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GAM SUSTAINABLE CLIMATE BOND ANNUAL IMPACT REPORT 2023



GAM
Investments

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FOREWORD

Our Commitment

At GAM we recognize that climate change is transforming the global economy, leaving no sector unchanged. To help our clients' capital prosper in this rapidly changing world we are firmly committed to addressing the significant risks and opportunities the low carbon transition creates.

That's why last year we published ambitious interim targets to put three quarters of our investment fund assets in material sectors on a clear pathway to net zero by 2030. We also further developed our ESG-related offerings, including launching our proprietary ESG Vector framework internally for deeper assessments of focus companies and innovating to create sustainable strategies and solutions for clients such as our climate bond strategy.

An award-winning focus on financials

Our climate bond strategy is unique in that it focuses on European financials, a pivotal player in financing the low-carbon transition and offering perhaps the broadest impact in the green bond market with exposure from real estate to renewables.

We take a methodical approach to measuring and disclosing the environmental impact of our strategy. A detailed approach that led us to win Environmental Finance's Impact Award for our Climate Bond Report last year (2022) and Green Bond Fund of the Year this year (2023).

We are careful to ensure transparency in our impact reporting and build in the extra step of using a third party data provider Carbone 4 to verify impact.

This year saw the spotlight shine further on biodiversity loss and its impact on the climate, with world leaders and investors committing to adopt the ambitious Global Biodiversity Framework at COP15. Looking forward, we will seek to further integrate biodiversity in our investment solutions, and continue to offer attractive returns that advance both the net zero and nature positive transitions.

Peter Sanderson

Group Chief Executive Officer



Peter Sanderson

Group Chief
Executive Officer



IN NUMBERS

Equivalent strategy impact per year

751

Tonnes of CO₂e avoided

2.2

MW Renewable energy capacity installed

1,849

MWh renewable energy generated

1,076

m² green buildings financed

99

m³ water treated per day

Financial

5.4%

Average yield (yield to call)

280bps

(vs. 170bps for the index) Average spread

BBB+

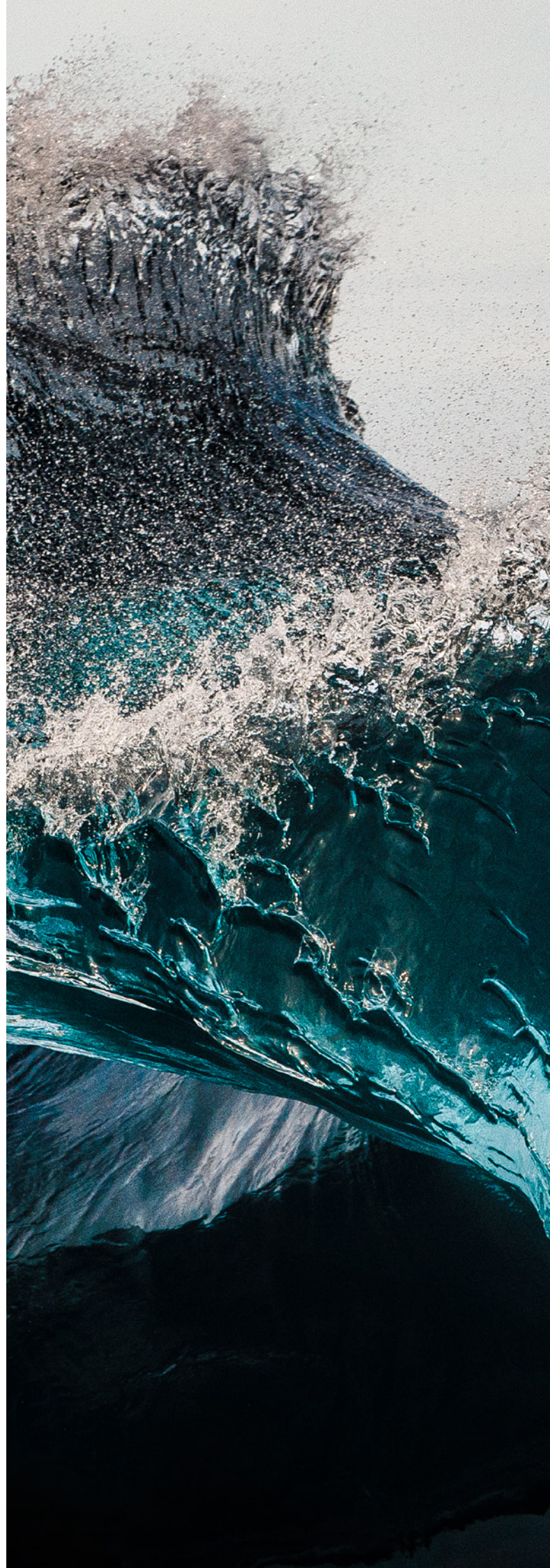
Average rating

4.0

Average duration

100%

Financials



OPINION: REFLECTING ON THE ROLE OF FINANCIALS IN THE TRANSITION AND UNIQUE OPPORTUNITY IN FINANCIAL GREEN BONDS

Financials a catalyst for the transition?

As detailed in our White Paper on the role of financials in the transition and the benefits of green bonds ([gam_whitepaper_climate-bond-fund_202109_eng-final.pdf](#)), European banks have a key role to play in supporting the shift to a low-carbon economy. Our conviction on the European financial sector is underpinned by several factors:

- The pivotal role of European banks in the economy:** Banks are the key source of financing in Europe, with bank lending representing ~80% of financing to European corporates. Consequently, shifting the flow of credit towards the “green” economy has tremendous positive environmental impact potential.
 - Supporting SMEs and individuals in their transition:** While large corporates can raise financing through capital markets, SMEs and individuals are typically solely reliant on bank financing. Banks have the ability to generate further impact by supporting SMEs and individuals that may lack internal resources to set up robust climate strategies.
 - Regulation will further shape banks’ climate strategies:** The impeccable track record of the regulator in transforming the financial sector after the Global Financial Crisis provides comfort in their ability to effect change. Climate risk is at the top of the regulatory agenda, and initiatives will further advance banks’ climate strategies as well as incentivize them to reorient credit flows towards the green economy. Ultimately, regulation will accelerate the strengthening of banks’ own climate strategies, which in turn should further catalyze the transition of the economy.
- Banks are already taking action:** Banks are continuously ramping up their climate strategies, whether setting net zero-aligned targets or other ambitious green financing targets. Banks are also increasingly taking an “active ownership” approach, leveraging their privileged relationships with clients. This includes supporting clients in their transition through specific green products, advisory and other services with positive impact. Moreover, banks are stepping up by setting strict expectations and requirements for clients in GHG-intensive sectors.

Banks’ climate action should target meaningful global impact, not simply “window dressing”.

Investors’ actions, from engagement to exclusions, that ultimately influence issuers’ funding costs – must reward leaders and penalize those laggards. On the climate side, the key KPI should be the issuer’s contribution to the transition – a global transition that must happen worldwide across countries, sectors and economic agents.

Taking a step back, banks’ role as financial intermediaries is to support the economy by providing financing (and other financial services) to a wide range of stakeholders. While banks can accelerate the transition by shifting the supply of credit and engaging with clients, their influence on the demand for credit is more limited. On aggregate, banks’ lending books will reflect today’s economy – still heavily reliant on fossil fuels and other greenhouse gas (GHG) intensive sectors. Turning off the financing taps to these sectors today would cause significant economic disruption, and material adverse social impacts in turn.

A good example is mortgage lending. GHG emissions from housing, such as energy use in buildings, represent a material portion of overall GHG emissions (~10%¹). Should banks immediately cease lending for purchasing properties with poor energy efficiency? While this would put pressure on individuals to renovate properties, ownership tends to be skewed towards lower-income households. Such a measure would likely have adverse social impacts, such as restricting access to property or declining values of property with low energy efficiency ratings. This would disproportionately impact households with lower income and wealth. The banks' role is to support customers (through advisory and green loans that incentivize renovations) and can skew the mix of new lending towards more efficient properties. This cannot, however, become a substitution for better public policy and regulation.

The easiest solution for banks would be to decarbonize their lending portfolios: shift lending to green activities and cease lending to GHG-intensive sectors. While this would lead to a drastic decline in carbon intensity, this would likely have zero impact of global GHG emissions worldwide – as lending would typically be picked up by another bank or capital markets.

A tougher solution would be to work with clients to support their carbonization plans – an “organic” reduction in emissions. As the concept of net zero is more meaningful at global level, banks' contribution to the transition should be seen as the impact of decarbonizing their portfolio on global GHG emissions, rather than a headline decline in their portfolio's GHG emissions. Organic reductions in emissions derived from clients' emissions reductions or where reductions in lending are due to retiring GHG-intensive assets should be prioritized. Reductions driven by a decline in lending that merely shifts to another institution should not be viewed as having a material impact.

Of course, there are activities where exclusions are necessary, especially those incompatible with the Paris Agreement targets. Disclosing a contribution analysis of the drivers of decarbonization is helpful to assess the sources and materiality of decarbonization efforts.

Managing exposures to GHG-intensive sectors is a key crux

Banks' exposures and policies to GHG-intensive sectors are often closely scrutinized. Perhaps counter-intuitively, the largest positive impact will come from the decarbonization of GHG-intensive sectors, alongside supporting the development of “green” activities – hence institutions with the largest exposures may well be those driving the largest impact.

Moreover, banks' policies for GHG-intensive sectors are typically assessed based on “best-practice” criteria, irrespective of banks' exposure. These tend to be easier to implement for issuers with limited exposure, while some best practices may not be realistically feasible for those more heavily involved. The push towards rewarding those institutions with more restrictive policies may create a further incentive to rapidly reduce exposures, or to restrict new lending instead of supporting sector transition.

Should a high exposure to the fossil fuel industry be a systematic negative for banks' environmental profile? Not necessarily, as long as there is a clear plan to manage these exposures, including robust exclusion policies for activities misaligned to the Paris Agreement, a strong engagement plan and a lending strategy that incentivizes improvements and delivering on climate strategies. Banks should be assessed on their ability to deliver on aligning their activities to net zero, rather than the starting point.

Supporting clients should not be synonymous with lending indiscriminately to GHG-intensive industry. Banks have a duty to take on an active ownership role, both supporting customers in their transition and engaging to voice their expectations and requirements. Lending to customers should increasingly be tied to progress on net zero strategy, both implementing and executing on their strategy. A wide range of instruments or mechanisms may be used: sustainability-linked loans, including climate-related requirements in loan covenants or setting time-bounds requirements that trigger reductions in exposure or exiting client relationships. Nevertheless, exclusions and divestment remain a critical tool, especially in activities incompatible with the Paris Agreement targets or as a last resort for companies that are not willing to implement or execute on credible net zero targets.

While this approach is likely to have the highest impact, this can be used as an excuse to justify complacency in managing exposures and raises the bar for banks to demonstrate the effectiveness of their strategy. Banks should clearly disclose requirements and expectations when providing financial services to GHG-intensive sectors including details around how this is assessed, action plans for those lagging and an assessment of their current exposures. The burden is on banks to demonstrate the impact through active engagement with issuers.

A successful transition is one that leaves no sector or country behind, highlighting the need for banks to avoid “window dressing” their decarbonization efforts by cutting lending to “brown” sectors, or those which would have limited impact at a global level. Banks must ensure that their transition plans contribute to a global and inclusive transition that generates high impact by supporting all stakeholders, while penalizing the laggards unwilling to transition. Given the breadth of the European banking sector's lending mix, serving all types of customers (from individuals and SMEs to large corporates) across all sectors and geographies, the impact potential is vast.

¹Source: [Emissions by sector – Our World in Data](#)

Green bonds from financials – a unique opportunity

From a pure credit standpoint, green and non-green bonds are identical. Green bonds are typically issued in senior unsecured, although they can also be in subordinated and other formats, with the same credit risk, ratings, and structure as non-green bonds. The sole difference is the use of the proceeds (what the issuer is allowed to do with the cash raised), which can only be used to finance assets or projects with a positive environmental impact (such as renewable energy) in the case of green bonds. An important implication is that while the proceeds are earmarked to finance green assets, bondholders bear the credit risk of the issuer, with no recourse to the green assets. In case of default of the issuer, the recovery for green and non-green senior unsecured bondholders would be identical.

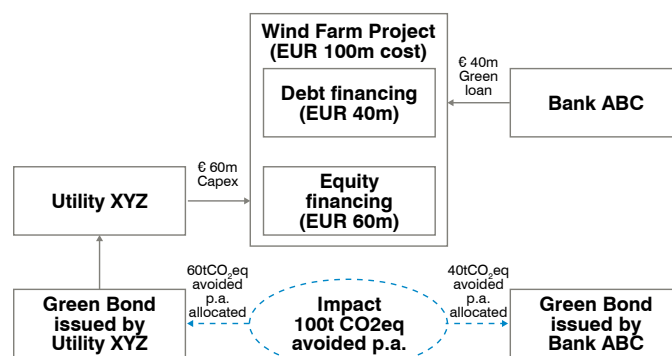
Green bonds from banks are no different than green bonds from corporate issuers. The only slight difference is that banks do not directly own green assets such as wind farms, but instead provide lending for such green projects. For example, banks will offer financing for renewable energy projects or mortgages on green buildings. Green bonds of insurance companies tend to be more alike those of corporates, typically allocated to projects that are owned by the insurer, such as stakes in renewable energy projects or owned green buildings, as part of their investment portfolio.

As an example of a green bond from a corporate, EDF Energy has issued several green bonds mainly related to renewable energy projects. The proceeds raised from the group's green bonds are therefore used for EDF to acquire these projects, where EDF typically owns (in part or in full) and operates the projects. As example of green bond from a bank, La Banque Postale has allocated part of its green bond proceeds to the loan financing of Project Condor, a portfolio of solar PV plants in the south of France.

The key takeaway is that the difference between banks and corporates is the role of the issuer. One is the owner (shareholder), and the other provides lending to projects. A single project could be allocated to the green bond of both a bank and a corporate.

Take a hypothetical wind farm project, for example, allocated to the green bonds of both a bank and a corporate. In this case, the total financing of EUR 100 million for a hypothetical wind farm project would be split between the corporate (Utility XYZ) as the "equity owner," which owns and operates the project (EUR 60 million), and the bank which provides the debt financing for part of the project (EUR 40 million). The project can be allocated to the green bond of the bank and utility pro-rata of their share of total financing. The impact generated by the wind farm – a hypothetical 1,000 tonnes of CO₂eq avoided per annum – would be allocated to each green bond pro-rata of the contribution to the financing of the project (40% of the impact to Bank XYZ green bonds and 60% to Utility XYZ green bonds). The split of impact would purely reflect the share of financing, while the impact per € financing/investment would be identical.

Figure 1: Wind Farm Project



Source: Atlanticomnium.

Green bonds from financials offer the broadest impact

Green bonds from carefully selected European banks provide investors with positive impact while benefitting from solid credit quality. This is especially important where banks finance projects with a high impact but a higher risk of default, such as small green projects for SMEs.

Perhaps the biggest USP for financials green bonds is the breadth of impact they offer. While European financials is a single sector and geographic area – the impact offered is perhaps the broadest available in the green bond market. The breadth of impact is three-dimensional: in terms of geography, sector and stakeholders.

European financials offer a global impact: The largest issuers of green (or sustainability) bond issuers tend to be the larger diversified institutions with global footprints. As an example, while Standard Chartered is UK-domiciled, the bank operates mainly outside of Europe (Asia and Africa are ~80% of loans). Another example would be BBVA, a Spanish bank that operates across >25 countries and mainly in Emerging Markets (Mexico, Turkey, South America are ~70% of total income). This is powerful in terms of impact, as these issuers support the transition globally with robust governance and sustainability strategies when compared to local non-European players.

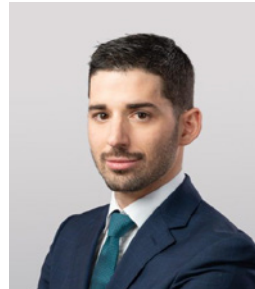
European financials support virtually all sectors in the

economy: European financials' loans or investment portfolios reflect the whole economy by including a wide range of sectors. This is demonstrated in the broad range of projects financed by green bonds, covering the whole energy supply chain (from renewable generation to infrastructure to manufacturing components), housing sector (both residential and commercial), sustainable transport and many other sectors – including water management, forestry and waste management.

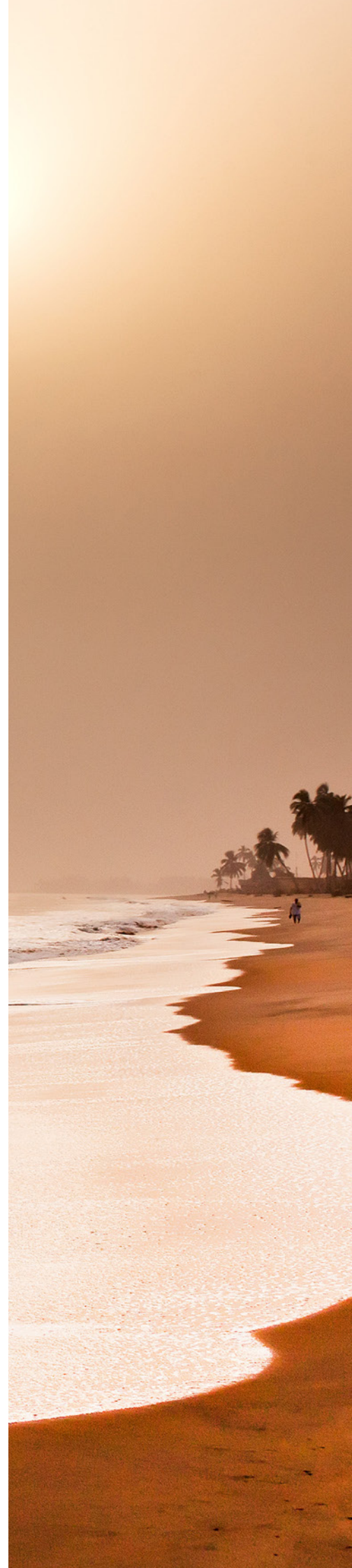
European financials support both SMEs and individuals:

Last but not least, one of the unique aspects of green bonds from financials is the ability to support a wide range of stakeholders, including individuals and SMEs. While large corporates most likely have a dedicated sustainability team in-house and the financial resources to help shape their climate strategy, this is plainly not the case for SMEs. Financial institutions can play an important role, offering advisory services to help SMEs understand their carbon footprint and potential levers they can pull to align their business with the Paris Agreement targets. On top of SMEs, green bonds from financials also support private individuals, for example products that incentivize green mobility or improve the energy efficient of property. **This offers the impact that is typically only accessible through private markets.**

The breadth of the impact that the European financial sector offers is unique within the green bond market, supporting a global and inclusive transition. Green financing is essential to the transition, nevertheless, to stay on course we must ensure that the whole economy transitions. In the green bond market, European financials offer the broadest impact across the three dimensions and represents a unique opportunity for impact investors.



Romain Miginiac
Portfolio Manager of GAM
Sustainable Climate Bond
fund and Head of Research
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1. A YEAR IN REVIEW AND LOOKING AHEAD

2022 marked several “landmark” climate moments, including the warmest night ever recorded in the UK, all-time high temperatures recording in California, record land loss from wildfires in Europe and floods in Pakistan displacing more than 30 million people. This comes against a backdrop of heightened uncertainty over energy supply in Europe due to geopolitical tensions, which has led to the extension or reopening of several coal plants – a short-term dent to decarbonization efforts. The science is clear – the latest IPCC report estimated 1.1°C of human-induced warming since 1990 and that limiting warming to below 1.5°C will require drastic action. Climate financing flows remain only a fraction of levels required, which according to latest estimates are still below USD 1 trillion a year. This is compared to at least USD 4 trillion per annum required to finance the green transition by 2030, according to the Climate Policy Initiative (CPI).

While in the near term the geopolitical context has detracted from decarbonization efforts, it does remain a positive catalyst in the medium and long-term as it emphasizes both the need to secure energy supply and accelerate the shift to cleaner energy sources.

Since the Global Financial Crisis, regulation has been a key driver of the financial sector. While a number of challenges for the banking sector could have moved climate to the bottom of regulator’s priority list – it has remained at the forefront of the regulatory agenda. 2022 has been particularly eventful, reflecting major milestones that will shape financials’ management of climate risks over the next decades. We continue to believe that regulation will accelerate banks’ climate strategies, which in turn will accelerate the transition of the wider economy.

Banks’ climate stress tests show high potential losses

The Bank of England (BoE) reported the results of its inaugural climate stress test of the UK banking and insurance sectors in May 2022. Through the stress test, the BoE provided a first estimate of the potential long-term (30-year horizon) impact of transition and physical risks on the UK financial sector. The exercise was based on three scenarios – exploring both transition and physical risks – that are built on the work of the Network for Greening the Financial System (NGFS).

The scenarios incorporate both the “direct” climate impact, for example losses related to weather events under the no additional action scenario (3.3°C mean rise in temperature) and the “indirect” economic impact of each scenario. The late action scenario that models a disorderly transition assumes a recession, while the no additional action scenario assumes a permanently lower growth over the exercise horizon.

The results show that climate-related losses are estimated in the GBP 200-350 billion range over 30 years depending on the scenario, with no additional action showing the highest losses. Nevertheless, the exercise shows that loan losses for banks increase considerably, while investment portfolios of insurers could face a material drop in value. Outputs are subject to considerable uncertainty, and the BoE points out that ranges of expected losses for similar counterparties for banks was in the 0.2-2.3x range (10x delta) for example.

Beyond the quantitative output and estimate of the potential climate-related impacts on the financial sector, this was a learning exercise for regulators and banks/insurers. The BoE highlighted that there are still considerable data gaps to assess climate risks and challenges related to quantifying/modelling the impact of climate risk. The output of the stress test has been used as part of the supervisory dialogue and feeds into financials’ supervisory assessment.

In July 2022, the ECB also released the output of its inaugural climate stress tests. The thematic exercise assessed the impact of transition and physical risks across a range of short- and long- term scenarios. The output reflects manageable aggregate losses of USD 70 billion under the short-term scenarios, with the majority of losses stemming from transition risks. The ECB states that this may significantly understate actual risks given a number of uncertainties around data quality and model limitations. As with the BoE’s stress test the most important aspects are data gathering and benchmarking banks’ stress testing capabilities. In time, as scenarios are refined and data quality improves, the quantitative outcome will be more relevant.

Moreover, the ECB has set a firm deadline for banks to meet supervisory expectations on the management of climate risk (and environmental risks) by the end of 2024, while publishing an assessment of current practices. The ECB’s thematic review of climate-related and environmental risks covered a wide range of areas (see Figure 3 below) – from governance to risk management to business environment and strategy. The review not only assessed whether practices have been implemented but how effectively they were implemented in practice. The findings show that while banks’ management of climate risks has improved, there remain significant gaps compared to supervisory expectations that need to be filled by the end of 2024.

Beyond the remediation action needed from banks, in a small number of cases the outcome of the climate stress tests, and thematic review has led to higher capital requirements.

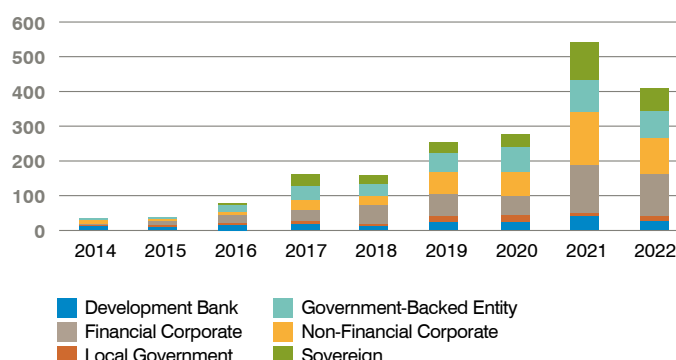
On the one hand, regulation will bring more transparency and consistency to reporting and data, which will improve investors’ ability to assess climate risk in the sector. On the other, climate stress tests will accelerate banks’ transition plans by penalizing those with higher risks with higher capital requirements. Over the medium-term, however, we expect climate-related risks to influence capital requirements directly.

Figure 2: Assessment modules of the thematic review

Core modules				Risk specific modules			
Materiality assessment	2.1 Credit risk	Governance and risk appetite	4.1 Management body	Credit risk	6.1 Onboarding and due diligence		
	2.2 Market risk		4.2 Risk appetite statement		6.2 Lending policies		
2.3 Operational risk	4.3 Remuneration		6.3 Risk classification				
2.4 Strategic risk	4.4 Organisational structure		6.4 Collateral valuation				
2.5 Liquidity risk	4.5 Data governance		6.5 Monitoring arrangements				
2.6 Environmental risk	4.6 Internal risk reports		6.6 Loan pricing framework				
Business environment and strategy	3.1 Business environment	Risk management framework	5.1 Risk quantification	Operational risk	7.1 Business continuity		
	3.2 KPIs		5.2 Mitigation measures		7.2 Reputational risk		
	3.3 Strategic steering		5.3 Capital adequacy		7.3 Liability and litigation risk		
			5.4 Environmental risks	Market risk	8.1 Portfolio analysis & monitoring		
					8.2 Investment process		

Note: Expectations 11 (stress testing) and Expectations 13 (disclosures) from the ECB’s Guide are excluded from the scope of the 2022 thematic review and Expectations 12 (liquidity risk) falls within its scope only in a limited manner.

Figure 3: Green Bond Market by Issuer



Source: Climate Bonds Initiative, 2022.

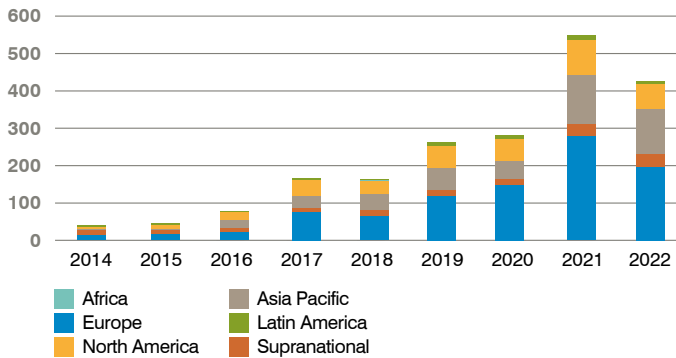
Definition: Green bonds, as defined by the ICMA Green Bond Principles (GBP), are any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the GBP.

Despite commitments and pledges, climate financing still falls short of required levels to stay on a 1.5°C pathway. According to the CPI, climate financing levels in 2021 average USD 850-940 billion, compared to minimum USD 4.3 trillion in estimated annual needs by 2030. We view the green bonds market as a key tool to support financing towards a net zero economy and bridge the climate financing gap.

2022 has been another strong year of green bond issuance, despite a 22% drop. Issuance volumes followed global trends in fixed income markets where supply declined overall. Nevertheless, the market is sizeable with a cumulative USD 2.2 billion issued since inception. Overall, issuance in the global green bond market has grown at a swift 36% CAGR over the period 2014-2022.

Supply from financial corporates has also seen the least decline compared to 2021, “only” 8%, compared to a 33% decline for non-financial corporates and 38% for sovereigns for example. Corporates (both financial and non-financial) continue to dominate the green bond market at a combined 55%, followed by sovereign at 36% (including government backed and local government), and development banks at 9%.

Figure 4: Green Bond Market by Region

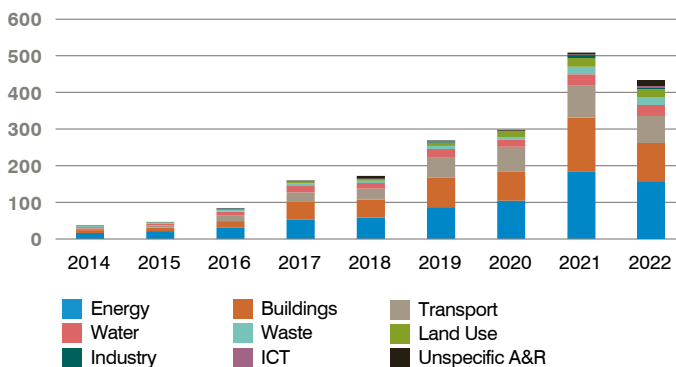


Source: Climate Bonds Initiative, 2022.

Developed markets continue to be the main issuers of green bonds (67% of total issuance), compared to emerging markets (23%) and supranational issuers (9%). Europe continues to be largest region (46%), unchanged in 2021, followed by APAC (28%) and North America (16%). While major geographies decline in issuance, APAC has seen the lower decline in supply in green bond issuance in 2022 at -10%, well above Europe (-31%) and North America (-27%). The top three largest geographies in the green bond market are China (18%), US (14%) and Germany (13%). China continues to be an area of rapid growth with a 16% increase in issuance in 2022, the only area that saw growth alongside supranational entities (+22%).

Looking at use of proceeds, Energy (35%), Buildings (24%) and Transport (18%) are the top three categories at a cumulative 77% of new issuance. Volumes grew rapidly in Adaptation (+68% year-on-year) albeit from a very low base, as well as for Information Technology and Communications (+27%).

Figure 5: Green Bond Market by UoP

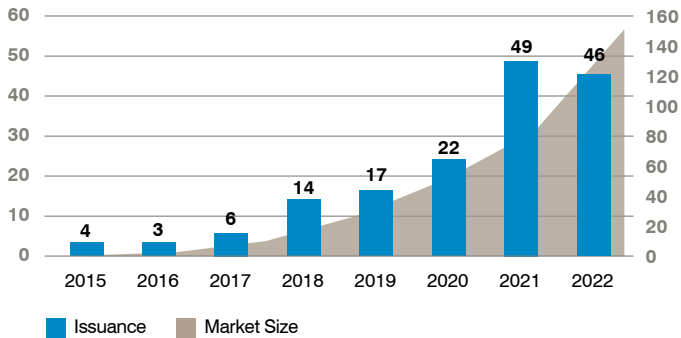


Source: Climate Bonds Initiative, 2022.

Focus on European Financials Green Bond Market

European Financials have remained highly active in the green bond market in 2022, with close to USD 50 billion of issuance, bringing the total outstanding market size² to around USD 150 billion.

Figure 5: European financials green bond issuance & market size



| Source: Climate Bonds Initiative, 2022.

There has been a clear continued growth of the market size, with around 37% growth in green bonds outstanding year on year. While USD 46 billion stands slightly below the record USD 49 billion of 2021, the market has continued its very strong growth (3-year CAGR of ~50%). Most of the decline has been driven by lower issuance from the insurance sector in green and sustainability format, which reflects an overall decline in issuance from the sector in bond markets in general. Banks' issuance of green and sustainability bonds has increased in 2022.

The dashboard below shows the current state of the market. By sector, banks represent the overwhelming majority of green bond issuance, 90% compared to 10% for insurers. By seniority, senior debt is the largest portion of the market at 84%, followed by Tier 2 (both from banks and insurers) at 15% and marginal AT1 issuance (1% – only two bond). There remains some aversion from issuers, especially banks to issue green bonds in subordinated format. The preference remains for senior debt (both senior non-preferred, senior preferred).

The currency split of the market continues to show that Euro issues dominate at 87%, followed by 10% US Dollar and 4% UK Sterling. This reflects the "EUR" focus of the funding structure of issuers, as well as demand from continental European investors.

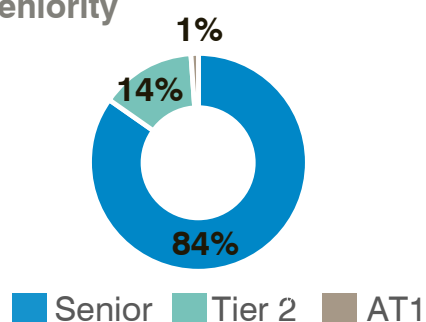
Finally, looking at the maturity (at issuance) split of bonds, 5-7 years remains the sweet spot for green bonds. This reflects the focus on senior debt, as subordinated debt typically has longer maturity, and 5-7 years is the typical tenor for EUR IG bonds.

²Market size based on labelled green (and sustainability) bonds from European Banks and Insurers (also includes Australia), minimum \$200m issued amount, in EUR, USD and GBP

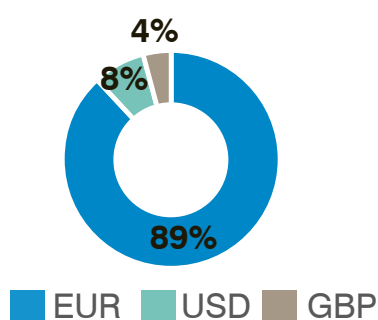


Figure 6: Splits by seniority, sector, currency and tenor

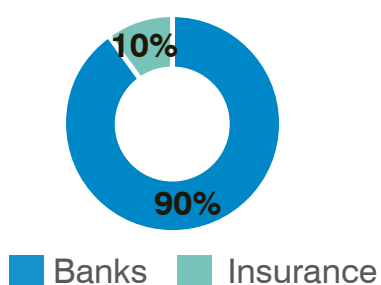
Split by Seniority



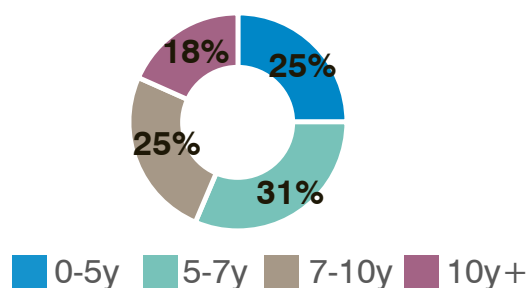
Split by Currency



Split by Sector



Split by Tenor



Outlook

While the Ukraine conflict and ensuing energy and affordability crises have heightened the need to reduce dependency on fossil fuels, there is still a long road ahead to scale up renewable energy and achieve global energy security. According to the fourth and final instalment of the IPCC's sixth assessment report (AR6) published in March 2023, current policies have the world on track for 2.8°C of warming, a far cry from the Paris Agreement's temperature pathways of 1.5°C, or even 2°C. As we get closer to 2030, a key milestone for achieving net zero and nature positive targets, capital markets must unlock the flow of finance towards a climate-resilient economy and capitalise on the opportunities that concrete action brings.

We continue to expect strong supply of European financial issued green bonds over the coming years as financials continue to set increasingly ambitious green financing targets. In January 2023 alone there has been more than USD 11 billion of issuance, more than 20% of the whole issuance in 2022. The market is expected to exceed USD 200 billion by 2023-end. Longer-term, as banks continue to set increasingly ambitious climate strategies that include green financing targets, we expect green bonds to make an increasingly large percentage of the European financials bond market. Over the medium to long-term, the market could comfortably exceed USD 400 billion in size according to our estimates.

2. STRATEGY OVERVIEW

The GAM sustainable climate bond fund is a high conviction strategy focused on delivering a positive environmental impact alongside attractive financial returns for investors. Positive environmental impact is generated by investing in green bonds (and other impact bonds) where proceeds can only be allocated to green projects such as renewable energy or green buildings. Green bonds provide investors with visibility on the use of proceeds and a measurable impact.

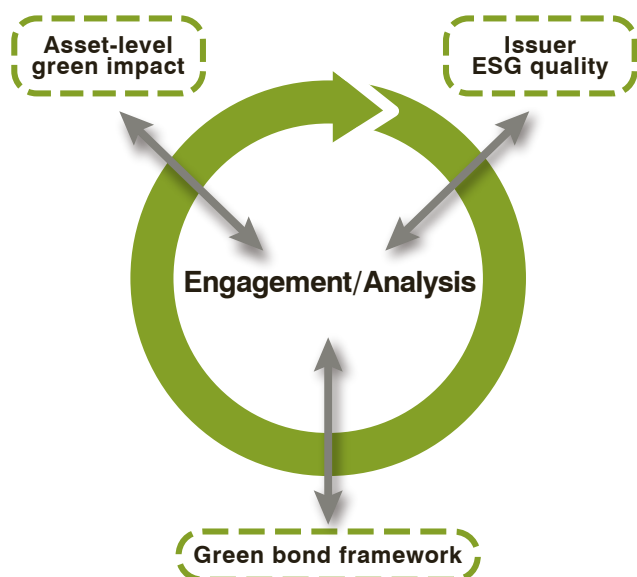
The fund invests mainly in green bonds from the financial sector (banks and insurers). This is based on a conviction that the financial sector has a pivotal role to play in the environmental transition. The European banking sector has tremendous impact potential as it finances the bulk of the economy (around 80% of corporates). Momentum on banks' own environmental strategies is increasing rapidly due to regulation and banks' own efforts, and banks are increasingly ramping up green financing and pressuring clients to align their activities to net zero.

The climate bond strategy also offers attractive returns by investing across the capital structure, in both senior and subordinated green bonds of financials. This allows a significant pick-up in spread and yield compared to the Euro Investment Grade Corporate Bond market. The fund is conservatively managed, aiming for a strong investment grade rating.



3. OUR GREEN BOND ASSESSMENT FRAMEWORK

Figure 7: Green Bond assessment framework



Source: GAM.

Our green bond assessment framework is designed to identify green bonds and other 'impact' bonds that will deliver meaningful impact. Our framework recognizes the ICMA Green Bond Principles (June 2021) and builds on an approach consistent with our investment philosophy – bottom-up research-intensive and adding value through engagement.

Our framework is split into three layers of analysis – issuer, bond, and green asset level. Each is assessed individually, using both proprietary research and data from external third parties. Engagement is a key part of our investment process, both to enhance our analysis and to encourage improved standards within each pillar. All assessments are based on a best-effort basis.

Our three pillars

- **Issuer ESG Quality:** At the issuer level, the general ESG profile of the issuer is analyzed with a particular focus on environmental strategy and expected to be aligned with the issuance of green bonds.
- **Green Bond Framework:** At the bond level, the quality of the governance and processes related to the green bonds' use of proceeds are assessed. This provides visibility on the allocation of proceeds and confidence in the environmental impact.
- **Asset-level Green Impact:** Finally, the financed green assets are assessed through a quantitative lens using comparable and consistent data to ensure meaningful impact.

Each pillar is assessed individually within the selection and allocation process to form a holistic assessment of the impact potential of each green bond. Below is a summary of the minimum criteria for potential inclusion in the fund, and our expectations from issuers:

Issuer ESG quality

We view issuers' overall ESG profile as a key component of our green bond assessment framework. This stems from our belief that issuers with strong ESG credentials, which include a clear and credible sustainability strategy, are more likely to:

- issue green bonds upholding the highest standards of quality, and
- have strategic reasons to issue green bonds.

Overall, we seek to invest in issuers with strong ESG credentials, including a clearly defined climate and sustainability strategy, a credible and transparent green bond framework, and strong pipeline of green assets.

Our analysis covers environmental, social and governance (ESG) factors to derive an overall assessment of the issuers' ESG profile. Given the environmental focus of green bonds, issuers' environmental profiles are a particular focus.

The analysis of issuers' ESG profile is performed internally with a proprietary scoring tool. The scoring tool assesses material ESG issues for each sector, including an assessment of any controversial elements. The output is an ESG Risk Assessment, ranging from Very Low Risk to Very High Risk. Each aspect (E, S, G) is also individually rated, from Very Low to Very High Risk.

We aim to invest in issuers with strong ESG credentials. Thus, issuers rated in a Very high or High ESG risk assessment are excluded from potential investment.

Similarly, issuers assessed as having severe controversies which are incompatible with the sustainability objectives of the fund, would also be excluded. In particular, very severe controversies, especially those assessed to be in breach of UN Global Compact principles, will result in automatic exclusion of issuers for investment. Issuers may score average or below average in certain categories, while still being eligible for inclusion in the fund. These areas will be a priority in terms of engagement with issuers.

Principal Adverse Impacts and Good Governance

Principal Adverse Impacts (PAIs) Principal Adverse Impact (PAI) is any impact of investment decisions that results in a negative effect on sustainability factors, such as environmental, social and employee concerns, respect for human rights, anti-corruption, and anti-bribery matters. As part of this strategy, we monitor the specific mandatory PAIs both through internal research (see above for our internal ESG scoring models that captures material issues for the sector), controversy monitoring, and periodic reviews of PAIs. The research team also reviews controversies and changes in United Nations Global Compact (UNGC) assessments by MSCI are also reviewed on a weekly basis. On a quarterly basis, we monitor PAIs for all issuers in the fund using data from MSCI, and action is required where indicators are above or below thresholds set internally. We use a flagging process to prioritise our actions and follow-up. From 2023, PAIs will also be assessed pre-investment.

Green Bond Framework

The green bond framework is the reference pre-issuance document that sets out all aspects surrounding the proceeds of the green bonds (green assets), from the eligible types of projects to the governance and processes around the selection of assets to reporting.

We view this as a key pillar in our green bond analysis, as there is currently no legal or regulatory requirement as to what constitutes a green bond. Without a robust framework from issuers, confidence around the ultimate impact of bonds is greatly reduced and leaves investors vulnerable to greenwashing. For this reason, we support the development of a consistent set of principles to govern the green bond market as set out in the draft EU green bond standard.

The Green Bond Principles have emerged as the widely adopted voluntary standard for green bonds, and we support these standards and encourage issuers to comply with them. While these standards outline minimum requirements for bonds, we have established our own internal framework to evaluate bonds too, which builds on the Green Bond Principles.

Our internal framework provides a score (0-100%) of the quality of the green bond framework. There is a pass/fail mark (irrespective of the score), should green bonds not fulfil certain minimum criteria.

The assessment is split into four parts, and the overarching goal of identifying bonds is when we have confidence in governance and processes, and strong visibility on the use of proceeds.

Figure 8: Internal ESG Scoring Framework (example using banks)

	Material issues	Risk Assessment	Overall ESG Risk Assessment
E	Exposure to high carbon industries Climate Strategy Sustainable Investments Underwriting Process Operations Controversies	Very Low Risk Low Risk Medium Risk High Risk Very High Risk	
S	Labor Management Diversity & Inclusion Employee health & well-being Human Rights Data Privacy Financial Inclusion Controversies	Very Low Risk Low Risk Medium Risk High Risk Very High Risk	Very Low ESG Risk Low ESG Risk Medium ESG Risk High ESG Risk Very High ESG Risk
G	Board & Organization Risk Management & Oversight Remuneration Auditors Culture & conduct Transparency Controversies	Very Low Risk Low Risk Medium Risk High Risk Very High Risk	

Figure 9: Internal Green Bond Assessment

<p>Use of Proceeds</p> <p>Minimum Criteria</p> <ul style="list-style-type: none"> • Clear issuance purpose and sustainability objectives (typically aligned to SDGs) • List of eligible projects • Eligible projects aligned with GBP or EU Taxonomy • Do no significant harm, related to other sustainability aspects of projects financed <p>Expectations</p> <ul style="list-style-type: none"> • Low use of refinance • If use of refinancing, short lookback period • Strong increase of green asset pool 	<p>Selection & Evaluation of Assets</p> <p>Minimum Criteria</p> <ul style="list-style-type: none"> • Clearly defined process to select assets, including governance • Process to identify and manage environmental and social risks of project • Provisions to review and replace assets in case of non-compliance <p>Expectations</p> <ul style="list-style-type: none"> • Assessment of taxonomy alignment • Periodic review of green asset eligibility • Selection committee with strong ESG credentials and involvement of senior management (C-suite preferred) • Use of external certifications to confirm “green” characteristics of projects (for example forestry)
<p>Management of Proceeds</p> <p>Minimum Criteria</p> <ul style="list-style-type: none"> • Segregated proceeds of funds with internal tracking. • Clear timeline for the investment of proceeds, consistent with life of bond and climate/environmental strategy <p>Expectations</p> <ul style="list-style-type: none"> • External audit of funds tracking • Clear policy of the allocation of uninvested funds, consistent with objectives of the green bond 	<p>Reporting & Certification</p> <p>Minimum Criteria</p> <ul style="list-style-type: none"> • Annual reporting until maturity including both allocation and impact (at least until full allocation) • Reporting is granular with split of projects by category and geography • Pre-issuance Second Party Opinion from a recognized third party • External audit of post-issuance allocation reporting <p>Expectations</p> <ul style="list-style-type: none"> • Transparent methodology for environmental KPIs, or impact metrics computed by 3rd party • Adherence to stricter standards than ICMA GBP such as Climate Bond Standards • External verification/audit of post-issuance reporting covers both allocation and impact reporting

Use of proceeds: As a starting point, the issuer should have a clear purpose to issue green bonds, including the sustainability objectives targeted, relevant alignment with the Sustainable Development Goals, and a list of potential projects for inclusion. Eligible projects should be clearly defined by the issuer and aligned with either categories described in the Green Bond Principles or aligned to the EU Taxonomy (where we encourage disclosure). These should also have clear environmental benefits and should not have any harmful impact on any other sustainable aspects. This is a core conviction and failure to comply will result in ineligibility for investment.

The green asset pool of the issuer should exhibit desirable characteristics. The use of refinancing versus finance should be clearly disclosed and limited, or the look-back period for refinancing of assets should be adequate to provide incremental impact. As we are conscious of the dilemma for issuers to minimize the use of refinancing while also investing proceeds from green bonds as soon as possible, we consider the use of refinancing with a short a look-back period as acceptable. Moreover, historical growth of the issuers’ green asset pool, or eligible green assets, should reflect the issuers’ strategy and incremental impact.

Selection & Evaluation of Assets: The issuers’ selection process is paramount in order to ensure that governance and processes are robust, and bondholders’ interests are safeguarded. As a minimum, we expect issuers to have a clearly defined selection process, including appropriate governance and oversight. We expect issuers to set up a selection committee with appropriate expertise to select and review projects – representing both strong ESG credentials and representatives from senior management. Best practice dictates the use of third-party reviews for the selection of assets and processes. Moreover, the use of certifications or other external metrics used to evaluate the “green” eligibility of projects should be disclosed where possible, especially for projects where the eligibility is less well-defined, such as for forestry projects.

In addition, we expect issuers to have strict provisions in case green assets become non-compliant (no longer deemed to fit within green asset categories). This includes a policy for the replacement of projects, periodical review of asset eligibility, and even a review of the ‘green’ bond label in case green assets become insufficient to fully cover green bond issued amounts.

Management of Proceeds: In line with the objectives of the green bonds, we expect issuers to have proceeds from green bonds clearly segregated, with the flows of invested cash closely tracked. Here again, the external audit of the internal tracking of funds is a positive and is encouraged.

Moreover, issuers should communicate a clear timeline for the full investment of proceeds. We expect issuers to communicate a clear time horizon, consistent both with the issuers' climate or environmental strategy, but also with the life of the bond.

Finally, we expect issuers to have a clear policy on the allocation of uninvested funds. We expect these to be consistent with the ESG objectives of the green bonds and avoid conflicts of interest when buying securities. We also expect a disclosure of those instruments which can be used for unallocated funds.

Reporting & External Certifications: Reporting is key for green bond investors, both to have visibility on the proceeds, as well as to have quantitative assessment of their impact.

We require issuers to provide post-issuance reporting on at least an annual basis until the bond reaches maturity or proceeds are fully allocated. Reporting should cover both allocation with a granular split by project category and geography, and disclose against key KPIs for their environmental impact. We also encourage reports to be verified by third parties to improve transparency.

Where environmental KPIs are provided, we expect the issuer to provide a transparent methodology around calculations and assumptions. The use of widely-recognized methodologies or third-party review of new methodologies to calculate environmental impacts is preferred.

At the pre-issuance level, we require issuers to have second party opinions on ICMA GBP compliance from a recognized assurance entity as a minimum requirement. We also encourage adherence to stricter standards such as the Climate Bond Standards of the Climate Bond Initiative.

Ultimately, where bonds meet minimum criteria for inclusion in the fund, the rating of the internal green bond assessment is considered in the overall assessment of the green bond. The output of the internal green bond assessment also helps steer engagement efforts. For eligible issuers with areas of weakness which do not force exclusion, discussions will be held to strengthen areas of concern. For issuers that do not meet minimum criteria, we aim to engage where relevant in order to voice our views on why upholding high standards is paramount for a well-functioning green bond market.

Asset-level Green Impact

The final step of our framework to assess green bonds is at the green asset or project level. Bonds eligible for investment after screening at the issuer and green bond framework levels provide investors with visibility on the allocation of proceeds and key KPIs for environmental impact.

One of the key challenges for green bonds investors is the lack of comparable and consistent data on reported environmental KPIs by issuers. The methodologies and assumptions used can vary significantly, leading to difficulties in comparing KPIs. Whilst we support efforts to provide granular information on the climate impact of their green bonds, there remains a need for comparable data.

We aim to select green bonds with meaningful positive environmental impact, and our approach also includes a quantitative assessment of environmental indicators. Given the current lack of harmonized and comparable methodology in disclosed indicators, we have decided to use an independent third party to re-estimate the green bonds' environmental KPIs provided by issuers.

Working with Carbone 4, an independent specialized climate data provider, we aim to supplement issuer level reporting with a third-party estimate of their environmental impact.

As we strive to invest in those with meaningful impact, this step offers greater confidence in these green bonds' environmental credentials.

Both our issuer and green bond models have been audited by KKS Advisors, ESG consultants.

Level	Minimum Criteria
Issuer ESG Quality	<ul style="list-style-type: none"> Adequate sustainability strategy including climate strategy ESG and Environmental Profile risk assessment: Medium No severe controversies incompatible with the sustainability objectives of the strategy (especially in breach of UN Global Compact Principles)
Green Bond Framework	<ul style="list-style-type: none"> Aligned with ICMA GBP or stricter standards (for example Climate Bond Standards) Best-in class governance and processes Granular impact reporting, using transparent third-party methodologies Aligned with ICMA GBP Post-issuance allocation and impact reporting
Green asset impact	<ul style="list-style-type: none"> Meaningful positive environmental impact using third-party quantitative data Aligned with Paris Agreement targets

CASE STUDY #1

Recognising the improvers – ANZ

**August 2021: Initial assessment of ANZ's
SDG bonds (sustainability bonds)**

Issuer Analysis

Overall ESG Assessment: Medium ESG Risk

Environmental Assessment: Medium Risk

Key areas of concern (non-exhaustive):

- **Climate Strategy:** No interim science-based targets for financing activities were set and no time-bound commitment to do so, and currently not planning to join the Net Zero Banking Alliance or other framework.
- **Climate risk management:** Integration of ESG within the group's risk management framework was at a very early stage.
- **Policies for lending to GHG intensive sectors:** ANZ's policy ranked as weak given high thresholds for existing customers, and leaves leeway to finance new coal plants for example. Policies in other sectors were very limited.

Social Assessment: Medium Risk

Governance Assessment: Medium Risk

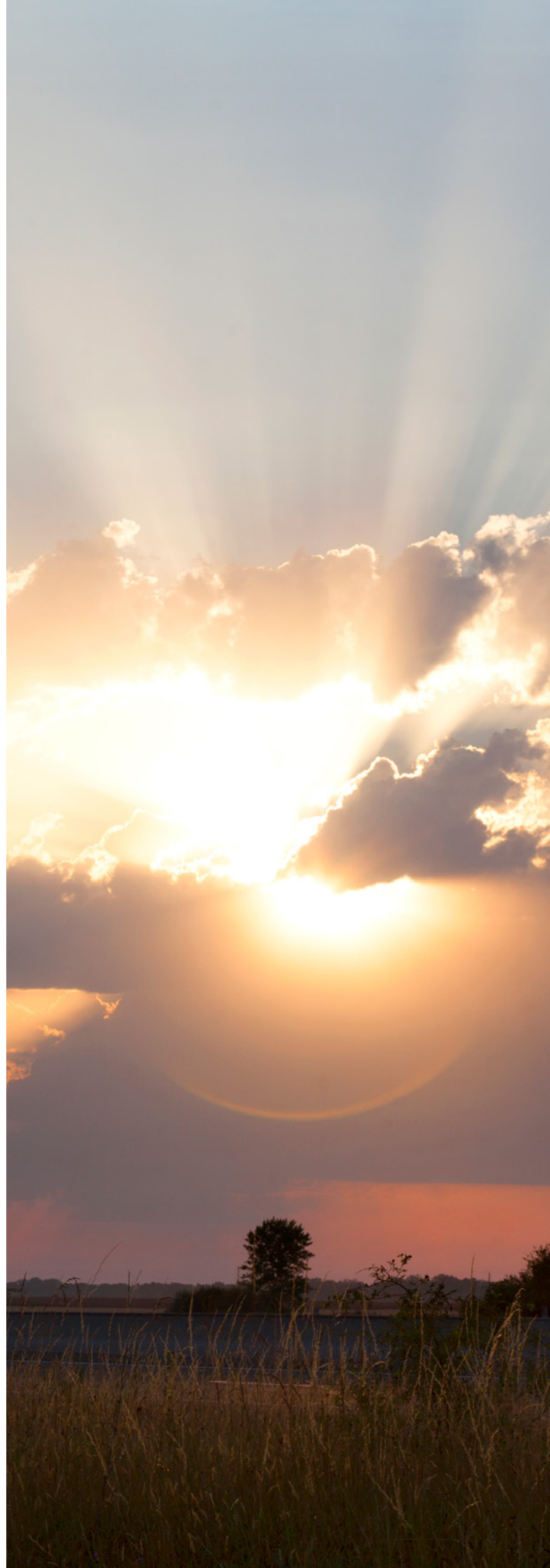
Key areas of concern (non-exhaustive):

- **Social and Governance:** Concerns were mainly related to controversies, following several cases of moderate scale, such as shortcoming on AML issues and Royal Commission investigation.

Green Bond Framework Analysis

Mandatory Criteria: The bond fulfilled all mandatory criteria, including post-issuance reporting audited.

Under our green bond assessment framework, issuers whose environmental or overall ESG score is "Medium Risk" can be included in the fund, if after engaging there is a conviction that the issuer's E and/or overall ESG profile is on an improving trend. Following the initial assessment of ANZ we engaged directly with the issuer, through a one-to-one call. After the engagement, the decision was taken not to proceed with the investment given the lack of conviction on a potential improvement.



August 2022: Second assessment of ANZ's SDG bonds (sustainability bonds)

Issuer Analysis

Overall ESG Assessment: Medium ESG Risk (borderline low ESG risk)

Environmental Assessment: Low Risk

Key areas of improvement (non-exhaustive):

- **Climate Strategy:** Set interim (2030) science-based targets for several sectors, from power generation to commercial buildings, with a commitment to expand the coverage of sectors by 2024 at the latest (in late 2022 ANZ disclosed targets for another four sectors), in line with the group's commitment as member of the Net Zero Banking Alliance (joined in late 2021).
- **Lending to GHG intensive sectors:** Despite fossil fuel policies that remain weak, ANZ has made progress in demonstrating its approach to decarbonize its portfolio by supporting clients. This was evidenced through the enhancement of the group's engagement plan targeting the top 100 largest emitting businesses in the group's lending portfolio – focusing on climate transition plans. ANZ disclosed the assessment of customer's transition plans as well as case studies to illustrate. The bank's engagement plan has a clear link to financing, with reductions in exposures or exits for laggards. Moreover, ANZ set a science-based target for power generation (includes coal) and has a commitment to set an interim target for the group's O&G policy (which has been set in late 2022).
- **Climate risk management:** Committed to develop a comprehensive climate risk management framework by the end of 2022 (which has been introduced in late 2022).

Social Assessment: Medium Risk

Governance Assessment: Medium Risk

Key areas of concern (non-exhaustive):

- **Controversies:** The assessment was unchanged, however given majority of fines have been paid and ANZ has made good progress in remediating material shortcomings, we expect to upgrade our controversy assessment in the absence of any adverse developments.

Given the strong progress made by ANZ, especially on setting interim science-based targets and enhancing other areas of its climate strategy (such as risk management) we took the decision to invest. The "Medium ESG Risk" assessment is expected to change to "Low ESG Risk" in a reasonable time horizon as controversies are upgraded and the group's environmental strategy continues to improve. ANZ's disclosure of its engagement plan with customers in GHG-intensive industries is viewed as a key positive – and provides evidence of their ability to decarbonize while supporting customers. Following the investment in ANZ's SDG bonds, we have initiated our climate-related engagement with the issuer in October 2022 and will continue to monitor the group's climate strategy and discuss areas of improvement.

REVIEW AND UPDATE OF OUR INTERNAL ESG SCORING MODELS FOR ISSUERS AND GREEN BONDS

As part of our research process, we aim to review our internal ESG scoring frameworks (proprietary scoring tools for issuers and green bonds) periodically. The aim of the review is to ensure that the model remains fit for purpose. The aim of the periodic review is both to enhance the model based on industry developments (such as regulation) as well as adjust scoring to reflect evolving best practices (as time goes on expectations increase).

The review considers internal views, as well as company disclosures, engagement, regulatory developments, publications and guidance from collaborative investor initiatives and other external sources deemed relevant.

We have implemented an updated version of our models in early 2023 following a holistic review of the model. These changes were reviewed by KKS Advisors, who performed an audit of the revised models.

Update of our internal scoring models for issuer ESG quality

Following the review of our scoring model for banks and insurers, we have identified several areas to enhance the quality of the assessment.

The review has led to changes mainly in the environmental and social assessment of issues. In the environmental section, granularity has been added to the analysis of climate strategies, climate risk management and climate opportunities. An example of enhancement is a deeper incorporation of transition management – both in terms of risk management (such as assessing a client's transition plans, disclosures or engagement) and climate opportunities (offering products and services to support the transition). Moreover, biodiversity has been explicitly incorporated into the environmental assessment.

On the social side, the bulk of changes have been focused on data privacy and cyber security. Specific KPIs and indicators have been added (and/or amended) to better assess governance, policies, strategies, and risk management.

Update of our internal scoring models for green bonds

The review of our green bond internal scoring model has led to a limited number of changes, mainly updating additional requirements (expectations to align to best practices) to consider market developments such as the EU Taxonomy or draft EU Green Bond Standards.

Impact of the issuer bond scoring model review and update

All else equal, the updated issuer ESG scoring models are expected to lead to a decline in the score of issuers rated, especially on the environmental side. Nevertheless, we expect this to be at least partially offset by year-on-year improvements in issuers' ESG profiles. In case issuers' rating declines materially following the review of their ESG profile under our updated models, this will be managed in line with our current process – as described above.

CASE STUDY #2

Assessing potential negative externalities in Renewable Energy projects – Societe Generale



Project features

- Project type: Renewable Energy – Offshore Wind
- Location: Baltic Sea (Germany)
- Project owner: Parkwind Ost GmbH (independent energy company)
- Capacity in MW: 257MW
- Estimated CO₂ emissions avoided of the project: 623,000 tonnes CO₂s per annum

Project facts

- The project will produce enough energy to power 290,000 households.
- The project includes 27 turbines with a capacity of 9.5MW, covering an area of 30km².
- A full analysis of potential social and environmental negative impacts has been conducted, and a mitigation plan put in place. For example, the impact of fisheries has been conducted and submitted to fishing authorities.

Sustainability strategy highlights

- Net Zero commitment by 2050 including the group's lending portfolio
- Granular approach to the group's net zero pathway, including a focus on sectors with the most impact: Electricity production (-18% emissions intensity by 2025), reduction of the group's O&G portfolio by 10% by 2025
- SocGen was part of the "Katowice banks" (BBVA, BNP, ING, SocGen, Standard Chartered) that pledged to develop an open-source methodology to steer their portfolios to the Paris Agreement targets



4. MEASURING IMPACT

Our approach

Measuring the environmental impact from green projects and assets funded is a key challenge. Methodologies and assumptions used can vary significantly, leading to difficulties in comparing key performance indicators (KPIs). As outlined above, our investment process and engagement focus on improving the robustness, accuracy and granularity of the green bonds use of proceeds and associated impact. We rely on these reports to provide portfolio level reporting. However, given the current lack of harmonized and comparable methodology in disclosed indicators, we have decided to additionally use Carbon4 Finance – a specialist data provider – to assess the associated environmental impact.

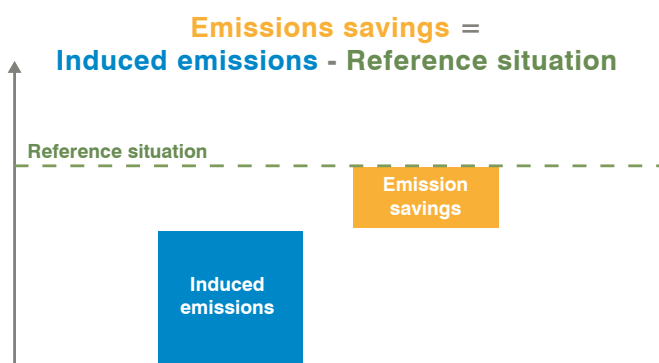
Key environmental impact indicators

CO₂ emissions avoided

To assess the carbon impact of each green bond, Carbon4 uses a proprietary methodology which calculates both the induced emissions and avoided emissions from projects financed. The net between both is the calculation for emissions saved. Data is compiled using physical data available, for example renewable capacity installed, to which Carbon4Finance applies industry ratios, for example the loading factor for solar farms. This is based on a combination of Carbon4Finance's proprietary database and public databases. In case the issuer does not disclose sufficient information, Carbon4Finance applies monetary ratios based on industry averages, for example the average CO₂ emissions avoided from EUR 1 million invested in a solar farm. These monetary ratios are also based on a combination of Carbon4Finance's proprietary databases and other external databases.

As an example, when building a solar farm, the calculation would consider the emissions saved through green energy generation less the emissions induced by the construction and purchase of material to build the farm.

Figure 10: Illustrative calculation of CO₂ emissions saved



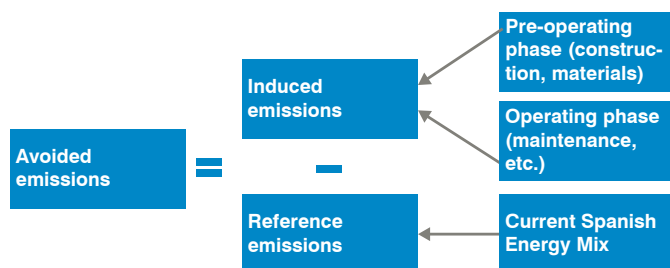
Source: Carbon4Finance Atlanticonnium/GAM.

Avoided emissions are calculated by comparing the project's GHG emissions' impact with a reference situation (typically based on an average for the sector in the country). For example, the net emissions saved from a solar farm in Spain is calculated comparing the net carbon emissions of the solar project, compared to carbon emissions from electricity generation in Spain using the average energy mix.

This provides a more granular approach to understand true impact. To continue the example, solar projects in different countries will not have the same impact as the calculation depends on the underlying energy mix: the cleaner the energy mix, the less incremental impact.

Figure 7: Avoided CO₂ emissions example: Spanish solar farm

Avoided CO₂ emissions example: Spanish Solar Farm



| Source: Carbon4Finance Atlanticomnium/GAM.

Other environmental KPIs are based on similar methodologies.

MW/MWh of renewable capacity installed/generated

This is either taken from issuers' reporting (this is reported information rather than estimated), otherwise monetary ratios are applied. For MWh, these are computed either based on reported data or based on industry ratios, such as loading factor, that is derived from a combination of internal datasets and other external datasets (typically government databases).

M2 of green buildings financed/refurbished

Square meters of green buildings financed and renovated are either taken from issuers' reporting or are computed based on monetary ratios. These ratios are based on Carbone 4's proprietary databases as well as other external databases.

Waste & water managed

Cubic meters of water treated and tonnes of waste managed are solely based on monetary ratios given limited disclosure from issuers. These ratios are based on Carbone 4's proprietary databases as well as other external databases.

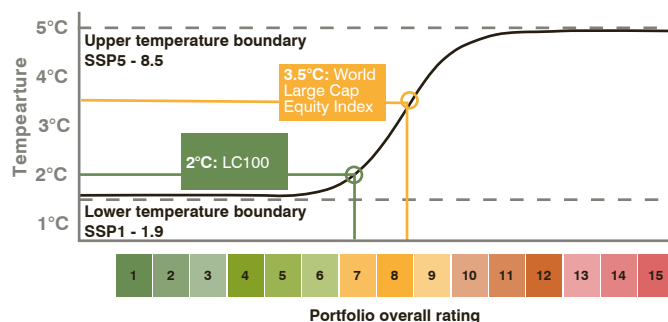
Temperature alignment

There is increasing interest in understanding temperature alignment. Methodologies and metrics are still evolving, and our approach may change over time. This calculation is based on a curve that transforms the portfolio's overall Carbon Impact Analytics (CIA) score into an alignment temperature in 2100. This curve is constructed with 2 tangents (upper limit and lower limit), and two reference points, the LC100 (Euronext Low Carbon 100 Eurozone PAB Index) as the low carbon index aligned at 2°C, and the "Business as usual" data point represented by the MSCI World Large Cap Equity Index. By considering the upper and lower tangents along with these two reference points, the outcome is an S-shaped curve that is used as a tool to assign alignment temperature to all corporate instruments in a portfolio. This concept is illustrated by the graph below. The full methodology is available here: [CIA methodological guide \(carbon4finance.com\)](https://www.carbon4finance.com/cia-methodological-guide).

The portfolio's CIA score is a rating based on the average CIA score of individual green bonds. This score is based on the green bond's carbon performance and qualitative assessment of the green bonds' transparency. The quantitative assessment is mainly based on Carbone 4's "Carbon Impact ratio" (saved emissions divided by induced emissions), which reflects the green bonds' environmental impact. The qualitative adjustment is based on the green bond's transparency (quality of reporting). The reason why transparency forms part of the green bonds' rating, is that for green bonds with poor reporting, the environmental impact is discounted given higher uncertainty.

And finally, to give more context on the use of this alignment temperature: this allows us on the one hand to compare with a close benchmark, and on the other to evaluate the compatibility of the portfolio with the Paris Agreement.

Figure 8: Illustration of temperature alignment methodology



| Source: Carbon4Finance

Taxonomy alignment and Do No Significant Harm (DNSH)

The EU taxonomy is a classification system that establishes a list of environmentally sustainable economic activities. Eligible activities include a wide range of activities with a positive environmental impact, covering activities contributing to six environmental objectives (including climate change mitigation, adaptation, pollution, biodiversity). For each activity, the taxonomy sets out the technical screening criteria and requires compliance with the “Do no significant harm” principle. “Do no significant harm” means that activities must not do significant harm to other environmental objectives, for example an offshore wind farm that would negatively impact local marine life.

Given the recent nature of the taxonomy (applicable since January 2022 for climate adaptation and mitigation), data availability on taxonomy alignment is currently challenging. While some issuers have started reporting, overall data on taxonomy alignment remains limited. Nevertheless, given the importance of taxonomy alignment we have conducted an initial analysis of the portfolio. We have conservatively estimated that taxonomy alignment for the fund would be at least 25%, based on currently available data.

Moreover, we have conducted a detailed review of green bond reporting and documentation to assess alignment to the EU taxonomy. These have been split into six categories.

Category 1: For 12% of the fund’s holdings, the issuer provides the percentage of alignment of green bond proceeds to the EU taxonomy, which is either internally (by the issuer) or externally assessed (typically by a recognized ESG provider such as Sustainalytics or ISS). The percentage alignment, as reported, is the 91-100% range for these holdings.

Category 2: For a further 6% of holdings, the post-issuance reporting contains an external verification of the alignment of the proceeds of the green bonds to the EU taxonomy, without an explicit alignment number.

Category 3: For 12% of holdings, the issuer’s criteria for project selection and “Do no significant harm” assessment are partly or fully aligned with the EU taxonomy and alignment is externally assessed as part of pre-issuance verification/review (typically by a recognized ESG provider such as Sustainalytics or ISS).

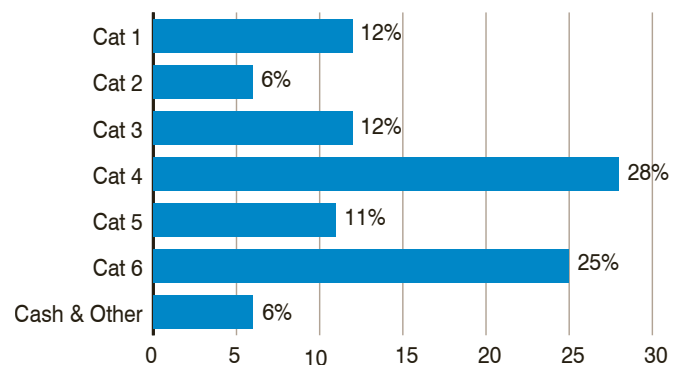
Category 4: For 28% of the fund, the issuer considers the EU taxonomy in its criteria for project selection and conducts an assessment of “Do no significant harm”, both on a best effort basis, with no external assessment.

Category 5: For 11% of the fund, the issuer intends to align its green bond framework to the EU taxonomy and conducts a DNSH assessment of eligible projects.

Category 6: For 25% of the fund, there is no information regarding the EU taxonomy, however the issuer conducts an assessment of DNSH for eligible projects.

Based on the above analysis, we conservatively estimate that >90% of the proceeds of holdings in categories 1 to 3 would be aligned to the EU taxonomy given that either (1) for these holdings the percentage alignment has been disclosed by the issuer or (2) there has been an external verification on the alignment to the EU taxonomy either at the pre- or post-issuance level. This implies that taxonomy alignment of the fund would be at least 27% (90% of 30% holdings in categories 1-3), in line with the estimated 25% share stated above. For the rest of the projects, although we believe a material share would be aligned with the taxonomy, data limitations prevent us from estimating percentage aligned. Note that we expect taxonomy alignment to be materially above the 25% level, as the majority of proceeds financed by green bonds in the portfolio are in scope of the EU taxonomy.

Figure 9: EU Taxonomy



- **Cat 1:** Percentage alignment to the EU Taxonomy is provided
- **Cat 2:** Alignment of green bond proceeds to the EU Taxonomy has been performed
- **Cat 3:** Criteria to select projects is partly or fully aligned to taxonomy & issuer conducts DNSH analysis - externally assessed
- **Cat 4:** Criteria to select projects considers the EU taxonomy & issuer conducts DNSH assessment of eligible projects
- **Cat 5:** Issuer intends to align framework to EU taxonomy & conducts a DNSH assessment of eligible projects
- **Cat 6:** Issuer conducts a DNSH assessment of eligible projects

Source: Atlanticonium, Company documents

Taxonomy alignment has been a key topic of focus when engaging with issuers. Following our discussions, we expect data availability to improve significantly over the next year, as new green bond reports are being released. When assessing green bonds through our internal framework, we assess whether issuers have processes in place to identify and manage potential adverse environmental or social impacts of projects financed. Also note that as part of the latest version of the ICMA’s Green Bond Principles (June 2021), issuers are required to have processes in place to identify and manage potential negative social and environmental impacts of projects financed.

CASE STUDY #3

Delivering positive environmental and social impact in Emerging Markets – Standard Chartered



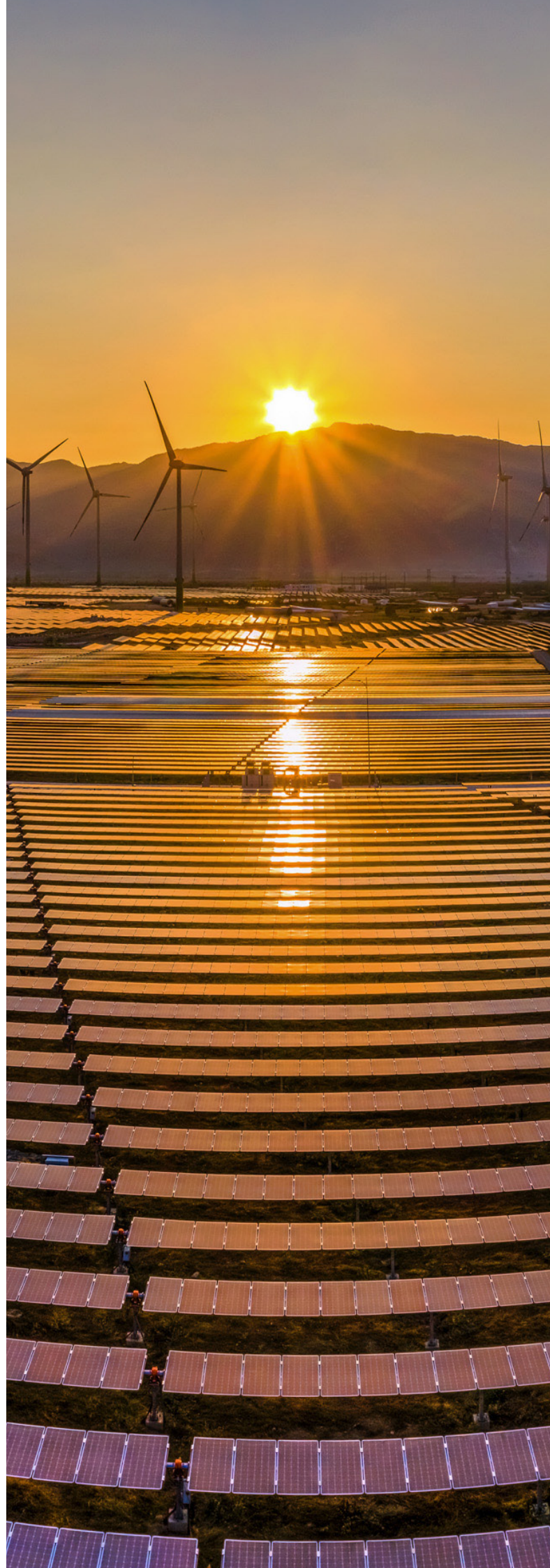
Positive environmental impact project – Solar plant in Vietnam

Project features

- Project type: Renewable Energy – Solar
- Location: Vietnam
- Project operator: Phu Yen TTP JSC
- Project owner: B.Grimm Power and Truong Thanh Viet Nam Group
- Project Scale: 257MW capacity
- Amount: USD 186 million (led by ADB with Standard Chartered share not disclosed)
- Project timeline: commenced in 2018 and started operation in 2019

Project facts

- The plant is the largest operating solar plant in Vietnam and one of the largest in Southeast Asia
- The plant is expected to offset 123,000 tonnes of carbon dioxide emission per year



Positive social impact project – Water Supply in Ghana

Project features

- Project type: Access to Water – Water Supply
- Location: Ghana
- Project operator: Ghana Water Company Ltd
- Amount: EUR 133 million in bank financing (Standard Chartered share not disclosed)
- Project timeline: 36 months and to be delivered by 2025

Project facts

- The project is targeted to significantly increase water treatment capacity from 6,819 m³ to 55,000 m³ per day and hence provide 400,000 people access to clean water
- The project uses purification technology from Sweden's Nordic Water
- The financing is backed by EKN, a Swedish Government backed export credit organisation

Sustainability strategy highlights

- Sustainability bond financing both environmental and social projects across emerging (~50%) and developed markets (~50%), bringing robust European governance to deliver positive impact worldwide (Asia ~90% of projects financed).
- Net zero commitment by 2050 including the loan portfolio despite the significant exposure in emerging markets.
- Granular approach to the net zero pathway, with solid medium-term targets for GHG-intensive sectors: oil & gas (-30% in emission by 2030 from 2020 baseline); mining excluding coal (-33%); coal mining (-85%); steel producers (-33%); power (-63%).
- Actively supports its clients' transition plans with a clear framework for green and transition activities, especially for the clients located in emerging markets.
- Part of the "Katowice banks" (BBVA, BNP, ING, SocGen, Standard Chartered) that pledged to develop an open-source methodology to steer their portfolios to the Paris Agreement targets.



5. OUR PORTFOLIO IMPACT

The philosophy of the fund is to generate a positive environmental impact by investing in green bonds (and other impact bonds) from the financial sector. Investing in green bonds allows investors to have strong visibility on the underlying green projects financed, as well a tangible impact through an estimated environmental impact (KPIs such as tonnes of CO₂ avoided).

Scope of data

The fund supported the financing of a wide range of projects with a positive environmental impact, and to a lesser extent social impact (social component of sustainability bonds). The analysis is based on the portfolio as of the 31st of December 2022, with data reported by the issuers in their most recent green bond report.

The split of the portfolio by project type and geography is based on 98% of the portfolio (excluding cash & others), with 87% of the portfolio with reporting produced and a further 11% where reporting has not been produced but assumption have been made (indicative portfolio provided by the issuer or previous year's report for example).

Financial characteristics

Financial KPIs

5.4%

Average yield to call (vs. 4.3% for the EUR IG index)

280bps

Average spread (vs. 170bps for the EUR IG index)

4.0

Average duration

BBB+

Average bond rating

57%

allocation to subordinated debt

100%

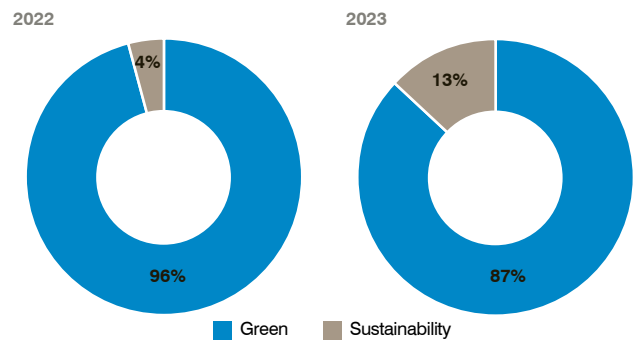
Financials (72% Banks, 22% insurance, 6% cash & FX)

Bond Type

The fund (excluding cash & others of c6.5%), is mainly invested in green bonds (87%) and sustainability bonds (13%). This reflects the objective of the fund to generate a positive environmental impact in impact bonds providing visibility on the proceeds used and a measurable impact.

Over the year, we have seen an increase in sustainability bonds in the fund, as a result of both new issuers being added to the fund (for example ANZ who issue mainly in sustainability format) and new issues coming in sustainability format as well as green format.

Figure 10: Split by instrument type



Source: Atlanticomnium/GAM as of year end 2022.

Green project type

The largest single category financed is green buildings (45%), which reflects the large exposure of the financial sector to the property sector – as lenders for banks and direct investors for insurers. Green buildings cover both individual housing and commercial real estate projects (such as residential, office). The green building category is roughly evenly split between individual housing (mainly green mortgages for individuals) and commercial real estate.

The second largest category is Renewable Energy (42%), which reflects a focus from the financial sector to provide capital for green energy production as part of their green finance targets. Solar PV and wind (onshore and offshore) were the two largest sub-categories within renewable energy with some allocation to other renewable sources such as biomass or hydro. The renewable energy category also includes infrastructure for renewables, such as transmission lines or manufacturing of components for renewable energy.

The rest of the portfolio is split between several other types of projects, such as sustainable transport (5%), pollution prevention and control (2%), environmentally sustainable management of living natural resources (2%), water and wastewater management (1%), energy efficiency (1%) and social projects (3%).

Sustainable transport projects are mainly related to train and other rail projects, with the rest split between other green transport (electric buses for example), and infrastructure for green transport (electric vehicle infrastructure for example).

Pollution prevention and control relates mainly to waste-to-energy projects and waste treatment projects and to a lesser extent other types of projects – such as carbon capture and storage.

Environmentally sustainable management of living natural resources projects relate mainly to sustainable agriculture projects and forestry projects.

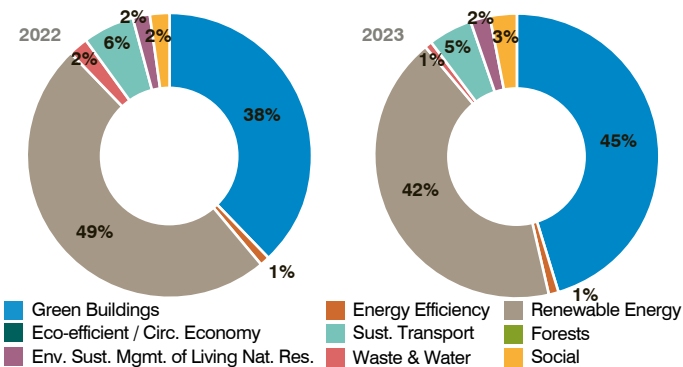
Energy efficiency includes a wide range of private energy efficiency projects for individuals (home renovations for example) and corporates.

Summary of project categories and examples of project types (illustrative and non-exhaustive)

Project Category	% of the fund	Examples of projects	SDGs targeted
Environmental Projects (97%)			
Green Buildings	45%	<ul style="list-style-type: none"> Individual Residential property Commercial Real Estate projects Includes both new properties and property refurbishments, retrofitting 	SDG 7, 9, 11, 13
Renewable Energy	42%	<ul style="list-style-type: none"> Solar and Solar PV projects Wind projects, both on- and offshore Other renewable energy generation (geothermal, hydro etc.) Renewable Energy infrastructure (transmission lines, grid etc.) 	SDG 7, 9, 12, 13
Sustainable Transport	5%	<ul style="list-style-type: none"> Rail transport Sustainable Public transport (metro, electric buses etc.) Infrastructure for sustainable transport (EV) 	SDG 9, 11, 13
Environmentally Sustainable Management of Living Natural Resources	2%	<ul style="list-style-type: none"> Sustainable forestry projects Sustainable Agriculture projects 	SDG 12, 13, 15
Pollution Prevention & Control	2%	<ul style="list-style-type: none"> Waste to energy Waste management Carbon Capture & Storage 	SDG 11, 12
Sustainable Water & Wastewater management	1%	<ul style="list-style-type: none"> Water and wastewater treatment and distribution facilities 	SDG 6, 11, 12
Energy efficiency	1%	<ul style="list-style-type: none"> Efficient lighting Smart meters 	SDG 7, 9, 11, 12, 13
Social Projects (3%)			
Affordable Basic Infrastructure	<1%	<ul style="list-style-type: none"> Road infrastructure Water supply (Access to water) 	6, 11
Social & Affordable Housing	<1%	<ul style="list-style-type: none"> Emergency accommodation for vulnerable populations 	1, 10, 11
Employment Generation	1%	<ul style="list-style-type: none"> Business banking to SMEs Micro finance 	1, 8, 9, 10
Access to essential Services	1%	<ul style="list-style-type: none"> Education (schools, university) Hospitals and hospital equipment 	3, 4
Socioeconomic advancement empowerment	<1%	<ul style="list-style-type: none"> Financial education 	4, 10
Covid-19	<1%	<ul style="list-style-type: none"> Healthcare facilities Critical Care equipment Pharma and Medical Goods 	3

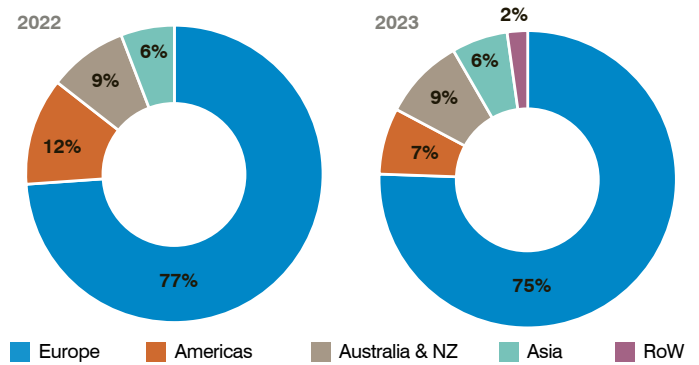
| Source: Atlanticomnium, Company documents

Figure 11: Split by project type



Source: Issuer green bond reports. Atlanticomnium/GAM as of year end 2022.

Figure 12: Split by geography



Source: Issuer green bond reports. Atlanticomnium/GAM as of year end 2022.

Finally, through the investment in sustainability bonds, 3% of proceeds relate to projects with a positive social impact. Main social categories include access to essential services (mainly healthcare and education), employment generation (access to finance or employment generation and micro finance) and other social projects such as affordable basic infrastructure (including water and roads), financial education and Covid-19 related projects.

Looking at the evolution of green projects year-on-year, green buildings and renewable energy remain the top two categories, albeit green buildings have increased (45% vs. 38%) and renewables have decreased slightly (42% vs 49%) – with their combined weight remaining stable at 87%. Other categories have remained broadly stable.

Geography of projects

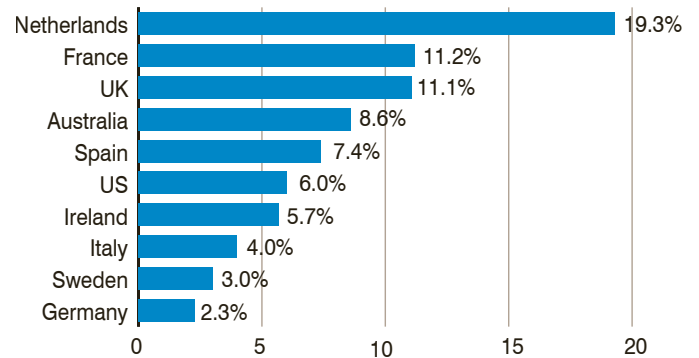
The fund finances a global pool of projects, in more than 50 countries and on six continents, and in both developed and emerging markets. Nevertheless, given the European bias of the issuers in the fund (more than 90%), Europe accounts for around 75% of projects financed. Australia & NZ (9%), Americas (7%), Asia (6%) and the rest of the world (2%) are the largest geographic zones.

More granularly, the Netherlands (19%) is the largest single country exposure, followed by the UK (11%), France (11%), Australia (9%) and Spain (7%).

The fund has 7% exposure to Northern America (mainly US), 6% exposure to Asia (Hong Kong and India are the two single largest countries), and 4% to the rest of the world that includes Latin America, the Middle East, Africa and other global (includes undisclosed) exposures.

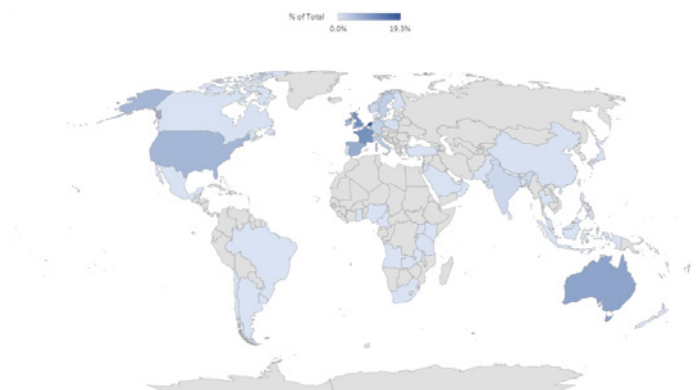
There has been a further diversification of the geographic split of projects within the fund, as European projects now account for around 75% of the total compared to around 80% last year. Notably, the exposure to Australia has increased driven by higher exposure to green and sustainability bonds from Australian banks. Within Europe, the Netherlands is now the largest single country, reflecting the change in the issuer mix of the fund.

Figure 13: Top 10 Country Exposures



Source: Atlanticomnium, Company documents

Figure 14: World Map



Source: Atlanticomnium/ GAM based on issuer reported data. As of December 2022

SDG alignment of green projects financed

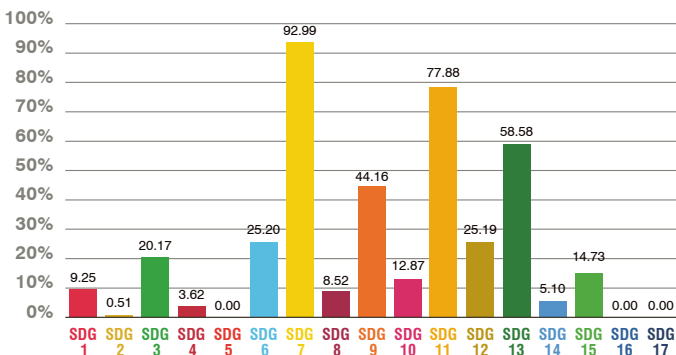
When issuing green bonds, issuers typically map each type of project to be financed to specific SDGs. This means that each green bond can target multiple SDGs, which reflects the fact that percentages do not add up to 100%. The SDG alignment of the fund is calculated as the % (based on market value) of green bonds aligned to each specific SDG. Projects financed by the fund cover 14 of the 17 SDGs, reflecting the positive environmental and social impact of green and sustainability bonds.

For example, SDG 7 – Affordable and Clean Energy, is the most targeted SDG by the green bonds in the fund, with 93% of the green bonds in the fund targeting this SDG. SDG 9 – Industry, Innovation and Infrastructure (44%), 11 – Sustainable Cities and Communities (78%) and 13 – Climate Action (59%) were the other top SDGs targeted.

The most targeted SDGs, 7, 9, 11 and 13 clearly reflect the focus on climate change mitigation of the fund.

Compared to 2021, the key change relates to the number of SDGs that are targeted through the green and sustainability bonds within the fund. With a growing exposure to sustainability bonds and wider range of green projects being included within banks and insurers’ frameworks – this has led to an increase in SDGs targeted. This is especially true for social projects and biodiversity projects that have become more in focus.

Figure 15: Allocation by Sustainable Development Goal



Source: Issuer green bond reports. Atlanticomnium/GAM as of year end 2022.



Top 10 issuer split

The chart below illustrates the projects financed by the ten largest issuers held in the fund. As described previously, green buildings and renewables make up the bulk of projects financed. Moreover, issuers have different strategies to allocation their green bonds. For example, issuers like BBVA and BNP will allocate a wide range of projects to their green bonds, while others like Commerzbank or Rabobank focus on a single project category.

Figure 16: Top 10 issuer split

Issuer	Weight in Fund	Green Buildings	Energy Efficiency	Re-newable	Water & Wastewater	Pollution Prev. & Control	Sustainable Transport	Forestry	Other Environm.	Social
1 ING	8%	49%	51%							
2 BBVA	7%	11%	1%	53%	2%	8%	26%			
3 BNP	6%	17%	16%	61%	1%	2%	3%			
4 DeVolksbank	6%	100%								
5 Aema Groupe	4%	84%	10%				1%	2%	3%	
6 St. Chartered	4%	49%	1%	18%	0%	2%	4%		26%	
7 Westpac	4%	24%	54%				22%			
8 NatWest*	4%	50%	50%							
9 Commerzb.	4%		100%							
10 Rabobank	3%		100%							

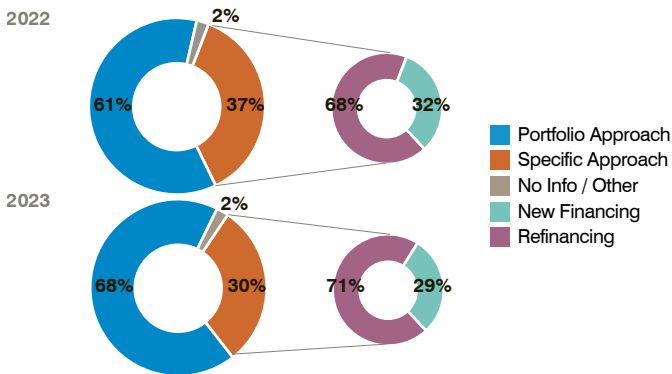
Source: Issuer green bond reports. Atlanticomnium/GAM as at 31 December 2022.

Financing & Refinancing

Green bonds can either be used to finance new projects or refinance existing projects. Providing an estimate of the percentage of refinancing is challenging, given a significant portion of issuers use the so-called “portfolio approach”, where green bonds are not allocated to specific projects but rather to the issuers’ pool of green projects, typically well in excess of all green bonds issued. In this case, day one the bonds are 100% refinancing, but as the green project pool grows, the percentage of refinancing decreases. For example, BBVA’s pool of green projects increased from EUR 1.1 billion in 2018 to EUR 5.2 billion in 2021 (an increase of five times over four years). This means that their green bond issued in 2018 was close to 100% refinancing as of end-2018, but now closer to 20% refinancing as of end-2021. This should continue to decline as new green projects are included in the green asset pool.

In the case of our fund, 68% of the portfolio is allocated to green bonds where the portfolio approach is used. In this case, as we focus on issuers with strong sustainability strategies, in particular around climate, we expect the pool of green assets to grow – therefore leading to an incrementally lower refinancing rate.

Figure 17: Financing vs. Refinancing



| Source: Atlanticomnium, Company documents

For the remaining part of the portfolio (30%), where green bonds are allocated to specific projects, the refinancing rate is 71%. As set out in our green bond assessment framework, we expect issuers to limit the portion of green bonds used for refinancing purposes. However, we understand the challenges of only financing new projects for issuers (balancing financing new projects versus allocating the full amount of the green bond in a timely manner). Therefore, we expect that in case of refinancing, the lookback period (how seasoned projects are) should be short. As an example, CNP’s green bond is 50% allocated to projects refinanced and 50% to new projects. Out of the projects refinanced, around 91% relate to real estate projects under development that were or are set to be operational after the issuance date of the green bond. The rest of refinanced projects relate mainly to assets acquired less than 24 months before the issuance of the green bond.

Focusing on issuers with strong pipelines of green assets (as part of their environmental strategy) means that the incremental impact is robust despite the use of refinancing. These issuers use green bonds as a tool to support the growth of their pool of green assets. As long as the future pipeline of green assets is strong, issuing green bonds before green assets, or financed or financing assets before green bonds are issued is a marginal consideration in our view.

Data is based on the portfolio as of end-December 2022, where data is available for 98% (excluded cash and equivalents) of the portfolio. Data is based on issuers’ latest green bond reports, and in some cases internal estimates.

Compared to 2021, the share of issuers using the portfolio approach has increased (68% versus 37%). Around 30% of the bonds in the portfolio are allocated using the specific approach, where the refinancing rate is roughly stable at 71% (vs. 68%).

Environmental impact indicators

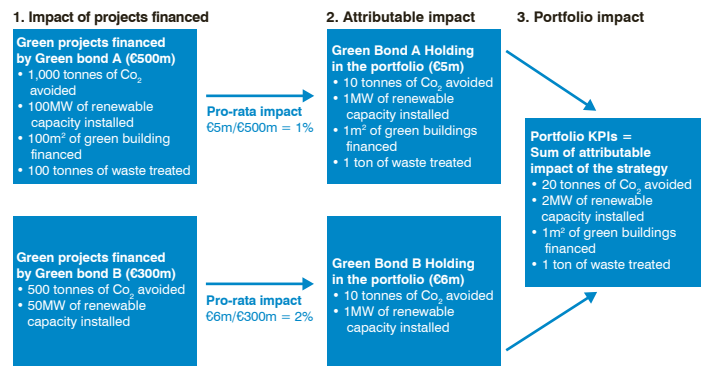
The proceeds raised from green and other impact bonds generate a positive environmental (or dual social and environmental in case of sustainability bonds). For each green bond, issuers provide post-issuance reporting, including an estimate of the green bonds’ environmental impact. As above, for comparability and consistency purposes, we have chosen to work with Carbon4 Finance, specialized data provider on climate and environmental issues for the financial sector, to re-estimate the impact of each green bond we invest in. This is due to the lack of comparability between estimates provided by issuers, each using different methodologies and assumptions.

All KPIs are calculated by Carbon4 Finance based on an analysis of individual green bond of the portfolio, then aggregated at the fund level. The analysis of the portfolio as of the end of 2022 covers 90% of the bonds in the portfolio (by market value excluding cash and equivalents), reflecting several green and sustainability bonds that were issued recently and where reporting was not yet available. Aggregate figures are given for EUR 10 million, for illustrative purposes.

The funds’ environmental KPIs represent an estimate of the impact attributable to projects financed by the green (and other impact bonds) held in the fund. For individual green bond, the overall impact of projects financed is estimated, after which the fund is attributed the pro-rata impact depending on the size of the holding (portfolio exposure as percentage of the bonds’ size). The impact is then computed at the fund level by summing up the attributed impact of each green bond, while eliminating potential double counting (same emissions being attributed to two different green bonds). Note that green bonds often finance a broad range of projects, and therefore can contribute to multiple environmental KPIs.

Illustrative calculation

Figure 18: Illustrative calculation – portfolio impact

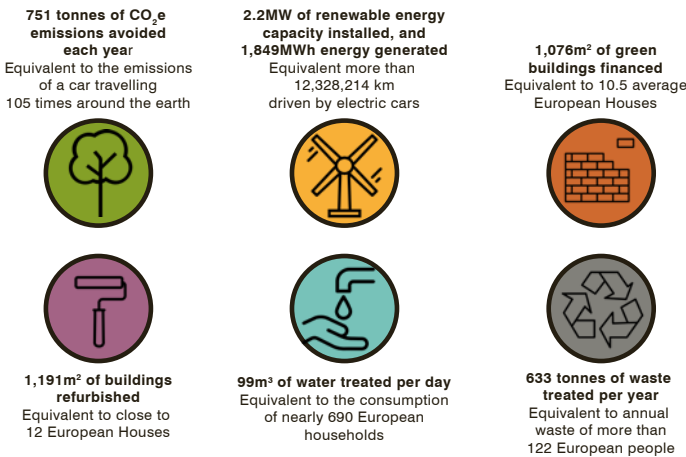


| Source: Atlanticomnium/GAM, Carbon4Finance.

Compared to figures reported in 2021, enhancement's to Carbon4Finance's methodology as well as refined analyses of specific green bonds (improved granularity) have led to changes in aggregate portfolio figures. Carbon4Finance have reviewed their methodology for energy efficiency projects (including renovation of buildings for example) that reduces emissions savings with more conservative assumptions used. This means that comparability with 2021 figures is limited and the decline in emissions savings and other KPIs does not reflect a material change in the underlying projects financed.

Figure 19: Diversified environmental benefits of the Green Bonds Portfolio

For 10M Eur invested in the portfolios, there are....



Source: Carbon4Finance Atlanticomnium/GAM as of year end 2022.

Further details on Carbon4 Finance's methodology are available in the previous section of this report.

CO₂ emissions avoided

As a large portion of the portfolio is allocated to projects targeting climate change mitigation (renewable energy, green buildings, sustainable transport), tonnes of CO₂ equivalent avoided represents a useful metric. The projects financed by the green bonds in the portfolio help avoid 751 tonnes of CO₂e each year – equivalent to driving a car more than 105 times around the Earth. Tonnes of CO₂e avoided represent the CO₂ emissions not emitted as a green project replaces the average project that is typically GHG intensive. For example, a solar farm in Spain that replaces the average electricity mix, with a significantly lower CO₂ intensity per MWh generated.

M2 of green buildings financed/refurbished

Green buildings are the largest project category financed, close to 45% of portfolio. Each EUR 10 million invested in the portfolio supports around 1100m² of green buildings financed and around 1200m² of green buildings refurbished.

MW/MWh of renewable capacity installed/generated

The projects financed by the portfolio (of which around half was allocated to renewables) contributes to installing 2.2MW of renewable energy capacity and therefore generating around 1,849 MWh of energy. This is equivalent to the energy necessary to drive an electric car for more than 12 million kilometres.

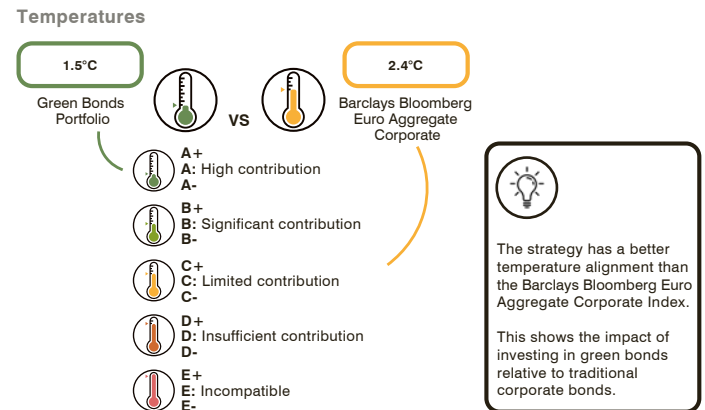
Waste & water managed

Finally, the fund supports a wide range of problems tackling other environmental issues, such as water and waste treatment. The projects financed by the portfolio help treat 99m³ of water per day (equivalent to the consumption of around 690 European households), and 633 tonnes of waste per annum (equivalent to the waste of 122 Europeans).

Temperature alignment of the fund

Given the portfolios' focus on green bonds financing projects that contribute to climate change mitigation, the portfolio is aligned to the Paris Agreement targets – a 1.5°C rise in temperature. This compares to the Euro Corporate Investment Grade Index that is aligned to a 2.4°C rise in temperature, reflecting the inclusion of fossil fuel producers and more broadly a large number of issuers that are not aligned to 1.5°C.

Figure 20: Temperatures



Source: Carbon4Finance methodology Atlanticomnium/GAM as of year end 2022.

Case studies – Supporting a global transition and beyond

Green bonds from financials provide a unique opportunity to support a very wide range of projects across sectors and geographies. European financials finance the broadest set of projects within the green bond markets across three dimensions: geography, sector and stakeholders (customer types). Positive impact is centred around supporting a global transition, but these also include other environmental impacts (biodiversity) and positive social impacts for sustainability bond. The projects below illustrate the impact of the projects financed by the green bonds held in the fund.

CASE STUDY #4

Financing robust infrastructure to support the development of low-carbon energy – BNP



Project features

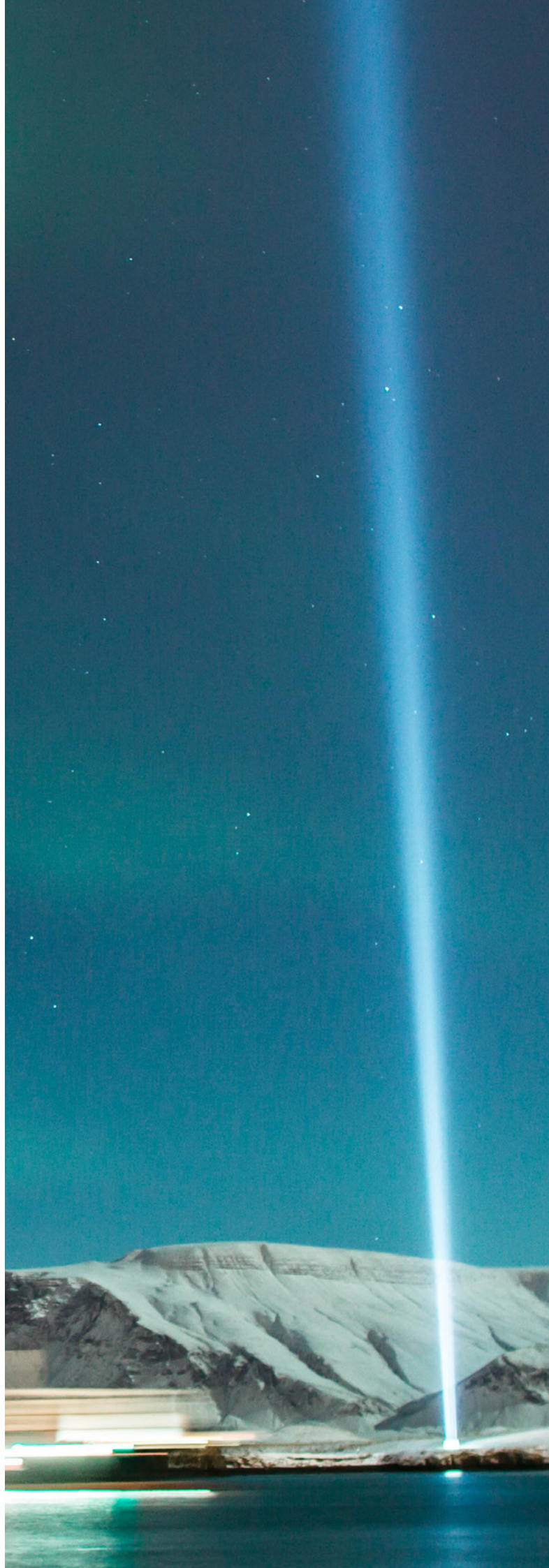
- Project type: Renewable Energy – Interconnector
- Location: UK and Denmark
- Project owner: Viking Link (Joint Venture between National Grid and Energinet)
- Total financing amount: USD 743 million (BNP's share not disclosed)

Project facts

- Loan structured as Green Loan following the Green Loan Principles
- BNP acted as structurer of the deal and took a part of the debt financing
- Interconnector (subsea electricity cable) will be close to 800km long and allow electricity to be exchanged between the UK and Denmark, supplying renewable energy to 1.4 million households.
- Project has been included on the EU's list of projects of common interest, given the material contribution of the project to the transition to green energy.

Sustainability strategy highlights

- Net Zero commitment by 2050, including the group's lending portfolio.
- Granular approach to the group's net zero pathway, including a focus on sectors with the most impact: BNP targets a better mix in its energy book compared to the IEA's SDS scenario (well below 2c pathway).
- BNP was part of the "Katowice banks" (BBVA, BNP, ING, SocGen, Standard Chartered) that pledged to develop an opensource methodology to steer their portfolios to the Paris Agreement targets.



CASE STUDY #5

Supporting the decarbonization of the transport sector and incentivizing changing consumer habits – BBVA



Project features

- Project type: Electric Vehicles – Charging Network
- Location: France
- Project operator: Allego
- Scale of project: more than 2,000 fast and ultra-fast EV charge points
- Project timing: Closing of financing in November 2021, gradual roll-out of EV charging stations by 2023
- Amount: EUR 55 million in bank financing (BBVA's share not disclosed)

Project facts

- The project, that has obtained a green loan label, will support the development of more than 2,000 EV charge points at 200 Carrefour (the French retailer) hypermarket locations in France.
- The EV network, fully powered by green energy, is focused on fast and ultra-fast charging networks (75 to 300kW) but will also include comfort charging services (22kW) and services for light EVs (such as e-bikes and electric mopeds).
- Carrefour will provide incentives for customers to switch to EVs, such as free charging for an hour on “comfort” chargers or free charging for light EVs.

Sustainability strategy highlights

- Net Zero commitment by 2050, including the group's lending portfolio.
- Granular approach to the group's net zero pathway, focus on sectors with the most impact: Electricity production (-52% emissions intensity by 2030), Auto manufacturing (-46% by 2030), Steel (-23%), Cement (-17%)
- BBVA was part of the “Katowice banks” (BBVA, BNP, ING, SocGen, Standard Chartered) that pledged to develop an opensource methodology to steer their portfolios to the Paris Agreement targets.



6. DELIVERING THROUGH ENGAGEMENT

Engagement is a core part of our assessment framework. By engaging, we not only gain valuable insights into the issuer’s strategy, governance and management practices, but we can also use our influence to encourage a focus on long-term, sustainable value creation and to drive positive impact.

Paris aligned expectations for Banks and insurers

In 2021, we signed the IIGCC statement regarding Investor Expectations for the banking sector, laying out areas for action and disclosure in order for banks to align with the Paris Goals. In 2022, we have initiated a thematic engagement campaign on climate – focused on net zero commitments and actions to transition to align with this commitment. This is based on a conviction that the management of climate-related risks and opportunities should be at the top of the agenda for senior management teams. We strongly support the necessity and urgency of aligning to the Paris Agreement targets. As investors we believe the banking and insurance sector can play a pivotal role in delivering on net zero, while remaining resilient to transition and physical risks. This is particularly important as long-term bond investors in these issuers. We have therefore set out expectations which we share with the issuers we are engaging with.

Net zero issuer heatmap

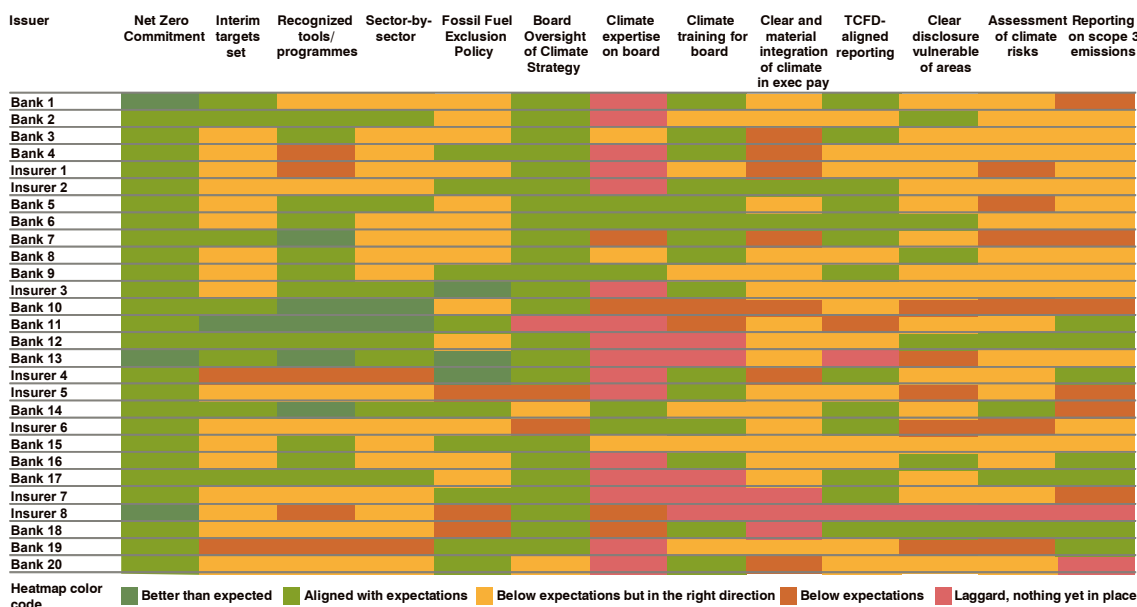
While setting our priorities, we conducted an initial analysis of all issuers held in the fund. This provided us with a starting point for discussions with issuers, highlighting key areas of focus. Throughout 2022, we have gradually sent out engagement letters to all issuers in the fund, including both our expectations and an issuer-specific assessment against these expectations.

The letters have been followed-up by one-to-one meetings with issuers, including representatives from sustainability teams, investor relations and senior management. Through this first engagement, we have been able to deep-dive into key areas of improvement, and voice our concerns and expectations.

We will continue to engage on climate-related topics with issuers, following up on initial engagements and incorporating an updated assessment as issuers continue to ramp up their climate strategies.

Overall, we have been positively surprised with the response rate from issuers, and willingness to provide further information regarding their climate strategy. We have engaged with the majority of issuers held within the fund or these are planned for early 2023. To illustrate, the case study below an example of engagement call.

Figure 21: Temperatures



Source: Atlanticomnium, Company documents

Paris-aligned expectations for Banks and insurers

Net Zero Commitments and Strategies

- We expect issuers to commit to net zero for all operations (including financing and investing activities) by 2050 at latest
- We expect this commitment to be complemented by a clear and credible net zero pathway, including science-based interim targets (not further away than 2030)
- While the focus needs to be on reducing emissions across all operations, the use of carbon offsets should be detailed within the interim targets and net zero plan and be in line with best practice³
- We encourage issuers to use recognized tools or programmes when setting targets and their net zero pathway, such as the SBTi or PACTA methodologies
- We expect Net Zero strategies to prioritize the most carbon intensive sectors and set specific sector-by-sector targets (or by asset class in the case of securities portfolios)
- We expect issuers to set strict exclusions policies for fossil fuel financing (in particular thermal coal phase-out by 2030 on OECD countries and 2040 worldwide and no new unabated thermal coal generation) that is compatible with the Paris agreement targets
- We expect issuers to outline their strategies and targets for scaling up green finance, and support frameworks such as the EU taxonomy to classify 'green' finance. In particular, we support the issuance of green bonds with robust green bond frameworks⁴ (at least aligned with the ICMA Green Bond Principles with pre- and post- issuance reporting audited or verified by a third party).

Governance and accountability

- We expect accountability at the board (this refers to the board of directors or equivalent) level for issuers' climate strategy, including oversight responsibility
- We expect boards to ramp-up climate expertise, through training of board members on climate-related topics and/or directly adding board members with climate-related expertise
- We expect a clear and material link between issuers' climate strategy and executive variable pay and performance assessment (only performance assessment if the bank does not have variable pay practices). This must be based on interim targets that occur within a typical CEO's tenure and assessed periodically

Risk Assessment & Reporting

- We expect climate reporting aligned with TCFD recommendations
- In particular, we expect:
 - A clear and granular assessment of climate-related risks in investment, lending and underwriting portfolios
 - Clear disclosure of areas vulnerable to climate risk (transition or physical risk) and use of scenario analysis/ stress tests to quantify vulnerability
 - Clear reporting on Scope 3 aligned emissions (lending or investment portfolio) based on robust methodologies

These expectations are aligned with the IIGCC Banking Sector Expectations⁵ and the latest TCFD supplemental guidance for banks and insurance companies⁶.

³The Oxford Principles for Net Zero Aligned Carbon Offsetting 2020

⁴See our Green bond assessment framework for further details on our requirements and expectations for green bonds ([gam_article_green-bond-assessment-framework_eng-final.pdf](#))

⁵<https://www.iigcc.org/download/investor-expectations-for-the-banking-sector/?wpdmdl=4454&refresh=61d4564867aab1641305672>

⁶P141021-4.pdf (fsb.org)

Improving robustness of green bond frameworks and reporting

Robust green bond frameworks and transparent and accurate reporting on use of proceeds and impact is critical to our investment process and delivering on the impact objectives of the strategy.

As set out in our green bond assessment framework above, we have clear expectations and minimum requirements for issuers and engage to improve these to deliver better outcomes for our clients and to improve market practices – see two case studies below.

Case study 1 (Bank) – Excluded

After conducting due diligence on the issuers' green bond framework, our assessment showed that the green bond failed our requirements. This was due to the fact that the issuer did not commit to having its green bond reporting (post-issuance allocation and impact reporting) audited or verified by a third party. Our engagement with the issuer has been unsatisfactory, as they argued that this is not a formal requirement of the ICMA Green Bond Principles. Therefore, as this is a mandatory requirement in our framework, the green bond was excluded from potential investment.

Case study 2 (Bank) – Included

As part of our frameworks, we require that issuers provide a clear split of projects (when the list is not provided) by type of projects and geography. Transparency is essential for green bond investors, and granular reporting provides better visibility on how proceeds are used, and the potential impact. After conducting due diligence on a European bank's green bond, we noticed that the framework did not mention that the issuer would provide the split of projects by geography. After engaging with the issuer, they agreed to include this information in upcoming green bond reporting.

Climate Bonds Initiative

The Climate Bonds Initiative (CBI) is an organisation working to mobilise global capital for positive environmental action in line with the Paris agreement. The CBI promotes investments through green and climate bonds that support a low carbon and climate-resilient economy. We continue to engage with the CBI to share and develop guidance on the labelled bond market and credible transition plans.



CASE STUDY #6

Reducing emissions through natural carbon sinks and generating positive biodiversity impacts – AXA SA



Project features

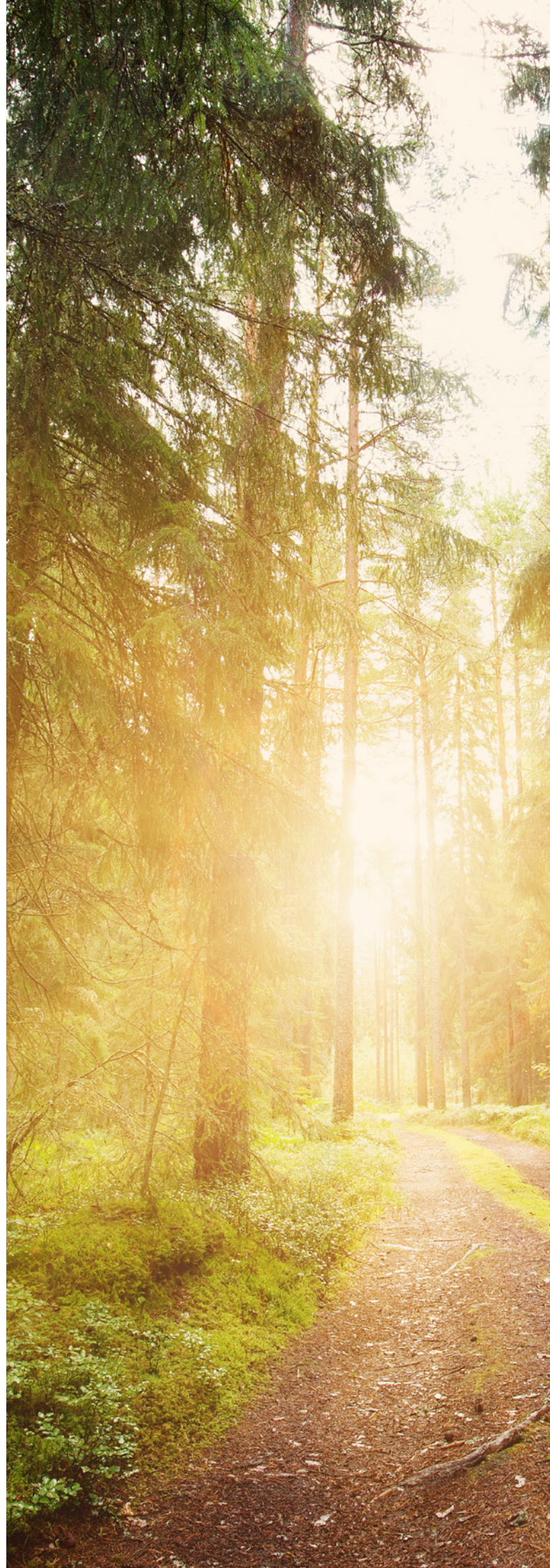
- Project type: Sustainable Forestry
- Location: Ireland
- Project owner: AXA (100% ownership)
- Total investment: EUR 58 million
- Size: 4,063Ha (equivalent to more than 5,000 football fields)

Project facts

- Sustainable management practices implemented across the project, PEFC certification obtained at the end of 2021 (Programme for the Endorsement of Forest Certification)
- Environmental impact: 77,851 tonnes of CO₂ net sequestered in 2020 (based on net growth of arboreal biomass), assessed annually by external consultants
- Standing stock (timber volume) increased by 7% in 2020, increasing the carbon stock of the project

Sustainability strategy highlights

- Net Zero commitment by 2050, including a long-term target to align its investments with a 1.5°C trajectory by 2050.
- Commitment to a 20% reduction in investment-related carbon footprint (compared to 2019), showing the group's commitment to decarbonize its' investment portfolio
- The group's coal policies (for insurance and investments) are very robust and assessed as best practice, including a firm commitment to fully phase-out exposures in line with Paris Agreement targets.
- Detailed assessment of the potential impact of physical and transition risk on the group's investment portfolio, for example physical risk assessment of the group's EUR 43 billion real estate portfolio with quantitative output, or the CVaR (Climate Value at Risk) of the equities and corporate bond portfolio that incorporates both climate risks.
- Founding member and chair of the Net Zero Insurance Alliance



CASE STUDY #7

Climate engagement case study: Generali

Context

Thematic climate-related engagement plan of the strategy

Following our engagement letter sent to the issuer, we held an initial engagement call with Generali in October 2022.

Generali representatives included the group's Head of Sustainability and Social Responsibility, Head of Sustainable Investments and Governance, Head of Shareholders and Governance as well as representatives from the Investor relations team.

Call with Fabio Cleva (Head IR), Rodolfo Svara (IR), Michele Amendolagine (Head of Shareholders & Governance), Sola Francesco (Head of Sustainable Investments and Governance), Lucia Silva (Head of Sustainability and Social Responsibility)

Activities

Deep-dive into specific areas of the group's climate strategy

Key areas discussed (not exhaustive, to illustrate examples of points discussed)

Point 1: Climate targets

- **Area of focus:** The timeline to set interim targets for remaining part of its investment portfolio (currently covers corporate bonds and equities, and real estate).
- **Response:** The group is currently working on setting targets for a wide range of sectors and areas, including sovereign bonds, implementing sector targets for corporate exposures and setting targets for insurance underwriting exposures as part of their commitment to the Net Zero Insurance Alliance (NZIA). They provided a clear timeline to set targets. Also discussed some of the challenges they face in setting targets (data availability for unlisted assets, methodology for sovereign issuers).
- **Follow-up:** none required at this stage given the details provided and timeline



Point 2: Fossil fuel policies

- **Area of focus:** coal policy, fossil fuel policy
- **Response:** As a starting point, the group operates in the CEE region, which is highly coal-dependent, and therefore needs to balance the climate and social aspects. Thresholds for the group's coal policy has been reduced to 20% (from 30%), however specific situations can be allowed for companies slightly above this level. There are strict rules for those exceptions, including the need to demonstrate a phase-out plan for coal by 2030-2040. They are also fine to be involved in companies above these thresholds if it's in the context of green projects. On oil and gas, they have set exclusions for unconventional oil and gas, and will set a sector decarbonization target. They want to work with clients to support their transition – engagement is a key tool for them (this also applies to coal). They have provided examples of engagements.
- **Follow-up:** Generali's approach is sensible, and despite some shortcomings in the group's fossil fuel policies, seems to be commensurate in the context of the group's geographic footprint. We support the approach of supporting the transition of companies in GHG-intensive sectors. Nevertheless, we communicated to the issuer that this requires more work to demonstrate that they are "walking the walk". We expect more granularity on their criteria to remain involved in fossil fuels (both on the investment and underwriting side), better disclosures around how companies screen against those, what action has been taken, and other relevant information. Moreover, disclosing the share of investment and underwriting exposure to GHG intensive sectors with a specific sustainability purpose (such as green projects and sustainability linked bonds) would further support the group's strategy. This point is a key area of focus.

Point 3: Integration of climate in executive compensation

- **Area of focus:** How does Generali expect to further tie executive compensation to climate targets
- **Response:** The group has started to embed ESG goals into remuneration of top leadership for both short and long-term incentives. Currently, they have only included green investing targets. Following investor feedback and other considerations, they will link net zero targets to remuneration in the future (they want to wait for data quality to improve).
- **Follow-up:** We will monitor this point, and expect progress on science based targets to be included in compensation, once these have been set for the majority of exposures of the group

Outcome

Continued progress on the group's climate strategy, which will be closely monitored

The engagement call has helped further our understanding of the group's climate strategy, in particular drill down into specific areas identified during our internal assessment. Moreover, on several of the points raised, discussions with management have helped shape our forward-looking view of the group's sustainability efforts. We expect the group to continue to deliver on its strategy, and make good progress on points raised. As part of our thematic climate engagement plan, we will continue to engage with the issuer and follow-up on specific points (and future points that may arise).

APPENDIX

Overview of key organisations

Atlanticonnium

Atlanticonnium S.A., regulated by the Swiss Financial Market Supervisory Authority (FINMA) is an independent Geneva-based fund management company, which has specialized in credit investing since it was founded in 1976. The firm has managed assets for GAM since 1985 and has a strong track record, through 35 years of experience investing in the bonds of financials.

Carbone4

Carbone 4 was created in 2007 by climate and energy experts Jean-Marc Jancovici and Alain Grandjean. Initially a consulting firm specialising in low carbon strategy and climate change adaptation, Carbone 4 has expanded its activities with Carbon4 Finance – a specialised data provider for the financial sector. Carbone 4 employs more than 50 climate professionals across Carbone 4 and Carbon4 Finance.

GAM Investments

GAM is a leading independent, pure-play asset manager providing active investment solutions and products for institutions, financial intermediaries and private investors. Collectively, we manage CHF 100 billion in assets for our clients.

As a global asset manager, GAM's purpose is to protect and enhance our clients' financial future. By attracting and empowering the brightest minds to think beyond the obvious, we strive to provide investment leadership, innovation and a positive impact on society and the environment.

Our investment management capabilities provide clients with differentiated investment strategies across equity, fixed income, alternatives and multi-asset. These are actively managed with discretionary, systematic and specialist approaches. Our product and solutions capabilities are focused on client needs and we are focused on building out our sustainable product offering

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<https://www.gam.com/en/corporate-responsibility/responsible-investing>

<https://www.gam.com/en/policies-and-disclosures#sfdr>

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The Portfolio ESG Rating, where applicable, stated in respect of any given strategy is derived from ratings provided by a third party in respect of the investments and is designed to help investors understand the resiliency of the portfolio to long-term ESG risk and opportunities. A strategy with a high Portfolio ESG Rating implies that its investments are perceived to have a strong or improving management of financially relevant ESG risks and may be more resilient to disruptions from ESG events. However, the investments of such a strategy with a high Portfolio ESG Rating may still create significant negative externalities on environmental or social factors such as pollution and poor labour practices. Further, a strategy with a high Portfolio ESG Rating does not necessarily achieve or seek any positive ESG or sustainability impact. There can be no assurance that the Portfolio ESG Rating correctly represents the strategy's exposure to financial loss because of ESG risks.

The strategies described in this Report may invest in economic activities which are aligned with the EU Taxonomy. Alignment of investments with the EU Taxonomy is calculated by specific metrics (such as revenue or expenditure) and determined by data most recently disclosed or provided by investee companies or collected by third parties in relation to those economic activities. Such metrics are calculated and disclosed, provided, or collected as at a point in time for each investee company and are based on the activities of those investee companies which may vary over time or be impacted by external events. As a result, any taxonomy-alignment of the strategies will be indicative only and will not be a true reflection of the taxonomy-alignment of the strategies as at a point in time or over a particular reference period. The strategies may involve investment decisions based on the taxonomy alignment of an investment and the impact of such decisions may result in the strategies generating lower financial returns than if the taxonomy alignment were not considered.

The strategies described in this Report may include sustainable investments as defined in the EU's Sustainable Finance Disclosure Regulation (EU 2019/2088) ("SFDR"). A sustainable investment is an investment in an economic activity which contributes to an environmental or social objective, which does not significantly harm any environmental or social objective and where the investee company follows good governance practices. SFDR does not provide for objective criteria to determine the contribution of an economic activity to a particular environmental or social objective or set thresholds for identifying whether an economic activity causes significant harm to an environmental or social objective. As a result, the definition of "sustainable investments" is not standardised and requires firms to make subjective decisions. Firms subject to SFDR may take different approaches to categorising such investments. There can be no guarantee that a sustainable investment will attain its environmental or social objective or avoid harm to any particular environmental or social objective. The strategies may involve investment decisions based on the whether or not an investment is determined to be a "sustainable investment" and the impact of such decisions may result in the strategies generating lower financial returns than if it did not consider such determination.

The strategies described in this Report may be intended to have an ESG-related impact. Any impact will be calculated based on sustainability-related data, and will be subject to the data limitations outlined above. Any ESG-related impact may not be as expected and there is no assurance that any ESG-related impact will be achieved.

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