, clean transportation, water use, waste management, land use and marine resources	6,7,9,11,13,14,15
2022	BANCO DE CREDITO DEL PER	30	90,0%	2,3%	Peru	NA	RE, clean transportation, green buildings, EE, sustainable water and wastewater management, environmentally sustainable management of living natural resources and sustainable land use	6,7,9,11,12,13,15
2022	ITAU UNIBANCO HLDG SA/KY	62,5	88,0%	4,7%	Brazil	NA	RE, EE, Clean transportation, sustainable water and wastewater management, pollution and prevention, environmentally sustainable management of living natural resources and land use, green buildings	6,7,9,11,12,13,15
2022	OTP BANK NYRT	60	88,3%	4,5%	Hungary	NA	RE, green buildings, clean transportation	7,9,11,13
2022	RAIFFEISEN BANK HUNGARY	50	88,0%	3,7%	Hungary	NA	RE, green buildings, clean transportation, land use and marine resources, EE	7,9,11,13,14,15
2022	SAUDI NATIONAL BANK	60	83,3%	4,2%	Saudi Arabia	NA	Eligible sustainable project categories comprise RE, management of living natural resources and land use, and SME financing.	7,8,13,15
2022	SLOVENSKA SPORITELNA AS	57	96,5%	4,7%	Slovak Republic	NA	Green buildings, RE	6,7,11,13
2022	TATRA BANKA AS	30	63,3%	1,6%	Slovak Republic	NA	Green buildings, RE, clean transportation, agriculture and forestry, water management, and wastewater management	6,7,9,11,13,15
2021	AGRICULTURAL BK CHINA/NY	300	4,0%	1,0%	China	NA	RE, clean transportation and sustainable water and wastewater management	6,7,11,13
2021	BCO DE CREDITO E INVERSION	54	92,6%	4,2%	Chile	29	RE	7,13
2021	BANCO BTG PACTUAL S A	50	10,0%	0,4%	Brazil	4 426	RE, EE, sustainable water and wastewater management, clean transportation, and green building	6,7,9,11
2021	CHINA MERCHANTS BANK/LUX	300	10,0%	2,5%	China	NA	RE	7,13
2021	CMB INTERNATIONAL LEASIN	300	1,4%	0,4%	China	466 323	Clean transportation, RE, pollution prevention and control, sustainable water and wastewater management	6,7,11,13

Note: EE = energy efficiency; GHG = greenhouse gas; MW = megawatt; NA = not available; RE = renewable energy; SDG = Sustainable Development Goal; SME = small and medium enterprise; tCO2e = tons carbon dioxide equivalent.
a. Total GB Portfolio amount includes six matured and sold bonds.

Green Bond Portfolio Insight

Year Invested	Issuer	Amount Issued (US$ million)	% held by Fund	% of Green Bond Portfolio[a]	Region	GHG emission avoided (tCO_2e/year)	Use of Proceeds	Contribution to SDGs
2021	LAAD (Latin American Agribusiness Development Corporation)	30	93,3%	2,4%	Curaçao	NA	SMEs climate-smart agribusinesses	7,13
2020	AKBANK TAS	50	96,8%	4,1%	Türkiye	NA	Wind and solar energy projects in Türkiye	7,9,11,13
2020	BANCO BTG PACTUAL S A	500	9,8%	4,1%	Brazil	44 257	RE, EE, sustainable water and wastewater management, clean transportation, and green building	6,7,9,11
2020	BANCO VOTORANTIM SA	50	100,0%	4,2%	Brazil	1 178	RE, particularly solar energy or wind energy as developed onshore	7,9,11,13
2020	CHINA CONSTRUCTION BANK CO. HK	700	2,1%	1,3%	China	5 434	RE, EE, pollution prevention and control, clean transport, sustainable water and wastewater management, green buildings, environmentally sustainable management of living natural resources	9,11
2020	CHINA MERCHANTS BANK CO LTD HK	800	0,9%	0,6%	China	233 776	RE, infrastructure construction with energy-saving and emission reduction, construction of green manufacturing systems, pollution prevention and control, clean transport, sustainable water and wastewater management, green buildings, and so on	9,11
2020	QATAR NATIONAL BANK QPSC	600	10,0%	5,1%	Qatar	97 211	Green buildings; RE; clean transportation; EE; sustainable management of living natural resources and land; sustainable and certified agriculture, forestry, and fishery; sustainable water and wastewater management; wastewater treatment; sustainable urban drainage systems; improvements to water infrastructure; pollution prevention and control; waste management and recycling; waste to energy; and technologies to reduce emissions to air	6,7,11,12,13
2020	YAPI VE KREDI BANKASI AS	50	100,0%	4,2%	Türkiye	6 708	RE, EE, pollution prevention and control, environmentally sustainable management of living natural resources and land use, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water and wastewater management, climate change adaptation, eco-efficient and/or circular economy adapted products, production technologies and processes, green buildings	7,9,11
2019	AXIS BANK LTD/ GIFT CITY	40	100,0%	3,4%	India	121 481	RE, low carbon transport, energy-efficient buildings	3,7,8,9,11,12,13,15,17
2019	BANK OF CHINA (MACAU BRANCH)	350	1,4%	0,4%	China	4 760	RE and clean transport	3,7,9,11,13

Note: EE = energy efficiency; GHG = greenhouse gas; MW = megawatt; NA = not available; RE = renewable energy; SDG = Sustainable Development Goal; SME = small and medium enterprise; tCO2e = tons carbon dioxide equivalent.
a. Total GB Portfolio amount includes six matured and sold bonds.

Green Bond Portfolio Insight

Year Invested	Issuer	Amount Issued (US$ million)	% held by Fund	% of Green Bond Portfolio[a]	Region	GHG emission avoided (tCO_2e/year)	Use of Proceeds	Contribution to SDGs
2019	FIRST ABU DHABI BANK	50	100,0%	4,2%	United Arab Emirates	NA	The net proceeds of the green bond issuance will be used to finance, in whole or in part, eligible projects or corporate loans to pure players, part of eligible categories, which are clearly defined and whose content is relevant, including RE, EE, green real estate, sustainable waste management, clean transportation, sustainable water management, climate change adaptation, and decarbonizing technologies.	6,7,9,14
2019	INDUS & COMAL BANK CHINA/HK	500	0,5%	0,2%	China	645 536	RE, low carbon and low emission transportation, EE, sustainable water and wastewater management	3,7,9,11,13
2019	INDUS & COMAL BANK CHINA/ SINGAPORE	600	3,8%	1,9%	China	1 555 687	RE, clean transport, EE, and water management	3,6,7,9,11,13
2019	BANK OF THE PHILIPPINE ISLANDS	300	9,7%	2,5%	Philippines	229 056	The eligible categories for the use of proceeds: (a) RE, (b) EE, (c) sustainable water and wastewater management, (d) pollution prevention and control, (e) green buildings	7,9,11,13
2019	SHANGHAI PUDONG DEVELOP BK	300	1,7%	0,4%	China	7 144	Green buildings and green transportation	9,11
2019	STATE DEVELOPMENT & INVESTMENT CORP	500	3,6%	1,5%	China	NA	Sustainable water and wastewater management, RE	6,7,13
2019	TURKIYE GARANTI BANKASI AS	50	100,0%	4,2%	Türkiye	14 430	RE, EE measures which reduce energy consumption by at least 30%. Includes the financing of retrofitting/improving/upgrading existing assets, as well as of new technology development and manufacture, energy recovery (waste to energy), and green buildings. In order for green building financing to be included, the asset must possess environmental certifications such as LEED (minimum silver), BREEAM (minimum good), HQE (minimum good), DNGB (minimum silver), or GBC España-VERD.	7,9,11
2019	TURKIYE IS BANKASI A.S	50	100,0%	4,2%	Türkiye	32 092	RE, EE, pollution prevention and control, environmentally sustainable management of living natural resources and land use, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water and wastewater management, climate change adaptation, eco-efficient and/or circular economy adapted products, production technologies and processes, and green buildings	7,9,11,13

Note: EE = energy efficiency; GHG = greenhouse gas; MW = megawatt; NA = not available; RE = renewable energy; SDG = Sustainable Development Goal; SME = small and medium enterprise; tCO2e = tons carbon dioxide equivalent.
a. Total GB Portfolio amount includes six matured and sold bonds.

Green Bond Portfolio Insight

Year Invested	Issuer	Amount Issued (US$ million)	% held by Fund	% of Green Bond Portfolio[a]	Region	GHG emission avoided (tCO_2e/year)	Use of Proceeds	Contribution to SDGs
2018	BNDES-BCO NAC DESVOL ECO SOC	496,798	10,0%	4,2%	Brazil	229 217	The proceeds were totally allocated to eight wind power generation projects which total 1,323 MW new installed capacity.	7,9,11,13
2018	CHINA DEVELOPMENT BANK CORP	500	0,8%	0,3%	China	167 006	Clean transportation, RE, pollution prevention and control, EE, environmentally sustainable management of living natural resources and land use, climate change adaptation, land and aquatic biodiversity conservation	3,7,9,11,13
2018	FIRST ABU DHABI BANK	587	1,2%	0,6%	United Arab Emirates	117 265	RE, EE, pollution prevention and control, sustainable management of living natural resources, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water management, climate change adaptation, eco-efficient products	6,7,9,13
2018	INDUS & COMAL BANK CHINA/ LONDO	500	1,6%	0,7%	China	290 174	RE, clean transport	3,7,9,11,14
2018	INDUS & COMAL BANK CHINA/LUX	400	3,0%	1,0%	China	545 556	RE, clean transport	3,7,9,11,15
2018	INDIAN RAILWAY FINANCE	500	10,0%	4,2%	India	NA	Infrastructure and freight railway lines	3,7,9,11,13
2018	INDUSTRIAL BANK HK BRANCH	450	1,8%	0,7%	China	41 707	Sustainable water and wastewater management, coastal climate change adaptation, marine renewable energy (such as offshore wind), pollution prevention of port and shipping activities	3,7,9,11,13,14

Note: EE = energy efficiency; GHG = greenhouse gas; MW = megawatt; NA = not available; RE = renewable energy; SDG = Sustainable Development Goal; SME = small and medium enterprise; tCO2e = tons carbon dioxide equivalent.
a. Total GB Portfolio amount includes six matured and sold bonds.

CASE STUDIES

Tatra Banka AS

Tatra Banka AS (TBSK) is a leader in the corporate banking, private banking, and premium and student segments in the Slovakian banking sector. It is part of the Raiffeisen Bank International (RBI) Group, which operates in 14 markets in Austria, and Central and Eastern Europe.

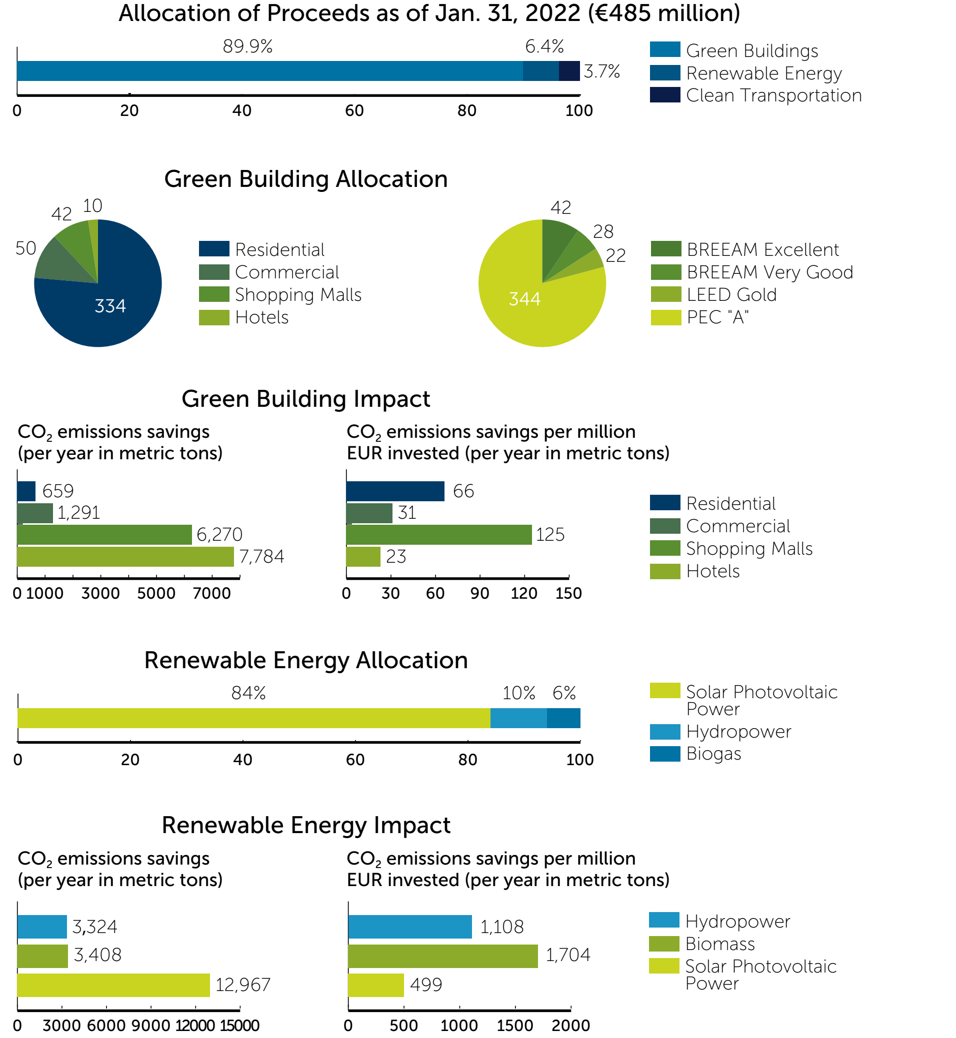
RBI's sustainability strategy lies on three pillars: responsible banker, fair partner, and active corporate citizen. As a member of the RBI group, TBSK develops its sustainability strategy to reflect those pillars and takes sustainability and corporate responsibility as key components of its identity and corporate culture. TBSK intends to achieve Group-level environmental goals by 2025 to decrease the carbon footprint of its own operations (by reducing energy consumption by 35%, increasing the share of energy consumption from renewable sources to 35%). As a result, green bonds become a vital instrument to realize these strategic shifts.

TBSK has established a Green Bond Framework[20] and issued a green bond in April 2021. It was the first green bond issued in Slovakian and among RBI's network banks. Its framework takes into consideration the United Nations Sustainable Development Goals (SDGs), the European Union Green Bond Standard (EU GBS), and the European taxonomy for sustainable activities (EU Taxonomy) and is aligned with the Green Bond Principles from ICMA.

It is worth noting that the eligible project categories are thoroughly defined, which allows investors, especially European investors, to have a clear view of what will be financed through the green bond and whether the financed activities align with EU taxonomy. For example, within the renewable energy category, it is clearly defined that hydropower projects up to 20 megawatts (MW) with a power density below 5 watts per square meter (W/m^2) and maximum life-cycle emissions below 100 g CO_2/kilowatt hours (kWh) are eligible, and their life-cycle GHG assessment will be verified by an independent third party. In addition to this robust framework, TBSK has also disclosed a detailed allocation and impact report with the 2021 issued green bond. The figure titled "Allocation and Impact", related to the first green bond issued by TBSK[21], illustrates the granularity and completeness of that report, which has set a high bar for the coming impact reports for the newly issued US$30 million green bond (November 2022), in which AP EGO invested.

Allocation and Impact

(in %)



Source: Tatra Banka

20. See Tatra Banka, "Green Bond Framework" March 19, 2021, https://www.tatrabanka.sk/files/archiv/financne-ukazovatele/emisne-podmienky/TatraBankaGreenBondFramework.pdf.
21. Impact results demonstrated in the figure titled "Allocation and Impact" are not included in the current impact report.

ENGAGEMENT CASE STUDIES

1 Engagement Case Study 1: Engagement with EM Banks in AP EGO Fund Portfolio

In 2022, Amundi initiated an engagement campaign with a third of the issuers in Amundi Planet Emerging Green One (the Fund), all of which are EM banks that have issued a green bond. The purpose of this engagement was to gain further insights into the banks' green bond allocation and/or impact reporting practices, overall environmental strategy, and ESG profile. Amundi's intention is not only to understand the quality of the green bond issuance practices but also to highlight areas of improvement within the banks' ESG strategy so they can enhance their green bond issuing and reporting practices in the future.

Methodology and Key Objectives

10 banks received a questionnaire that covered six main themes on green bond issuance rationale and alignment of the issuer with its green bond framework. Questions ranged from lending practices (for example, dedicated green loan offerings) to features in the project selection process (for example, inclusion of minimum social safeguards, or DNSH[22]), as well as questions about the issuer's own environmental and ESG practices (such as exclusion policy and carbon reduction strategy). When analyzing the responses of these issuers, Amundi was able to classify banks on best practices in their ESG strategy, understand their strengths and areas for improvement in their ESG strategy, and provide recommendations for improvement. Amundi intends to follow up and assess the banks' progress in the coming year.

22. DNSH = Do no significant harm.
23. SBTi = Science Based Targets initiative.
24. GHG Protocol = Greenhouse Gas Protocol.
25. PCAF = Partnership for Carbon Accounting Financials.
26. ISO = International Organization for Standardization.

Engagement Outcomes

Seven of the 10 banks responded to the engagement campaign, of which three showed a high degree of responsiveness. Amundi will continue to pursue engagement efforts with unresponsive issuers in the coming year. The key outcomes of Amundi's engagement are the following:

- **All responding issuers had a formal exclusion policy in place,** applicable to their lending practices, while only two issuers had extended their policy to all their business activities. Regarding coal phaseout, three issuers have a policy in place, and among the remaining four issuers, two of them are considering a restriction on coal financing. However, oil and gas exclusion or phaseout policies are still nascent, with two issuers considering it.
- **Carbon reduction targets are not the norm yet but are gaining traction.** All issuers had a carbon footprint assessment in place covering at least scope 1, 2, and 3 (partially) for their own operations. Four issuers have set carbon reduction targets with varying degrees of ambition and implementation. Most of the issuers are using widely recognized standards to assess their carbon footprint and set targets (SBTi[23], GHG Protocol[24], PCAF[25], and ISO[26] 14064), which is positive as it supports harmonization within the sector.
- **Most of the issuers have a process in place to evaluate climate risk.** Only two banks stated that a process is under development. It is worth noting that there is no consensus regarding the methodology to perform this type of evaluation.
- **Lending practices: Sustainable product offering is not systematic.** Four banks have set a target on the proportion of their business that should be sustainable in the coming years, while five banks displayed a large commercial sustainable offering (such as a loan to finance electric vehicles and microenterprises).
- **All issuers demonstrated internal processes to assess the externalities of projects financed; however, they remain heterogeneous.** Issuers with best practices include on-site visits to check the development of the project. It is worth noting that five out of seven banks referred to the IFC performance standards for their negative externalities risk assessment, which shows more harmonization compared with climate risk assessments.Upon review of information collected through the questionnaires, Amundi will have a clearer view of the banks' ESG strategies, lending practices, and ESG expectations for 2023. Amundi intends to pursue discussions with these 10 issuers in 2023 to highlight their strengths and points of improvement through comparison to their peers, and to track progress on their ESG strategies. Amundi also intends to engage with an additional 10 issuers to cover a larger number of companies in the portfolio.

2 Engagement Case Study 2: Banco de Crédito e Inversiones

Headquartered in Chile, Banco de Crédito e Inversiones (BCI) is one of the leading banks in Latin America and has a global reach. To support Chile's national sustainability agenda and its transition to a low-carbon economy, BCI has developed a climate strategy to promote sustainable finance and solutions, and was one of the first banks in Chile to join the Task Force on Climate-Related Financial Disclosures.

Key Objectives

Amundi has played an instrumental role in facilitating the development of a green bond capital market for new issuers in emerging markets, and BCI is one such example. Since 2021, Amundi has engaged with BCI to support the issuance of its inaugural green bond. During the engagement, Amundi shared global industry standards and investor expectations for green bond issuance with BCI across several key scopes: (a) Amundi's green bond assessment framework, (b) compliance of the issuers' Sustainability Financing Framework with the Green Bond Principles of ICMA, (c) selection of eligible projects, and (d) recommendations for allocation and impact reporting guidelines.

Overall, Amundi's objectives were to achieve the following:

- Facilitate a debut emerging market green bond issuance.
- Encourage BCI to adopt global industry standards for green bond issuance, including complying with ICMA's Green Bond Principles, publishing a Sustainability Finance Framework, and delivering impact reporting.
- Promote best practices and improve transparency regarding granularity of details on green projects, case studies, and alignment to ICMA's Harmonized Framework for Impact Reporting.

Engagement Outcomes

Amundi facilitated the development of green bond markets by collaborating with BCI on its inaugural green bond and helped enhance the integrity of the issuance. Throughout Amundi's engagement, BCI remained open to discussions and welcomed Amundi's feedback. Notable outcomes included the following:

- **BCI complied with industry standard green bond practices** by launching its Sustainability Finance Framework in alignment with ICMA's Principles and appointed a Second Party Opinion provider (S&P) to issue an assurance report in 2021.
- In 2022, **BCI became the first public issuer from Chile** to tap the green bond market, with three successful green bond issuances.
- **BCI presented three case studies of green projects in its impact report.** Certain environmental impact data and metrics were included, but Amundi seeks further alignment with the Harmonized Framework for Impact Reporting.

Amundi continues to engage with BCI on areas of improvement, including more granularity on the environmental benefits of allocated projects, methodology, and assumptions for the calculation of impact data, and greater alignment with impact reporting recommendations under the Harmonized Framework for Impact Reporting, such as project lifetime and inclusion of other impact indicators. Upon review of selected green projects, Amundi has encouraged BCI to supplement relevant policies and guidelines surrounding biodiversity.

3 Engagement Case Study 3: BTG Pactual

BTG Pactual is a leading investment bank in Latin America. The bank has a well-developed ESG strategy, places high decision-making power on its ESG Committee, and conducts a systematic ESG assessment before collaborating with counterparties. BTG Pactual issued its first green bond private placement in November 2020 for US$50 million, followed by a benchmark-sized green bond in January 2021.

Key Objectives

Amundi reviewed BTG Pactual's 2021 annual allocation and first impact report as a green bond investor. The allocation and impact report provided BTG Pactual's overview from an ESG perspective, allocation data, and case studies on the type of projects financed by the green bonds issued. Amundi believed there was room for improvement, in particular through further clarifications on the impact data calculation methodology. Amundi did not incorporate BTG Pactual's impact data in Amundi Planet Emerging Green One's impact report in 2021 and engaged with the bank during 2022.

Overall, Amundi's objectives were to help BTG Pactual achieve the following:

- Provide reliable pro rata impact data (for example, avoided carbon emissions, capacity installed).
- Include additional description of impact data calculation methodology in the impact report.
- Detail into the reporting the pro rata share of the impact related to the green bonds.

Engagement Outcomes

Amundi facilitated transparency on green bond markets by collaborating with BTG Pactual on its impact reporting practices. The bank was already keen on "leading the movement of best practice reporting on EM", and Amundi noted impressive progress from the bank during 2022. Notable outcomes included the following:

- **BTG Pactual improved its impact data coverage** by collecting information directly from the Brazilian electricity system operator. This action allowed the bank to receive energy generation impact data directly from its borrowers.
- BTG Pactual used the Partnership for Carbon Accounting Financials (PCAF) methodology coupled with attribution and emission factors to determine the bank's emissions. Amundi believes that using this standardized method is a good practice that **increases impact reporting harmonization within the market**.
- BTG Pactual published its 2022 report with an **appendix on the impact data calculation methodology**. The bank also added clean impact data with a pro rata share related to the green bonds.

Following the improvements in BTG Pactual's impact reporting, Amundi was comfortable incorporating the impact data provided into the impact assessment of Amundi Planet Emerging Green One. Amundi continues to engage with BTG Pactual on areas of improvement, including carbon footprint reduction and strengthening of its ESG business strategy (such as setting a percentage target of total business related to sustainable finance or of dedicated offers for sustainable finance). Amundi believes this is a worthwhile exercise given how open to discussion and feedback the bank has been. Amundi appreciates the efforts put in and the milestones achieved to date and uses the bank's green bond reporting as a reference for peers.

THE GREEN BOND TECHNICAL ASSISTANCE PROGRAM (GB-TAP)

The GB-TAP is an IFC-managed and -administered technical assistance program in partnership with Switzerland's State Secretariat for Economic Affairs (SECO), the Swedish International Development Cooperation Agency (SIDA), and Luxembourg's Ministry of Finance. The objective of the GB-TAP is to stimulate the supply of green bonds issued by financial institutions in EMs by creating and disseminating knowledge on green bonds and enhancing the quality of disclosed information by green bond issuers.

2022 GB-TAP highlights

Training for Banks in Emerging Markets

IFC's GB-TAP had a record results impact year in 2022. As the world gradually recovered from the pandemic, the GB-TAP used both in-person and online platforms to deliver and support a total of **12 Green, Social, and Sustainability (GSS) Bonds Executive Training Programs** with partners such as the ICMA, University of Los Andes Regional Center for Sustainable Finance (Colombia), HEC Paris (France), Stockholm School of Economics (Sweden), and Escuela Superior Politécnica del Litoral –ESPOL (Ecuador). In 2022, **the GB-TAP trained.**

441 global professionals (of whom 36% were women)	from 173 financial institutions	across 53 emerging market countries.

More specifically, the program continued to **expand its reach to low-income and lower-middle-income countries** as 32 out of the 53 emerging market countries fell under these economic brackets.

Apart from continuing with the virtual GSS Bonds Executive Training Program, the GB-TAP also delivered three strategically designed in-person trainings in Cambodia, Côte d'Ivoire, and Egypt, as well as the flagship executive training in partnership with the Stockholm School of Economics.

For the year 2022 alone, financial institutions that attended the GB-TAP executive trainings issued or helped arrange 18 green bonds with a total value of US$1.4 billion, investing in green projects across Africa, Asia, Latin America, and the Middle East, as well as issuing or helping arrange 22 Social and Sustainability Bonds with a total value of US$1.1 billion. Some of those 22 bonds allocated crucial funds to support women-owned small and medium enterprises (SMEs), COVID-19 post-pandemic recovery of SMEs, and affordable housing in low-income Sub-Saharan African countries.

Green Bond Principles Dissemination

In 2022, the GB-TAP continued to provide strategic initiatives to disseminate knowledge and best practices through various channels:

- In partnership with Environmental Finance, the GB-TAP delivered two webinars: Green Bond Impact Reporting best practices and Green Capital Market Opportunities in Mexico.
- New **Sustainable Bond of the Year Award**: three winners were given the 2022 award at the Global SME Finance Forum in Cambodia, including GB-TAP alumni whose sustainable bond issuances marked firsts in their corresponding country.
- **Climate Champion Alumni Network** via a LinkedIn group to bring together professionals from the 150-plus financial institutions trained by the program.

Enhancing issuer reporting

In 2022, the GB-TAP published **four first-of-its-kind market guides and reports**:

- ***Green Bond Handbook*** is a step-by-step guide on how to prepare and execute a successful green bond for financial institutions.
- ***Biodiversity Finance Reference Guide*** is the world's first guidance document to help investors, financiers, companies, and governments identify investments that protect and rehabilitate biodiversity and ecosystems.
- ***The Green Finance Reference Guide*** offers a "knowledge compass" to help green bond practitioners navigate the green bond issuing process.
- ***Emerging Market-Banks, Bonds, and Impact*** in partnership with Environmental Finance provides a comprehensive assessment of the landscape of the impact reporting practices of emerging market financial institutions.

Arabesque's ESG Book has registered 7,537 platform users and 589 entities since its December 2021 launch. Its platform actively engages and verifies ESG disclosure data. During 2022, ESG Book implemented new dashboard functionalities for both users and disclosing companies, a new evidence upload functionality, a refined data verification journey, and an improved guidance functionality. The platform plans further releases in the first quarter of 2023 with enhanced features such as a third-party climate align score, solutions and analytics, portfolio weights, a reporting exchange, a materiality score, peer benchmarking, and a score and data export functionality.

Sharing of Knowledge

In 2022, published three market reports and one case study:

- ***Green Bond Pricing in the Primary Market H2 2021*** report and webinar, in partnership with the Climate Bonds Initiative (CBI).
- ***Sustainable Debt Global State of the Market 2021*** report and webinar, in partnership with CBI, is a flagship, go-to series capturing the state of the global sustainable bond market.
- ***Green Bond Funds—Impact Reporting Practices 2021***, in partnership with Environmental Finance, is the second installment of the series analyzing impact report practices.
- ***Microfinance in Support of Sustainable Development***, in partnership with the Stockholm School of Economics, is a teaching case study focusing on the use of sustainable bonds in microfinance and drawing on the experience of GSS bond issuances from Symbiotics, an alumnus of the GB-TAP.

In addition, the GB-TAP hosted a first-of-its-kind technical workshop dedicated to the Central Bank of Egypt staff both in preparation for the COP27 and to strengthen the staff's skills in green and sustainable finance. The GB-TAP also organized three tailored workshops for alumni: *Financing Green Buildings, Emerging Technologies and Blockchain, and Blue Bonds.*

Cecilia Scharp

Assistant Director General, Department for International Organisations and Policy Support, Swedish International Development Cooperation Agency – SIDA

"Climate change and the loss of biodiversity is one of the defining issues of our time. Unfortunately, we are still far from reaching the targets set out in the Paris Agreement and the SDG on climate. We need to urgently scale up funding for climate mitigation and adaptation, and do more in countries particularly vulnerable to climate impacts. We need to facilitate collaboration between public and private actors to close the financing gap, and help emerging markets mitigate and adapt to the effects of climate change.

Green bonds are proving to be a successful way to raise capital and increase investments in climate-related projects. In 2018, when the EGO fund was established, the international green bond market was relatively under-developed. While the EGO fund was willing to invest, support was also needed to help boost the supply of green bonds in emerging markets. This was the purpose of the GB-TAP, which provides support to financial institutions and government bodies in terms of professional education, knowledge-sharing, policy support, and technical assistance.

Four years later and the results are impressive. For the first time in history, the global sustainable bond market has surpassed the threshold of US$1 trillion in total annual issuance volume, and has topped US$3.7 trillion in lifetime issuance. Green bonds reached a new record high at US$517 billion in 2021 and expected to rebound after a temporary dip in 2022, despite the ongoing global pandemic and a lower economic growth trajectory. In addition to record-breaking issuance volumes, the sustainable bond market has also seen increasing diversification in bond labels, currencies, debut issuers, and new countries coming to the market.

The GB-TAP has contributed directly to this market growth. By the end of 2022, the GB-TAP's support has directly led to the issuance of 41 green bonds, mobilizing more than US$ 2.7 billion for green projects such as clean transportation, solar panels, energy efficiency, and green buildings. The GB-TAP has also mobilized more than US$3.3 billion in social and sustainability bonds, which will support green and social projects in emerging markets. Moreover, the GB-TAP has continued to raise the quality of the bond issuances so that they are attractive to institutional investors, and so there is adequate transparency and reporting around use of proceeds.

We are delighted to support this initiative and look forward to the continued cooperation with IFC, Amundi, and other program partners."

First GB-TAP In-Person Training in French with HEC Paris in Abidjan, Ivory Coast

In December 2022 in Abidjan, Côte d'Ivoire, and in collaboration with HEC Paris, IFC's Green Bond Technical Assistance Program (GB-TAP) delivered its flagship Green, Social, and Sustainability (GSS) Bonds Executive Training Program dedicated for bankers in West Africa. The training was timely as a follow-up and action plan from the COP15, which was in Abidjan in May 2022. **The GB-TAP had 40 exceptional senior bankers from 15 leading financial institutions from seven countries** (Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Senegal, and Togo). Together, they exhibited the best of Africa in resilience, enthusiasm, and commitment. This first entirely delivered-in-French training was groundbreaking in many ways and has inspired a new generation of green bankers. The training gathered incredible leading market players as speakers and contributors, such as Amundi, BNP Paribas, Luxembourg Stock Exchange, Cosmos Yopougon, CEMOI chocolatier, West African Development Bank (BOAD), Société Générale Corporate & Investment Banking (CIB), and Moody's France SAS, who provided commanding insights, foresights, and passion.

This highly practical training is designed specifically for emerging market banks interested in issuing GSS bonds. The training seeks to strengthen bank executives' foundational skills in green and sustainable finance. During the intense four-day in-person training, the participants, to solidify their learning, had to work in their assigned teams to deliver a green bond pitch presentation to judges who are market leaders.

The participants also had the chance to visit the green Cosmos Yopougon shopping center, the first in West and Central Africa to have earned EDGE certification, the green building certification offered by IFC. Participants also had an inspirational visit from senior representatives of CEMOI, a major chocolate player that supports farmers in growing cacao in the best conditions, guaranteeing respect for their human rights and fighting against deforestation.

Summary of Abidjan training.

Attiogbé Komlan Vossah

Group Director Treasury, Vista Bank Group

"A real opportunity to have participated from 05 to 08 December 2022 in the executive training on «green, social and sustainable bonds» organized by IFC GB-TAP and the HEC Paris office based in Abidjan. We were more than 40 bankers and CSR actors from 15 banks in West and Central French-speaking Africa. This training has just launched the foundations for a new generation of bankers more concerned with the green, social, and sustainable impact of the projects they finance. Through this training we became aware that our States, Banks and Companies can have access to long-term and reasonable resources for the financing of projects with social and sustainable impact."

Ouidad Djihouan Aminou

Chef service ALM & Monnaie locale Trésorerie au sein de la NSIA Banque Benin SA.

"Participating in this Executive Training on Green Bonds was a golden opportunity and life changing. For someone who had no idea about the existence of this type of financing, it was a very interesting and enriching discovery. These four days allowed me not only to learn about this financing instrument but to change my perspective on many things and in particular how our decisions, our habits, and our way of thinking can impact the environment. One of the things I also learned is the fact that as a bank, unfortunately we do not bother to look at the environmental aspects in the activities carried out by the companies we finance. This training was the trigger to take us as young bankers to a change of thinking about our financing strategies by having a responsible posture for the environment."

APPENDIX A:
IMPACT REPORTING METHODOLOGY

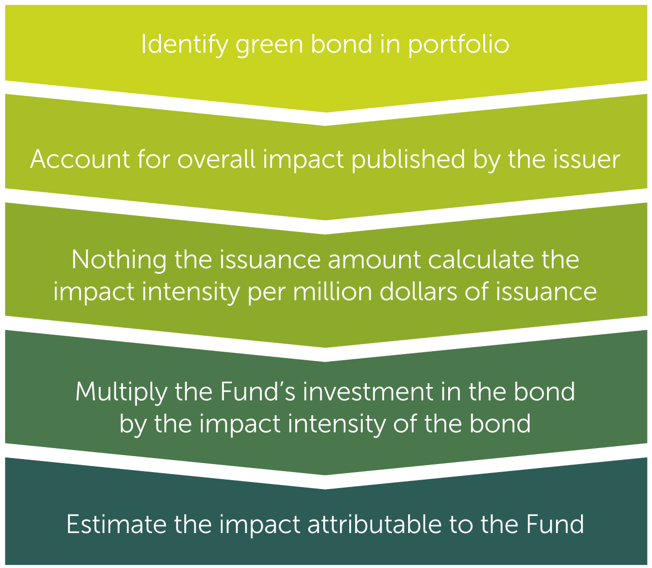
Amundi Planet Emerging Green One (AP EGO) seeks to provide accurate and timely information to clients, partners, and stakeholders about the Fund's investment activities. This appendix elaborates on the process followed for impact reporting of the AP EGO Fund. The primary inputs for this process are the annual impact reports and dedicated newsletters published by green bonds' issuers, and information published in official websites of green bond issuers. These reports usually include aggregated impact information per eligible category under the Green Bond Principles. The impact is often expressed by issuers using annual key performance indicators, such as greenhouse gas (GHG) emissions avoided, energy saved, renewable energy installed capacity, water saved, and others. AP EGO takes this information and selects a set of indicators to summarize the impact of eligible projects that have been financed through its investments in green bonds.

In addition to calculating the impact attributable to the Fund on a bond-by-bond basis, the Fund also tracks the distribution of green bonds in its portfolio by sector and geography, according to the issuer's main location, to enrich the impact reporting.

The amount of avoided GHG emissions is one of the most frequent impact indicators disclosed by green bonds and is one of the key indicators for reporting the impact of the Fund's investments. For the sake of conservativeness, the Fund applies the following criteria:

1. Only published reliable data is used as input for the Fund's impact calculation. In the absence of data (such as a recently issued green bond where the first annual impact report is not available until a year after the issuance), the impact calculation (tons carbon dioxide equivalent [tCO_2e]/US$1 million invested) takes the full volume of the Fund's investment but does not estimate or artificially fill in missing impact data.
2. In cases where the available impact report does not reflect 100% of the GHG avoidance[27], the Fund will only use the available disclosed data to represent the avoided GHG emissions of the total bond. For example, one green bond has fully allocated its proceeds to six renewable projects and one transport project. However, the issuer has disclosed the avoided GHG emissions only for the six renewable projects, not for the transport project. As a result, AP EGO will still use the disclosed data for the Fund's impact report to represent the avoided GHG emissions of the total bond because this method is conservative.
3. In cases where the green bond impact reports include data that does not pass AP EGO quality control (such as cases in which the reported impact data is not within the usual range of similar projects), the respective numbers are excluded from the impact calculation of the Fund's portfolio.
4. In cases where a green bond issuer released its impact reports in previous years but not this fiscal year, defined by AP EGO Fund, data from the latest impact report will be used for impact calculation of this particular issuer to appreciate the impacts of green finance, with an assumption that impacts are generated in a consistent way across years within the life cycle of the underlying green assets once they are in full operation. These cases will be reviewed on an individual basis to ensure no overestimation, and the follow-up engagement will be prioritized with these issuers.

At a high level, the Fund takes issuer information for each bond and calculates the impact associated with the financing share of the projects using a prorating approach. Then the Fund translates this information into an impact intensity per bond (such as tCO_2e/year avoided by US$1 million invested) and converts it into a prorated impact attributable to the Fund. The following figure highlights the process for estimating the impact for each bond invested by the Fund.



27. Many reasons are possible, such as insufficient data sources and lack of calculation methodology or capability by the issuer.

EXAMPLE: AP EGO INVESTMENT IN THE GREEN BOND XS2373796593 ISSUED BY CHINA MERCHANTS BANK (CMB) FINANCIAL LEASING

1) The Fund locates the specific bond in its portfolio and accesses the latest impact report published by the issuer (in this case, CMB Financial Leasing's Annual Sustainable Finance Report**).**

- On a 9 September 2021, CMB Financial Leasing successfully issued a carbon neutrality themed Gren Bond with 3 tranches; and
- In December 2021, a Green Loan was arranged:

Type	Currency	Tenor (year)	Amount (million)	RMB Equivalent Amount (million)
Green Bond	USD	3	600	4,270
	USD	5	300	2,135
	EUR	3	100	698
Green Loan	JPY	3	15,000	737
Total				**7,840**

The specific bond is the US$300 million five-year bond identified as the second bond listed in the table showing CMB leasing green bonds and green loans in its Annual Sustainable Finance Report. The issuance volume for this bond accounts for 27.2% of the total issuance amount of the four listed green bonds and loans in the table. (2.135 million RMB/7.840 million RMB = 27.2%).

2) The Fund uses the avoided GHG numbers from the report to estimate the avoided GHG impact associated with this bond.

Eligible Project Categories	Projects	Impacts
Renewable Energy	Solar Energy Projects	• 629,25 MWh of solar energy generated annually • 501,136 tonnes of GHG avoided annually
	Wind Energy Projects	• 1,371,796 MWh of wind energy generated annually • 1,216,105 tonnes of GHG avoided annually
Clean Transportation	Urban Rail Transition Projects	• 11 urban rail transit projects across China • 920,000 of passengers transported daily

From the issuer disclosure, AP EGO identifies the following impact:

- Avoided GHG emissions through Renewable Energy = 501,136 + 1,216,105 = 1,717,241 tCO_2e/y
- Avoided GHG emissions through Clean Transportation: **Not reported**
- Total reported GHG Avoidance: 1,717,241 tCO_2e/y

Because the issuer reported the avoided GHG emissions for one eligible activity (renewable energy), the Fund uses allocation information in addition to GHG avoidance numbers to calculate the GHG avoidance intensity. Thus, the following table shows the amount allocated to each eligible activity.

Eligible Project Categories	Number of Projects	Amount (RMB Million)	Percentage
Renewable Energy	24	5,503	70%
Solar Energy Projects	13	2,090	27%
Wind Energy Projects	11	3,413	43%
Clean Transportation	11	2,337	30%
Urban Rail Transition Projects	11	2,337	30%
Total	**35**	**7,840**	**100%**

- Percentage of total issuance allocated to Renewable Energy (RE): 70%.
- Total issuance amount allocated to RE: 5.503 million RMB.

$$\textit{GHG Avoidance Intensity} = \frac{\text{Total reported GHG avoidance}}{\text{Total issuance amount allocated to RE}} \times 70\% = \frac{1{,}717{,}241\ tCO_2eq/y}{5{,}503\ \text{million RMB}} \times 70\% = 218.4\ \frac{tCO_2eq}{y\ \text{million RMB}}$$

Considering a foreign exchange rate of 7.116, the GHG intensity per US$1 million is then 1,554.4 tCO_2e/y per million US$ (218.4 × 7.116).

3) With the GHG avoidance intensity, the GHG avoidance attributed to the AP EGO Fund is estimated as follows:

- The Fund invested US$4.3 million in this bond (XS2373796593).

6,645 tCO_2e/y is the final GHG avoidance number included in the Fund's impact report for the respective avoided GHG emissions financed by the Fund through the specific green bond XS2373796593.

$$\textit{GHG Avoidance Attributable to the Fund} = \text{GHG Avoidance Intensity x Fund investment in the bond}$$

$$\textit{GHG Avoidance Attributable to the Fund} = 1{,}554.4\ \frac{tCO_2eq}{y\ \text{million US}} \times 4.3\ \text{million US\$} = 6{,}645.1\ tCO_2eq/y$$

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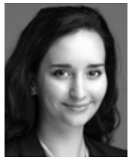

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