

Second-Party Opinion

PNC Green Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the PNC Green Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2018. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that the eligible projects funded relating to Renewable Energy, Energy Efficiency and Green Buildings will lead to positive environmental impacts and advance the UN Sustainable Development Goals, particularly goals 7 and 11.



PROJECT EVALUATION / SELECTION PNC has a dedicated Sustainable Finance Working Group (SFWG) which will act as the governance committee for project evaluation and selection. The Green Bond Approval Committee will approve eligible projects. This is in line with market practices.



MANAGEMENT OF PROCEEDS PNC has established the Green Bond Asset Tracking Group which will track funds from PNC's green bond issuance using its internal reporting system. All unallocated funds will be tracked by the Group and will be held in cash or cash equivalents. This is in line with market practice.



REPORTING PNC will publish an annual Green Bond Report on its Green Bond webpage which will provide both quantitative and qualitative information about the use of proceeds categories such as description of projects, allocated and unallocated balances to each eligible category, and environmental KPIs including installed capacity, emission reductions, etc. Sustainalytics views PNC's allocation and impact reporting as aligned with market practice.

Evaluation date	September 2019
PNC Location	Pittsburgh, United States

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Introduction

The PNC Financial Services Group, Inc. (“PNC”) is a bank holding company and financial services corporation headquartered in Pittsburgh, Pennsylvania. It is one of the largest diversified financial services companies in the United States and has businesses engaged in retail banking, including residential mortgage, corporate and institutional banking, and asset management. Its retail branch network is located in markets across the Mid-Atlantic, the Midwest and the Southeast. They also have strategic international offices in four countries outside the U.S. Its Asset Management Group consists of PNC Wealth Management, Hawthorn and PNC Institutional Asset Management

PNC has developed the PNC Green Bond Framework (the “Framework”) under which it intends to issue green bonds and use the proceeds to finance/refinance, in whole or in part, existing/future projects that promote a transition to a low-carbon economy. The Framework defines eligibility criteria in three areas:

1. Renewable Energy
2. Energy Efficiency
3. Green Buildings

PNC engaged Sustainalytics to review the Framework, dated September 2019, and provide a second-party opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2018 (the “GBP 2018”).¹ The Framework has been published in a separate document.²

As part of this engagement, Sustainalytics held conversations with various members of PNC’s management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of PNC’s green bond. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the Framework and should be read in conjunction with that Framework.

¹ The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

² The PNC Green Bond Framework is available at: <https://www.pnc.com/en/about-pnc/corporate-responsibility/corporate-social-responsibility/communities-green/sustainable-finance.html>

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on PNC's Green Bond Framework

Summary

Sustainalytics is of the opinion that the Framework is credible and impactful and aligns with the four core components of the GBP 2018. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
 - The three use of proceeds categories are recognized as impactful by the GBP 2018.
 - Under the renewable energy category, proceeds from the bond will be used to support investment for construction of new solar and wind energy facilities as well as for maintenance of these facilities.
 - The proceeds from issuance of the bond will provide funds for investment that reduce energy consumption, specifically for lighting purposes. Energy efficient lighting improvements will be made within PNC owned and operated real estate, resulting in a minimum of 25% energy efficiency improvement.
 - PNC will also fund investments in new and refurbished buildings through the proceeds raised by the green bond issuances. These buildings will be certified by the LEED building standard with a minimum of a Gold rating.
- Project Evaluation and Selection:
 - PNC has created a Green Bond Approval Committee (the "GBAC"), within its Sustainable Finance Working Group which will act as the governance committee for green bond project evaluation and selection. The GBAC includes individuals from PNC's Corporate Social Responsibility and Debt Capital Markets teams. PNC's business representatives will present potential eligible projects to the GBAC who will then approve eligible projects. To document this process PNC will create a standardized form to document proposals, approvals and rejections made by the GBAC. Sustainalytics considers that systematic collaboration between relevant business units is likely to strengthen the implementation of the Framework and is in line with market practice.
- Management of Proceeds:
 - PNC has established the Green Bond Asset Tracking Group. This group will be responsible for tracking funds from green bond issuances by using PNC's internal reporting system. All green bond funds will be earmarked at issuance for allocation to eligible projects. All unallocated funds will be tracked by the Green Bond Asset Tracking Group and will be held in cash or cash equivalents. The GBAC will provide annual updates of fund allocation on its Sustainable Finance webpage.³
 - PNC's process with respect to the management of proceeds is in line with market practice.
- Reporting:
 - PNC will provide both quantitative and qualitative information about the use of proceeds on its Green Bond webpage which will include information such as – description of projects, environmental impacts of funded projects, and allocated and unallocated balances to each eligible category. Sustainalytics considers this to be in line with market practice.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that the Framework aligns to the four core components of the GBP 2018. For detailed information please refer to Appendix 1: Sustainability Bond/ Sustainability Bond Programme External Review Form.

³ Link to PNC's Sustainable Finance webpage available at: <https://www.pnc.com/en/about-pnc/corporate-responsibility/corporate-social-responsibility/communities-green/sustainable-finance.html>

Section 2: PNC's Sustainability Strategy

Contribution of the Framework to PNC's sustainability strategy

In support of the transition to a low-carbon economy, PNC strives to balance financial priorities with environmental issues by integrating sustainability practices that promote a holistic approach to good environmental stewardship.⁴ PNC focuses on both their own operations in terms of reducing greenhouse gas emissions, energy use and water use, as well as on how they can assist their customers in meeting their sustainability goals.

In terms of sustainable operations initiatives, PNC has made sustainable design and construction a driving factor for its long-term climate change strategy. After meeting its 2020 goals for energy, water and carbon emissions reductions early, in 2017 PNC set even more ambitious, science-informed targets for 2035 – a 75% reduction in carbon emissions and energy use, and a 50% reduction in water use. Additionally, in May 2019 PNC set a goal to achieve 100% renewable energy use by 2025.⁴

PNC has also supported the transition to a low-carbon economy by helping its clients finance sustainability projects, including those related to energy efficiency, green building and renewable energy. PNC's sustainable finance commitment totals more than \$23 billion since 2016.⁴

As part of this commitment, in 2017, PNC's Energy Capital business provided financing to the City of Holyoke's Gas and Electric, a municipal-owned power company, for a 5.8MWdc ground-mounted photovoltaic project located at a former coal-burning power plant site in Holyoke, Massachusetts.⁵ This project was expanded in 2018 to include a 3MWac battery storage system on the same site as the solar project, specifically to enhance operational efficiency, optimize intermittent solar energy and improve power reliability to customers.⁶

Another example of PNC's support of renewable energy solutions was PNC Renewable Energy Finance Group's financing - alongside two other banks - of a \$104.1 million senior secured term loan to help finance a portfolio of solar distributed generation projects for a leading global renewable power company with over 3,700 MW of high-quality wind and solar assets in North America and Western Europe. The portfolio consists of 117 individual project sites in 14 states with a total generation capacity of 138MWdc.⁶

Based on the policies and plans in place, Sustainalytics believes that PNC is well positioned to issue green bonds and that its green bonds will further PNC's overall climate change strategy.

Well positioned to address common environmental and social risks associated with the projects

While the proceeds from the green bonds will be directed toward eligible projects that are recognized by market norms to deliver overall positive environmental outcomes, Sustainalytics recognizes that such projects could also lead to negative environmental and social outcomes. Some key environmental and social risks associated with the eligible projects could be pollution control and occupational health and safety in construction and development projects, increased exposure of local communities to adverse effects, and biodiversity loss.

Although PNC has a limited role in the development of specific eligible projects, Sustainalytics considers that the following mechanisms, systems and procedures which PNC has put in place will further help mitigate such risks:

- PNC has enacted policies to mitigate social risks, including its Code of Business Conduct and Ethics,⁷ and its Supplier Code of Conduct, the latter of which commits PNC to ensuring occupational health and safety and maintaining a healthy and safe workplace.

⁴ The PNC Financial Services Group. 2018 Corporate Social Responsibility Report is available at: https://www.pnc.com/content/dam/pnc-com/pdf/aboutpnc/CSR/PNC_2018_CSR_Report.pdf

⁵ The PNC Financial Services Group. 2017 Corporate Social Responsibility Report is available at: https://www.pnc.com/content/dam/pnc-com/pdf/aboutpnc/CSR/PNC_2017_CSR_Report.pdf

⁶ Information based on the draft PNC 2019 CDP report.

⁷ PNC, Code of Business Conduct and Ethics is available at: <https://www.pnc.com/en/about-pnc/corporate-responsibility/corporate-social-responsibility/governance-risk/ethics.html>

- PNC has adopted a framework to assess, mitigate and manage risks at both the portfolio and individual transaction levels.⁸ The framework is regularly reviewed by senior management and in line with PNC's broader Corporate Social Responsibility governance process, overseen by PNC's Board of Directors.⁸
- PNC has internal processes and personnel in place, such as its Corporate Social Responsibility team which helps manage Corporate & Institutional Banking's environmental and social risk efforts and facilitates regular communication between business partners when reviewing materiality, renewable energy financing, environmental assessments and socially responsible investing.⁸
- PNC has developed an Environmental and Social Risk Management Rapid Risk Screen to use across all of Corporate & Institutional Banking.⁸ The Rapid Risk Screen accounts for environmental and human rights risks and expands PNC's focus on both risk domains across all of the company's wholesale lending activities.⁸

Given the above-mentioned policies, systems and procedures, Sustainalytics is of the opinion that PNC is well prepared to manage and mitigate potential environmental and social risks associated with eligible projects.

Section 3: Impact of Use of Proceeds

All three use of proceeds categories are recognized as impactful by the GBP 2018.

The role of financial institutions in supporting a transition to a low-carbon economy

It is estimated that by 2020 approximately USD 5 trillion per year will need to be channeled towards green investments in order to achieve sustainable growth, particularly in clean water, sustainable transport, renewable energy, and other green infrastructure.⁹ If no action is taken and the current trends continue it is projected that the cost of global warming will be as high as 3.6 percent of global gross domestic product.¹⁰ To meet this scale of investment, both public and private sector participation is required. The United Nations Environment Programme Finance Initiative states that "bank loans are the most important source of external finance for companies and will play a crucial role in steering businesses towards lower emission activities".¹¹

Therefore, Sustainalytics is of the opinion that PNC's bond proceeds which will be used to support investments, particularly in renewable energy, energy efficiency and green buildings, are impactful and will push for a low carbon economy.¹²

The role of renewable energy and energy efficiency in achieving climate goals

Shifting towards clean energy plays an important role in mitigating climate change and limiting a 1.5 degree Celsius increase in temperature as specified by the IPCC 2018 report.¹³ However, annual global energy increased by 2.3% in 2018 with fossil fuels contributing to nearly 70% of the growth.¹⁴ Fossil fuels still made up 80% of U.S. energy consumption in 2017.¹⁵ There is an urgent need to increase renewable energy share in the U.S. energy mix and to limit GHG emissions from the use of fossil fuels. Further, the state of Pennsylvania, where PNC is headquartered, has committed to reduce its 2005 GHG emissions levels by 26% by 2025 and by 80% by 2050.¹⁶

⁸ PNC, Environmental & Social Risk Management:

<https://www.pnc.com/en/about-pnc/corporate-responsibility/corporate-social-responsibility/governance-risk/values-business.html>

⁹ The Green Investment Report, the ways and means to unlock private finance for green growth. Green Growth Action Alliance.

http://www3.weforum.org/docs/WEF_GreenInvestment_Report_2013.pdf

¹⁰ The Cost of Climate Change. Natural Resources Defense Council. <https://www.nrdc.org/sites/default/files/cost.pdf>

¹¹ Financial Institutions Taking Action on Climate Change. UNEP.

<https://www.unepfi.org/fileadmin/documents/FinancialInstitutionsTakingActionOnClimateChange.pdf>

¹² http://www3.weforum.org/docs/WEF_GreenInvestment_Report_2013.pdf

¹³ IPCC Global Warming of 1.5 °C, 2018: <https://www.ipcc.ch/sr15/>

¹⁴ Global Energy Demand. International Energy Agency: <https://www.iea.org/newsroom/news/2019/march/global-energy-demand-rose-by-23-in-2018-its-fastest-pace-in-the-last-decade.html>

¹⁵ The United States uses a mix of energy sources. U.S. Energy Information Administration.

https://www.eia.gov/energyexplained/?page=us_energy_home

¹⁶ Powering Our Future: A Clean Energy Vision for Philadelphia. The City of Philadelphia. <https://www.phila.gov/media/20180821150658/Powering-Our-Future-Full-Report.pdf>

Therefore, Sustainalytics believes that supporting investments in renewable energy and energy efficiency projects in the U.S. will promote low carbon growth.

Importance of Green Building to reduce GHG

In 2017 the residential and commercial building sector contributed to almost 12% (about 6,457 Million Metric Tons of CO₂ equivalent) of total GHG emissions in the U.S.¹⁷ This sector was the fourth largest emitting sector after transportation, electricity and the industry/manufacturing sector. This sector is also the largest consumer of electricity in the U.S., accounting for about 70% of electricity consumption.¹⁸ In this context, investment in green buildings that are LEED certified with a minimum of Gold rating can provide substantial environmental benefits.

Alignment with/contribution to Sustainable Development Goals

The UN Sustainable Development Goals (the “SDGs”) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This green bond advances the following SDG goals and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy Energy Efficiency	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency.
Green Buildings	11. Sustainable Cities and Communities	11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, and resilience to disasters.

Conclusion

PNC has developed the Framework, under which it will issue green bonds, with the proceeds being used to support investments in renewable energy, energy efficiency and green buildings. Sustainalytics believes that the Framework is aligned with the overall mission of PNC and that the three use of proceed categories will advance the SDGs. Additionally, Sustainalytics is of the opinion that PNC has appropriate measures in place to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds.

Overall, Sustainalytics is of the opinion that the Framework is robust, transparent, and in alignment with the four core components of the GBP 2018.

¹⁷ Sources of Greenhouse Gas Emissions. United States Environmental Protection Agency. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#industry>

¹⁸ Electricity Customers. United States Environmental Protection Agency. <https://www.epa.gov/energy/electricity-customers>

Appendices

Appendix 1: Green Bond / Green Bond Programme - External Review Form Section 1. Basic Information

Issuer name:	The PNC Financial Services Group, Inc. ("PNC")
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable: <i>[specify as appropriate]</i>	PNC Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	September 3, 2019
Publication date of review publication: <i>[where appropriate, specify if it is an update and add reference to earlier relevant review]</i>	

Section 2. Review overview

SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review assessed the following elements and confirmed their alignment with the GBPs:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use of Proceeds | <input checked="" type="checkbox"/> Process for Project Evaluation and Selection |
| <input checked="" type="checkbox"/> Management of Proceeds | <input checked="" type="checkbox"/> Reporting |

ROLE(S) OF REVIEW PROVIDER

- | | |
|---|--|
| <input checked="" type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Please refer to Evaluation Summary above.

Section 3. Detailed review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

The eligible categories for the use of proceeds are aligned with those recognized by the Green Bond Principles. Sustainalytics considers that the eligible projects funded relating to 1. Renewable Energy 2. Energy Efficiency and 3. Green Buildings will lead to positive environmental impacts and advance the UN Sustainable Development Goals, particularly goals 7 and 11.

Use of proceeds categories as per GBP:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Renewable energy | <input checked="" type="checkbox"/> Energy efficiency |
| <input type="checkbox"/> Pollution prevention and control | <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation | <input type="checkbox"/> Clean transportation |
| <input type="checkbox"/> Sustainable water and wastewater management | <input type="checkbox"/> Climate change adaptation |
| <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes | <input checked="" type="checkbox"/> Green buildings |
| <input type="checkbox"/> Unknown at issuance but currently expected to conform with GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other <i>(please specify)</i> : |

If applicable please specify the environmental taxonomy, if other than GBPs:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section *(if applicable)*:

PNC has a dedicated Sustainable Finance Working Group (SFWG) which will act as the governance committee for project evaluation and selection. The Green Bond Approval Committee will approve eligible projects. This is in line with market practices.

Evaluation and selection

- | | |
|--|--|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input type="checkbox"/> Documented process to identify and manage potential ESG risks associated with the project |
| <input type="checkbox"/> Summary criteria for project evaluation and selection publicly available | <input type="checkbox"/> Other <i>(please specify)</i> : |

Information on Responsibilities and Accountability

- | | |
|--|---|
| <input checked="" type="checkbox"/> Evaluation / Selection criteria subject to external advice or verification | <input checked="" type="checkbox"/> In-house assessment |
| <input type="checkbox"/> Other (please specify): | |

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

PNC has established the Green Bond Asset Tracking Group which will track funds from PNC's green bond issuances using its internal reporting system. All unallocated funds will be tracked by the Group and will be held in cash or cash equivalents. This is in line with market practice.

Tracking of proceeds:

- | |
|---|
| <input checked="" type="checkbox"/> Green Bond proceeds segregated or tracked by the issuer in an appropriate manner |
| <input checked="" type="checkbox"/> Disclosure of intended types of temporary investment instruments for unallocated proceeds |
| <input type="checkbox"/> Other <i>(please specify)</i> : |

Additional disclosure:

- | | |
|--|---|
| <input type="checkbox"/> Allocations to future investments only | <input checked="" type="checkbox"/> Allocations to both existing and future investments |
| <input type="checkbox"/> Allocation to individual disbursements | <input type="checkbox"/> Allocation to a portfolio of disbursements |
| <input type="checkbox"/> Disclosure of portfolio balance of unallocated proceeds | <input type="checkbox"/> Other <i>(please specify)</i> : |

4. REPORTING

Overall comment on section *(if applicable)*:

PNC will publish an annual Green Bond Report on its Green Bond webpage which will provide both quantitative and qualitative information about the use of proceeds categories such as description of projects, allocated and unallocated balances to each eligible category, and environmental KPIs including installed capacity, emission reductions etc. Sustainalytics views PNC's allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other <i>(please specify)</i> : |

Information reported:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Allocated amounts | <input type="checkbox"/> Green Bond financed share of total investment |
| <input checked="" type="checkbox"/> Other (<i>please specify</i>): Balance unallocated balances | |

Frequency:

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Impact reporting:

- | | |
|--|--|
| <input type="checkbox"/> Project-by-project | <input checked="" type="checkbox"/> On a project portfolio basis |
| <input type="checkbox"/> Linkage to individual bond(s) | <input type="checkbox"/> Other (please specify): |

Frequency:

- | | |
|--|--------------------------------------|
| <input checked="" type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Information reported (expected or ex-post):

- | | |
|---|---|
| <input checked="" type="checkbox"/> GHG Emissions / Savings | <input type="checkbox"/> Energy Savings |
| <input type="checkbox"/> Decrease in water use | <input checked="" type="checkbox"/> Other ESG indicators (please specify): installed capacity, building certification |

Means of Disclosure

- | | |
|---|---|
| <input type="checkbox"/> Information published in financial report | <input type="checkbox"/> Information published in sustainability report |
| <input type="checkbox"/> Information published in ad hoc documents | <input checked="" type="checkbox"/> Other (please specify): Green Bond Report |
| <input type="checkbox"/> Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): | |

Where appropriate, please specify name and date of publication in the useful links section.

USEFUL LINKS (e.g. to review provider methodology or credentials, to PNC's documentation, etc.)

- | |
|---|
| <ol style="list-style-type: none"> 1. PNC's CSR website: www.pnc.com/csr 2. PNC's Sustainable Finance Page: https://www.pnc.com/en/about-pnc/corporate-responsibility/corporate-social-responsibility/communities-green/sustainable-finance.html 3. PNC's 2018 CSR report: https://www.pnc.com/content/dam/pnc-com/pdf/aboutpnc/CSR/PNC_2018_CSR_Report.pdf |
|---|

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

- | | |
|--|--|
| <input type="checkbox"/> Consultancy (incl. 2 nd opinion) | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification / Audit | <input type="checkbox"/> Rating |
| <input type="checkbox"/> Other (<i>please specify</i>): | |

Review provider(s):

Date of publication:

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. **Second Party Opinion:** An institution with environmental expertise that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

Disclaimer

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The Opinion was drawn up with the aim to provide objective information on why the analyzed bond is considered sustainable and responsible, and is intended for investors in general, and not for a specific investor in particular. Consequently, this Opinion is for information purposes only and Sustainalytics will not accept any form of liability for the substance of the opinion and/or any liability for damage arising from the use of this Opinion and/or the information provided in it.

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The client is fully responsible for certifying and ensuring its commitments’ compliance, implementation and monitoring.

Sustainalytics

Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization, and supports various stakeholders in the development and verification of their frameworks. In 2015, Global Capital awarded Sustainalytics "Best SRI or Green Bond Research or Ratings Firm" and in 2018 and 2019, named Sustainalytics the "Most Impressive Second Party Opinion Provider". The firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance in 2018, and in 2019 was named the "Largest Approved Verifier for Certified Climate Bonds" by the Climate Bonds Initiative. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan and the Minister of the Environment Award in the Japan Green Contributor category of the Japan Green Bond Awards in 2019.

For more information, visit www.sustainalytics.com

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