Second-Party Opinion

Analog Devices, Inc. Green Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the Analog Devices, Inc. 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 – Renewable Energy, Energy Efficiency, Green Buildings, Sustainable Water and Wastewater Management, Pollution Prevention and Control, Clean Transportation and Eco-efficient and/or Circular Economy Adapted Products, Production Technologies – are aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers that the projects financed by the proceeds of the green bond will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDG Goals 6, 7, 9, 11 and 12.

PROJECT EVALUATION / SELECTION ADI has appointed its Sustainability and Finance teams to oversee the Green Bond allocation and selection process. The teams will nominate projects submitted by the Company's various business units and will recommend the allocation of eligible projects to the Treasurer who is responsible for final project approval. Sustainalytics considers the project selection process in line with market practice.

MANAGEMENT OF PROCEEDS ADI will monitor and keep track of the green bond(s) net proceeds using its internal tracking systems. Pending full allocation of an amount equal to the net proceeds, proceeds may be temporarily invested in cash or liquid securities in accordance with ADI's Investment Policy or used to repay existing debt. ADI intends to allocate within 24 months of issuance if feasible. Sustainalytics views this as aligned with market practice.

REPORTING ADI intends to provide allocation and impact reporting on its website on an annual basis until full allocation. The report will include the allocation of net proceeds at the category level and a list of eligible projects which have been financed, including descriptions and, where feasible, impact metrics. Sustainalytics views ADI's allocation and impact reporting as aligned with market practice.

Evaluation date	March 27, 2020
Issuer Location	Norwood, Massachusetts

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Introduction

Analog Devices, Inc. ("ADI" or the "Company") is an American multinational semiconductor company headquartered in Norwood, Massachusetts. The Company specializes in data conversion, signal processing and power management technology and serves over 100,000 customers across a wide range of industries, including communications, industrial, instrumentation, military/aerospace, automotive, and consumer electronics.

ADI has developed the Analog Devices, Inc. Green Bond Framework (the "Framework") under which it intends to issue green bond(s) and use the proceeds to finance and/or refinance, in whole or in part, existing and/or future projects that will help the Company conserve the resources its uses throughout its operations, minimizing its overall impact to the environment. The Framework defines eligibility criteria in seven areas:

1. Renewable Energy
2. Energy Efficiency
3. Green Buildings
4. Sustainable Water and Wastewater Management
5. Pollution Prevention and Control
6. Clean Transportation
7. Eco-efficient and/or Circular Economy Products, Production Technologies and Processes

ADI engaged Sustainalytics to review the Analog Devices, Inc. Green Bond Framework, dated March 2020, and provide a second-party opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2018 (GBP).[1] An excerpt of this Framework has been included in Appendix 1 of this document.

As part of this engagement, Sustainalytics held conversations with various members of ADI'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 ADI's Green Bond Framework. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics' opinion of the Analog Devices, Inc. Green Bond 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/

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Analog Devices, Inc. Green Bond Framework

Sustainalytics is of the opinion that the Analog Devices, Inc. Green Bond Framework is credible and impactful, and aligns with the four core components of the GBP 2018. Sustainalytics highlights the following elements of ADI's Green Bond Framework:

- Use of Proceeds:
  - The eligible categories for the use of proceeds – Renewable Energy, Energy Efficiency, Green Buildings, Sustainable Water and Wastewater Management, Pollution Prevention and Control, Clean Transportation and Eco-efficient and/or Circular Economy Adapted Products – are aligned with those recognized by the Green Bond Principles 2018.
  - Within the Renewable Energy category, the Framework allows for expenditures related to the construction, development, acquisition, maintenance and operation of eligible renewable energy.
    - The Framework defines renewable energy as wind power, solar power, and geothermal power with direct emissions less than 100gCO_2/kWh.[4] This is in line with market practice.
    - In addition to on-site renewable energy, the Framework allows for allocating to the differential costs associated with sourcing renewable energy. Sustainalytics views positively that allocations in this category are directed solely to cost differences for renewable energy procurement, not the entire amount, while encouraging ADI to prioritize procurement that is long-term and project-specific.
  - Within the Energy Efficiency category, ADI will finance and/or refinance investments to increase the energy efficiency of its own operations. This includes projects such as LED lighting upgrades, pump upgrades, cooling tower upgrades, smart grids and energy storage. Sustainalytics views investments in the specified technology classes to generate positive environmental impacts, and encourages reporting of quantitative impact metrics.
  - Proceeds from the green bond(s) will be used to finance expenditures related to properties that have received, or are expected to receive, LEED Gold certification or higher for new construction or LEED Silver certification or higher for retrofitted buildings, or other equivalent certifications.
    - Sustainalytics views LEED certification as credible and aligned with market practice. See Appendix 2 for further description of LEED.
    - Sustainalytics considers LEED Gold and above as aligned with market practice, noting that retrofitting existing buildings to the level of LEED Silver will generate positive environmental outcomes while encouraging the achievement of higher levels of performance where feasible.
  - The Framework defines eligibility criteria for Sustainable Water and Wastewater Management assets in line with market practice. Sustainalytics encourages, where feasible, reporting on the quantitative impact of these projects.
  - The Pollution and Prevention Control category includes expenditures related to waste water treatment, waste prevention, waste reduction, waste recycling and associated environmental monitoring activities. Sustainalytics views these classes of activities positively and encourages ADI to report on the quantitative impact of these projects, where feasible.
  - The Clean Transportation category allows for expenditures related to the development of clean transportation infrastructure such as electric car charging stations. Sustainalytics recognizes the importance of financing such infrastructure as an important contribution to low-carbon transport.
  - Within the category of Eco-efficient and/or Circular Economy Adapted Products, Production Technologies and Processes, ADI will allocate proceeds to activities related to the development and introduction of green products and distribution. This includes current and future ADI technologies that use power efficiency, such as wireless battery management systems, intelligent battery sensors, pressure sensors, and investments in 5G network infrastructure. On

the whole, Sustainalytics views positively the ambition of the projects included within this category,[2] and notes the following about specific project types:

- ADI has communicated that proceeds in this category may be directed to technology which provides increased efficiency in both battery-electric and hybrid vehicles, including battery management, sensor technology, and other technologies. Sustainalytics views positively these efficiency improvements, noting that, as they are component technologies, no improvement threshold is considered in this analysis. It is also recognized that these technologies may be applied to hybrid vehicles which, while generally less polluting than conventional internal combustion engines, may not be fully aligned with a low-carbon trajectory.[3] Nevertheless, as ADI's investments are focused on improving the performance of subsystems within these vehicles, thus enabling a lesser reliance on fossil fuel combustion overall, these investments are viewed positively.
- ADI may invest in the development of battery management technologies which will provide improved energy performance in wireless applications. Sustainalytics views positively these efficiency improvements, noting that as they are component technologies that no quantitative threshold is considered in this analysis.
- ADI may invest in the development of components which support and enable advanced telecommunications infrastructure, such as 5G. Sustainalytics recognizes the potential environmental benefits of widespread 5G deployment, which will deliver energy savings and other environmental benefits. However, Sustainalytics notes that (i) ADI's technologies are implemented by third parties, and therefore the environmental benefits associated with its technologies will accrue across the value chain and (ii) ADI does not control the implementation, and therefore cannot guarantee that they are not being used in fossil-fuel intensive applications.

– Also within the category of Eco-efficient products, expenditures may include research and development costs. Sustainalytics recognizes that R&D activities have the potential to result in positive environmental outcomes, while noting the difficulty in quantifying the direct impacts of R&D related activities until the commercialization phase, as well as that the GBP are commonly focused on project expenditures. Overall, ADI's R&D expenditures are viewed positively based on: the disclosure of anticipated environmental benefits, the Company's demonstrated track record of successfully implementing new and advanced technology, and the specific products targeted by the Framework for R&D activity are noted to be in deployment and/or near commercial stage.

- Project Evaluation and Selection:
  – ADI's Sustainability and Finance teams will be responsible for overseeing the Green Bond allocation and selection process. The teams will collectively nominate projects submitted by the Company's various business units and will then recommend the allocation of eligible projects to the Treasurer who will be responsible for final project approval.
  – Based on the clear process for nominating projects and the final approval by senior member of the management team Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
  – ADI will monitor and keep track of the green bond(s) net proceeds in accordance with its internal tracking systems. ADI has communicated its intention to allocate net proceeds within the 24 months after a green bond issuance, where feasible.
  – Pending full allocation of an amount equal to the net proceeds, proceeds may be temporarily invested in cash or liquid securities accordance with ADI's Investment Policy or used to repay existing debt. Considering the nature of ADI's business activities and the defined allocation timeframe, Sustainalytics considers these forms of temporary investments as aligned with market practice.
  – Overall, based on the use of formal internal systems, as well as the disclosure of temporary investments and intended allocation timeframe, Sustainalytics considers this process to be in line with market practice.
- Reporting:

[2] ADI has provided to Sustainalytics a list of projects which it is considering for inclusion in the inaugural green bond; Sustainalytics considers these projects to be indicative of the undertakings to be financed under the Framework.
[3] Sustainalytics considers an emissions threshold in CO2emitted per person-kilometer of mobility, as proposed by the IEA Mobility Model, to be indicative of compliance with a 2-degree warming scenario.

- ADI intends to provide a Green Bond Report on its website on an annual basis and until full allocation. Allocation reporting will include (i) the amount of net proceeds allocated to each eligible project category, (ii) the list of eligible project categories with brief descriptions, and (iii) the outstanding amount of net proceeds that are yet to be allocated to projects at the end of the reporting period. Where feasible, ADI will also include impact reporting, drawing on metrics such as CO2e emissions avoided, certified green buildings floor area (sq.ft), renewable energy installed (capacity/savings kWh), greenhouse emissions avoided (metric tons CO2e, waste reduction (metric tons) and water savings (gal).
- The Green Bond Report will be accompanied with management's assertion that an amount equal to the net proceeds of an offering of bonds were allocated to eligible projects. This will be supplemented with a report from an independent registered public accounting firm in respect of its examination of management's assertions conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants.
- Based on the commitments outlined above, Sustainalytics considers this process to be in line with market practice.

Alignment with Green Bond Principles 2018

Sustainalytics has determined that the Analog Devices, Inc. Green Bond Framework aligns to the four core components of the GBP 2018. For detailed information please refer to Appendix 3: Green Bond/Green Bond Programme External Review Form.

Section 2: Sustainability Performance of Analog Devices, Inc.

Contribution of framework to Analog Devices, Inc.'s sustainability strategy

Considering the focus on minimizing its impact to the environment, Sustainalytics is of the opinion that ADI has taken steps to integrate sustainability considerations within its overall business operations. The Company's environmental sustainability strategy focuses on monitoring and conserving the resources it uses within its production operations, namely energy, water, and materials, as part of its efforts to reduce discharges and emissions. In order to monitor its environmental performance, ADI routinely sets quantitative and time-bound goals and tracks ongoing progress in the following four focus areas: greenhouse gas, energy, water and waste.[4] Sustainalytics considers that the proceeds of the green bonds issued under the Framework will directly contribute to Analog's ability to fulfill its resource conservation goals.

Analog initially set and met its 2010 goal of reducing GHG emissions, energy, water use and waste volume by 10% against a 2006 baseline and by 5% by 2015 against a 2010 baseline. ADI has set a new goal of achieving a further 2.5% reduction across the four metrics (GHG emissions, energy, water use and waste volume) by 2020 against a 2015 baseline.[5] In 2018, Analog's absolute Scope 1 emissions decreased by 29% relative to 2015, while normalized emissions (g/cm^2 of wafer fabricated) were reduced by 38% through the improvement of its abatement systems.[6] Between 2015 to 2018, ADI reduced its Scope 2 emissions by 34% as a result of shifting to renewable energy generation, as well as through energy efficiency and conservation initiatives. Since achieving these reductions, the Company has set a new target of a 50% reduction in Scope 1 and 2 emissions by 2025 against a 2015 baseline. In addition, the Company encourages its employees to reduce their own carbon footprints by providing shuttle bus services, prime parking spots for employees who carpool, and the use of teleconference and videoconference to reduce emissions associated with employee business travel. As a result of these efforts, the Company's business travel category emissions under Scope 3 decreased by 52% in 2018 compared to 2017 levels. Regarding its energy usage and intensity, ADI's purchased electricity and fuel – the Company's main energy usage sources - decreased by 2% in 2018 against the 2015 baseline. In the same year, the Company's electricity intensity at its wafer fabrication and assembly and test sites decreased by 11% and 9% respectively.[7] As discussed, the Company began using renewable energy in 2016 and 2017, at its Ireland and Philippines manufacturing sites respectively, resulting in decreased reliance on non-renewable energy sources. In 2018, 35% of the energy used at its manufacturing sites were derived from renewable sources as compared to the 2015 baseline, and in the same year the Company installed zero-loss CDA heated dryer, lighting upgrades, variable frequency drives, and pump upgrade projects, resulting in more than 16 million kWhr in energy savings.

[4] Analog, Environmental Sustainability: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability.html
[5] Analog, Environmental Sustainability: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability.html
[6] Analog Devices, Greenhouse Gas: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/greenhouse-gas.html
[7] Analog Devices, Energy: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/energy.html

Despite ADI's growth, the Company's water usage has remained relatively constant with that of its base year. In 2018, the Company's water use intensity at its wafer fabrication, assembly and test sites decreased by 10% and 15% respectively, against a 2015 baseline. On average, 20% of the Company's annual water withdrawal between 2015 to 2018 was reused or recycled.[8] By focusing on water use reduction programs at its manufacturing facilities, with an emphasis on recycling and reuse, the Company recycled over 157 million gallons of water in 2018.[9] Given increased production, in 2018, waste generation (total waste generated less recycled nonhazardous waste) increased by 1.2% against the 2015 baseline year.[10] However, the Company's recycling rate for non-hazardous waste improved between 2015 and 2018 from 54% to 58%.[11]

Given the abovementioned targets and ADI's ongoing commitment to improving its environmental practices across the four focus areas, Sustainalytics is of the opinion that the Analog Devices, Inc. Green Bond Framework will further the Company's ability to fulfill its overall sustainability strategy and minimize its impact on the environment.

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

While it is acknowledged that the net proceeds from the bond(s) issued under ADI's Framework will be directed towards eligible projects that are expected to yield overall positive environmental impact, Sustainalytics recognizes that companies operating within the semiconductor industry face potential environmental and social risks, particularly when considering the resource-intensive nature of the industry's manufacturing processes. Some of these risks could include high amounts of water and energy depletion, the use of toxic chemicals in the manufacturing process, generation of hazardous waste, emission of harmful substances and occupational health and safety risks, namely exposure of workers to hazardous and harmful substances during the manufacturing process.

Sustainalytics is of the opinion that ADI can proactively manage and/or mitigate potential risks through the following policies and procedures:

- ADI's manufacturing sites are all certified to ISO 14001:2015, and the Company is in the process of transitioning to ISO 45001.[12] In alignment with these certifications, the Company applies an enterprise-wide Environmental Management System (EMS) and Occupational Health & Safety (OH&S) policy, ensuring that ADI is meeting internal and external compliance obligations.[13]
- ADI has procedures in place to ensure that relevant local, regional and global laws are followed with regards to the use of hazardous substances. The Company also sources materials that comply with restriction laws in countries where its products are used, and adheres to restrictions found in the European Union's, as well as China's, Restriction of Hazardous Substances (ROHS), Registration Evaluation Authorization and Restriction of Chemical Substances (REACH), and End of Life (ELV) Directives or China's RoHS.[14] The Company has instated a compliance review board to monitor ongoing preparedness and conformance with legislation, and maintains regulatory registers and has programs in place to evaluate Environmental Health and Safety (EHS) compliance status.[15] The compliance management system is audited internally and externally and is certified by an independent third party. In addition, ADI's facilities undergo routine inspections by government agencies to ensure compliance with regulatory requirements. Employees also receive EHS training, including prevention and risk control activities associated with their work.
- As part of its commitment to employee health and safety, each ADI manufacturing site has an EH&S committee and/or working group which is comprised of representatives from different functioning groups across the Company.[16] ADI has also implemented an enterprise-wide industrial hygiene

[8] Analog Devices, Water: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/water.html
[9] Analog Devices, Water: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/water.html
[10] Analog Devices, Waste: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/waste.html
[11] Analog Devices, Waste: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/waste.html
[12] Analog Devices, Commitment to Management Systems and Structure: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability.html
[13] Analog Devices, Commitment to Management Systems and Structure: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability.html
[14] Analog Devices, Policies & Commitments: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/policies-commitments.html
[15] Analog Devices, Policies & Commitments: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability/policies-commitments.html
[16] Analog Devices, Employee Health and Safety: https://www.analog.com/en/about-adi/sustainability/employee-health-safety.html

surveillance program that minimizes and prevents exposures in the workplace, reducing the risk of specific diseases.[17]

- The EHS Director, who reports to the Senior Vice President (SVP) of Global Operations and Technology, is responsible for compliance with applicable EHS legal requirements.[18] EHS Management convenes on a regular basis with ADI's in-house counsel and with external counsel, advisors, and financial personnel to discuss potential environmental risks, including those to climate change, and possible impacts to ADI's overall business and operations.[19]
- In order to ensure that its environmental goals remain relevant, ADI reviews and updates its environmental performance objectives annually, and reviews its goals on a quarterly basis at the corporate level, and on a monthly basis at the site level.

Based on the outlined policies and protocols, Sustainalytics is of the opinion that ADI has implemented sufficient measures and is well positioned to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

All eight use of proceeds categories are aligned with those recognized by the GBP. Sustainalytics has focused below where the impact is specifically relevant in the local context.

The impact of investing in energy efficiency, renewable energy and green buildings in the semiconductor manufacturing industry

Studies show that in the United States, the semiconductor industry accounts for around 1.3% – 2% of energy consumption in the manufacturing sector.[20] According to research conducted by McKinsey & Company, the average semiconductor fabrication plant will consume as much power in a year as approximately 50,000 homes.[21] While larger fabrication plants often consume more electricity than automation plants and refineries, research suggests that facility and energy system upgrades can reduce energy costs and savings by approximately 30% for most fabrication plants. Examples of such measures include energy efficiency upgrades such as converting to LEDs as well as electric pump upgrades. In this context, ADI's investments in the areas of energy-efficiency, renewable energy and green buildings for its corporate facilities, products, and supply chain operations can result in significant reductions in both the Company's direct and indirect GHG emissions as well as its ability to operate in an energy efficient manner. An example of ADI's past investments in these areas includes the Limerick Campus in Ireland, where the Company obtained LEED-Platinum certification. The building uses 100% renewable energy and includes energy efficient features such as intelligent parking lot lighting, the use of sustainable building materials, reuse of materials where possible during the construction phase, low energy equipment, low global-warming potential (GWP) refrigerants and stormwater runoff filters in order to protect the quality of groundwater. To ensure the Company's energy savings performance is continuously improving, ADI conducts an energy efficiency audit every two years and implements recommendations. Based on the above, Sustainalytics believes that ADI's investments in energy efficiency, renewable energy and certified-green buildings will have a positive environmental impact in the semiconductor industry.

The importance of increased water efficiency and conservation in resource-intensive industries

A portion of the proceeds from the bond(s) issued under the Framework will be allocated to projects focused on water savings. As one of the world's largest manufacturers of semiconductor chips, water plays an integral role in the Company's day-to-day operations.[22] A single 30cm wafer may require up to 2,200 gallons of water, including 1,500 gallons of ultra-pure water. A large fabrication facility that processes approximately 40,000

[17] Analog Devices, Employee Health and Safety: https://www.analog.com/en/about-adi/sustainability/employee-health-safety.html
[18] Analog Devices, Environmental Sustainability: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability.html
[19] Analog Devices, Environmental Sustainability: https://www.analog.com/en/about-adi/sustainability/environmental-sustainability.html
[20] Smartwatt, Semiconducter Fabs: Chipping Away at Wasted Energy: https://www.smartwatt.com/semiconductor-fabs-chipping-away-at-wasted-energy/
[21] McKinsey & Company, Bringing energy efficiency to the fab: https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/operations/pdfs/bringing_fabenergyefficiency.ashx
[22] WaterWorld, Measurement of Ultra-Pure Water in the Semiconductor Industry: https://www.waterworld.com/technologies/article/16211282/measurement-of-ultrapure-water-in-the-semiconductor-industry

wafers a month might use up to 4.8 million gallons of water per day,[23] roughly equivalent to the water usage of a city of approximately 50,000 inhabitants.[24] Despite water being the largest fabrication input, and subsequently the largest contributor to fabrication plant waste, the tools for analyzing a fabrication facility's water footprint are generally considered to be less mature than tools for analyzing emissions related to CO_2 and other greenhouse gases. As such, it is paramount that companies operating water-intensive manufacturing plants address such issues. ADI monitors its water use intensity by normalizing its fabrication site's water withdrawal to its production output, and in 2018 successfully decreased water use in fabrication by 10% and in assembly and test by 15%. In this context, and in order to continue meetings its goals, ADI has implemented water use reduction programs across its various manufacturing sites. For example, at the Limerick campus, ADI has ongoing projects to reduce water consumption and reuse water streams where possible, including recycle of RO (Reverse Osmosis) and UF (Ultra-Filtration) concentrate within the site water plant. Considering the above, Sustainalytics view ADI's investments in the category of Sustainable Water and Wastewater Management positively and encourages ADI to disclose its water usage by site and routinely update associated figures in order to ensure greater transparency.

The impact of the semiconductor industry in enabling energy savings

Given the wide application of the devices developed by ADI, innovations in semiconductor processes and performance have the potential to enable increased environmental performance across a number of industries. Through increased innovation, the feasibility of introducing energy-saving technologies has become more mainstream, allowing the industry , and those in affiliation, to undergo a collective shift towards more eco-efficient and green practices. For example, ADI presently offers a battery formation control system solution that optimizes an efficient energy recycling feature, allowing for positive energy savings impacts within its own large scale battery manufacturing processes while also enabling increased energy savings for the hybrid and electric vehicles in which the rechargeable batteries will be installed.[25] The solution offers a power efficiency higher than 90%, while during battery formation and grading, the energy discharged can be recycled in the process for other batteries.[26] In this context, ADI's investments in energy-saving technologies such as battery management systems, including sensors and monitors, will advance energy-efficient performance across a broad range of devices and applications.

Alignment with/contribution to SDGs

The Sustainable Development Goals (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	9. Industry, Innovation and Infrastructure	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
Sustainable Water and Wastewater Management	6. Clean Water and Sanitation	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

[23] China Water Risk, 8 Things You Should Know About Water & Semiconductors: http://www.chinawaterrisk.org/resources/analysis-reviews/8-things-you-should-know-about-water-and-semiconductors/
[24] IEEE Specturm, Semiconductor Manufacturing Plants can use as much water as a small city: https://www.waterworld.com/technologies/article/16211282/measurement-of-ultrapure-water-in-the-semiconductor-industry
[25] Analog Devices, Power Efficient Battery Formation: https://www.analog.com/en/technical-articles/power-efficient-battery-formation.html
[26] Analog Devices, Power Efficient Battery Formation: https://www.analog.com/en/technical-articles/power-efficient-battery-formation.html

		6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
Pollution Prevention and Control	12. Responsible Consumption and Production	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Eco-efficient and/or Circular Economy Adapted Products, Production Technologies and Processes		12. 4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
Clean Transportation	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Conclusion

Analog Devices, Inc. ("ADI") has developed the Analog Devices, Inc. Green Bond Framework under which it will issue green bonds and the use of proceeds to finance projects in the areas of Renewable Energy, Energy Efficiency, Green Buildings, Sustainable Water and Wastewater Management, Pollution Prevention and Control, Clean Transportation and Eco-efficient and/or Circular Economy Adapted Products, Production Technologies and Processes.

The Analog Devices, Inc. Green Bond Framework outlines a process by which proceeds will be tracked, allocated, and managed, and commitments have been made for reporting on the allocation and impact of the use of proceeds. ADI has sufficient measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the use of proceeds. Furthermore, Sustainalytics believes that the Analog Devices, Inc. Green Bond Framework is aligned with the overall sustainability strategy of the company and that the green use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals 6, 7, 9, 11 and 12.

Based on the above, Sustainalytics is confident that Analog Devices, Inc. is well-positioned to issue green bonds and that the Analog Devices, Inc. Green Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles 2018.

Appendices

Appendix 1: Excerpt of the Analog Devices, Inc. Green Bond Framework

The Green Bond Principles, 2018 ("GBP"), as administered by the International Capital Market Association ("ICMA"), are voluntary process guidelines for best practices when issuing Green Bonds. The GBP recommend transparency, disclosure and promote integrity in the Green Bond Market. The ADI Green Bond Framework is aligned with the four core components of the GBP.

4.1 Use of Proceeds

An amount equal to the net proceeds is expected to refinance or finance, in whole or in part, new or on-going projects, that meet the following "Eligibility Criteria". Projects may include expenditures made by us during the 28 months preceding the issuance of the Green Bond. We intend to allocate the net proceeds to finance projects that meet the "Eligibility Criteria" within 24 months from the date of issuance of the Green Bond, where feasible.

We aim for our Green Bonds to support the achievement of the United Nations Sustainable Development Goals noted below

"Eligibility Criteria" are outlined below:

GBP Eligible Project Category	Eligibility Criteria and Example Projects
Renewable Energy	• Expenditures related to the construction, development, acquisition, maintenance, and operation of renewable energy including solar, wind, geothermal with direct emissions of less than 100 g CO2/kWh • On-site renewable energy • Differential costs associated with sourcing renewable energy versus nonrenewable sources
Energy Efficiency	• Expenditures related to projects designed to improve energy-efficient projects including LED lighting upgrades, pump upgrades, cooling tower upgrades, smart grids, and energy storage
Green Buildings	• Expenditures related to properties that have received or are expected to receive: • New construction: LEED Gold certification or higher or equivalent • Retrofit: LEED Silver certification or higher or equivalent
Sustainable Water and Wastewater Management	• Expenditures related to projects designed to improve water efficiency, water conservation monitoring, water quality projects
Pollution prevention and control	• Expenditures related to projects designed to improve waste water treatment, waste prevention, waste reduction, waste recycling and associated environmental monitoring
Clean Transportation	• Expenditures related to the development of clean transportation infrastructure such as electric car charging stations
Eco-efficient and/or circular economy adapted products, production technologies and processes	• Expenditures related to research and development activities which are designed to contribute to green products and distribution, including projects improving power efficiency, battery management, electric vehicles, and 5G network infrastructure

4.2 Process for Project Evaluation and Selection

ADI's Sustainability Team and Finance Team will oversee the Green Bond allocation and selection process. The Sustainability and Finance Teams will nominate projects submitted by the various business units and recommend the allocation of eligible projects for approval by the Treasurer.

4.3 Management of Proceeds

ADI has established an internal tracking system to monitor and account for the proceeds. Pending full allocation of an amount equal to the net proceeds, proceeds may be temporarily invested in cash or liquid securities in accordance with ADI's Investment Policy, or used to repay existing debt.

In the case of divestment or if a project no longer meets the eligibility criteria, the funds will be reallocated to other Eligible Assets. Payment of principal and interest will be made from our general account and not be linked to the performance of the Eligible Assets.

4.4 Reporting

Annually, until all the proceeds have been allocated, and on a timely basis in case of material developments, ADI will publish a Green Bond Report on its website(https://investor.analog.com/investor-relations), which will include (i) the amount of net proceeds allocated to each Eligible Project Category , (ii) the list of Eligible Project Categories with a selection of brief descriptions and expected impact metrics such as CO2e emissions avoided, green buildings (sq. ft.), renewable energy (capacity/savings kWh), greenhouse emissions avoided (metric tons CO2e), waste reduction (metric tons), water savings (gal), where feasible, and (iii) the outstanding amount of net proceeds yet to be allocated to projects at the end of the reporting period.

Appendix 2: Overview of LEED Certification Scheme

	LEED[27]
Background	Leadership in Energy and Environmental Design (LEED) is a US Certification System for residential and commercial buildings used worldwide. LEED was developed by the non-profit U.S. Green Building Council (USGBC) and covers the design, construction, maintenance and operation of buildings.
Certification levels	• Certified • Silver • Gold • Platinum
Areas of assessment	• Energy and atmosphere • Sustainable Sites • Location and Transportation • Materials and resources • Water efficiency • Indoor environmental quality • Innovation in Design • Regional Priority
Requirements	Minimum requirements independent of level of certification; point-based scoring system weighted by category to determine certification level. The rating system is adjusted to apply to specific sectors, such as: New Construction, Major Renovation, Core and Shell Development, Schools-/Retail-/Healthcare New Construction and Major Renovations, and Existing Buildings: Operation and Maintenance.
Qualitative Considerations	Widely accepted within the industry, both in North America and internationally, and considered a guarantee of strong performance.
Performance display	

[27] USGBC, LEED: www.usgbc.org/LEED

Appendix 3: Green Bond / Green Bond Programme - External Review Form
Section 1. Basic Information

Issuer name:	Analog Devices, Inc.
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable*: [specify as appropriate]*	Analog Devices, Inc. Green Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	March 27, 2020
Publication date of review publication: *[where appropriate, specify if it is an update and add reference to earlier relevant review]*	

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:

☒	Use of Proceeds	☒	Process for Project Evaluation and Selection
☒	Management of Proceeds	☒	Reporting

ROLE(S) OF REVIEW PROVIDER

☒	Consultancy (incl. 2nd opinion)	☐	Certification
☐	Verification	☐	Rating
☐	Other *(please specify)*:		

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 – Renewable Energy, Energy Efficiency, Green Buildings, Sustainable Water and Wastewater Management, Pollution Prevention and Control, Clean Transportation and Eco-efficient and/or Circular Economy Adapted Products, Production Technologies and Processes – are aligned with those recognized by the Green Bond Principles 2018. Sustainalytics considers that the projects financed by the proceeds of the green bond will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDG Goals 6, 7, 9, 11 and 12.

Use of proceeds categories as per GBP:

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

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

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):

ADI has appointed its Sustainability and Finance teams to oversee the Green Bond allocation and selection process. The teams will nominate projects submitted by the Company's various business units and will recommend the allocation of eligible projects to the Treasurer who is responsible for final project approval. Sustainalytics considers the project selection process in line with market practice.

Evaluation and selection

☒	Credentials on the issuer's environmental sustainability objectives	☒	Documented process to determine that projects fit within defined categories
☒	Defined and transparent criteria for projects eligible for Green Bond proceeds	☒	Documented process to identify and manage potential ESG risks associated with the project
☐	Summary criteria for project evaluation and selection publicly available	☐	Other *(please specify):*

Information on Responsibilities and Accountability

☒ Evaluation / Selection criteria subject to external advice or verification

☐ In-house assessment

☐ Other (please specify):

3. MANAGEMENT OF PROCEEDS

Overall comment on section *(if applicable)*:

ADI will monitor and keep track of the green bond(s) net proceeds using its internal tracking systems. Pending full allocation of an amount equal to the net proceeds, proceeds may be temporarily invested in cash or liquid securities in accordance with ADI's Investment Policy. ADI intends to allocate within 24 months of issuance if feasible. Sustainalytics views this as aligned with market practice.

Tracking of proceeds:

☒ Green Bond proceeds segregated or tracked by the issuer in an appropriate manner

☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds

☐ Other *(please specify)*:

Additional disclosure:

☐ Allocations to future investments only

☒ Allocations to both existing and future investments

☐ Allocation to individual disbursements

☐ Allocation to a portfolio of disbursements

☐ Disclosure of portfolio balance of unallocated proceeds

☐ Other *(please specify)*:

4. REPORTING

Overall comment on section (if applicable):

ADI intends to provide allocation and impact reporting on its website on an annual basis until full allocation. The report will include the allocation of net proceeds at the category level and a list of eligible projects which have been financed, including descriptions and, where feasible, impact metrics. Sustainalytics views ADI's allocation and impact reporting as aligned with market practice.

Use of proceeds reporting:

☐ Project-by-project

☒ On a project portfolio basis

☐ Linkage to individual bond(s)

☐ Other *(please specify):*

Information reported:

☒ Allocated amounts ☐ Green Bond financed share of total investment

☐ Other *(please specify):*

Frequency:

☒ Annual ☐ Semi-annual

☐ Other (please specify):

Impact reporting:

☐ Project-by-project ☒ On a project portfolio basis

☐ Linkage to individual bond(s) ☐ Other (please specify):

Frequency:

☒ Annual ☐ Semi-annual

☐ Other (please specify):

Information reported (expected or ex-post):

☒ GHG Emissions / Savings ☒ Energy Savings

☒ Decrease in water use ☒ Other ESG indicators (please specify): waste reduction

Means of Disclosure

☐ Information published in financial report ☐ Information published in sustainability report

☐ Information published in ad hoc documents ☒ Other (please specify): Green Bond report

☐ 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 issuer's documentation, etc.)

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

☐ Consultancy (incl. 2nd opinion) ☐ Certification

☐ Verification / Audit ☐ Rating

☐ Other *(please specify):*

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

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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