Second-Party Opinion UOB Sustainable Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the United Overseas Bank, Limited ("UOB" or "the Bank") Sustainable Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles (GBP) 2018, Social Bond Principles (SBP) 2020, Sustainability Bond Guidelines (SBG) 2018, ASEAN Social Bond Standards (ASEAN SBS) 2018, ASEAN Green Bond Standard (ASEAN GBS) 2018, and ASEAN Sustainability Bond Standards 2018 (ASEAN SUS). 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 GBP, SBP, SBG, ASEAN SBS, ASEAN GBS, and ASEAN SUS. Sustainalytics considers that the eligible categories will lead to positive environmental and social impacts and advance the UN Sustainable Development Goals, specifically SDG 1, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14 and 15.



PROJECT EVALUATION / SELECTION UOB's project evaluation and selection will be conducted by its business units and a working group (the "Working Group") within UOB's Environmental Sustainable Governance Committee. The eligible assets will be initially selected by the business units, and approved by the Working Group. This is in line with market practice.



MANAGEMENT OF PROCEEDS The processes for management of proceeds is handled by the Working Group using a portfolio approach. Use of proceeds will be tracked by a register using internal accounting and information systems. If the assets are repaid or divested, they will be removed from the portfolio and replaced as soon as practically feasible. Pending full allocation, unallocated proceeds will be invested in line with UOB's liquidity management policy. This is in line with market practice.



REPORTING Until maturity of the Green, Social or Sustainability bond, UOB intends to report on allocation and impact of financing on its website on an annual basis. Allocation reporting will include (amongst others) total amount of eligible assets, share of new financing and refinancing, and balance of unallocated proceeds. Additionally, UOB is committed to reporting on relevant quantitative and qualitative impact where feasible. This is in line with market practice.

Alignment with the ASEAN Sustainability Bond Standards

Evaluation dateMarch 17, 2020Issuer LocationSingapore

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The ASEAN Sustainability Bond Standards provide guidance to issuers and communicate more specifically about what an issuer should do to issue credible green, social, and sustainability bonds within Southeast Asia. Sustainalytics is of the opinion that the eligible green and social project categories under the UOB Sustainable Bond Framework align with the ASEAN Sustainability Bond Standards.



Introduction

Established in 1935 and headquartered in Singapore, UOB United Overseas Bank Limited ("UOB", the "Bank", or the "Issuer")¹ is a financial institution providing personal financial services, private banking, business banking, commercial banking, transaction banking, investment banking, and treasury services. As of February 2021, UOB has more than 500 branches and offices in 19 countries in Asia Pacific, Europe, and North America.

The UOB Sustainable Bond Framework is intended for the Bank to issue green, social or sustainability bonds and use the proceeds to finance and/or refinance projects that generate environmental and social benefits and advance the Bank's sustainability objectives. The Framework defines eligibility criteria in the following areas:

Eligible Green Categories:

- 1. Renewable Energy
- 2. Energy Efficiency
- 3. Clean Transportation
- 4. Green Buildings
- 5. Sustainable Water and Wastewater Management
- 6. Pollution Prevention and Control
- 7. Circular Economy Adapted Products, Processes and Production Technologies
- 8. Climate Change Adaptation and Resilience
- 9. Sustainable Management of Living Natural Resources and Land Use

Eligible Social Categories:

- 1. Access to Essential Services
- 2. Affordable Housing
- 3. Employment Generation

UOB engaged Sustainalytics to review the UOB Sustainable Bond Framework, dated March 2021, and provide a Second-Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2018 (GBP), ² Social Bond Principles 2020 (SBP),³ Sustainability Bond Guidelines 2018 (SBG),⁴ the ASEAN Green Bond Standards (ASEAN GBS),⁵ the ASEAN Social Bonds Standards (ASEAN SUS),⁶ and the ASEAN Sustainability Bonds Standards (ASEAN SUS).⁷ This Framework has been published in a separate document.⁸

Scope of work and limitations of Sustainalytics Second-Party Opinion

Sustainalytics' Second-Party Opinion reflects Sustainalytics independent⁹ opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

https://www.theacmf.org/initiatives/sustainable-finance/asean-green-bond-standards

¹ United Overseas Bank, Ltd refers to UOB Ltd or any of the issuing entities of the group which may include branches or subsidiaries of the Bank. ² The Green Bond Principles are administered by the International Capital Market Association and are available at

https://www.icmagroup.org/greensocial-and-sustainability-bonds/green-bond-principles-gbp/

³ The Social Bond Principles are administered by the International Capital Market Association and are available at

https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/

⁴ The Sustainability Bond Guidelines are administered by the International Capital Market Association and are available at

https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-bond-guidelines-sbg

⁵ The ASEAN Green Bond Standards are administered by the ASEAN Capital Markets Forum, and are available at:

⁶ The ASEAN Social Bonds Standards are administered by the ASEAN Capital Markets Forum, and are available at:

https://www.theacmf.org/initiatives/sustainable-finance/asean-social-bond-standards

⁷ The ASEAN Sustainability Bonds Standards are administered by the ASEAN Capital Markets Forum, and are available at:

https://www.theacmf.org/initiatives/sustainable-finance/asean-sustainability-bond-standards

⁸ The UOB Sustainability Bond Framework is available on UOB's website at: <u>www.uob.com.sg/investor-relations/capital-and-funding-information/group-issuance-programmes.html</u>

⁹ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.



- The Framework's alignment with the GBP, SBP, and SBG, as administered by ICMA, and the ASEAN GBS, ASEAN SBS and ASEAN SUS, as administered by ACMF;
- The credibility and anticipated positive impacts of the use of proceeds;
- The alignment of the issuer's sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.7.1, which is informed by market practice and Sustainalytics' expertise as an ESG research provider.

As part of this engagement, Sustainalytics held discussions with various members of the UOB 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 the Framework. UOB's representatives have confirmed (1) they understand it is the sole responsibility of UOB to ensure that the information provided is complete, accurate or up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. 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 the Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and UOB.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects which are expected to be financed with bond proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner.

In addition, the Second-Party Opinion opines on the intended allocation of proceeds but does not guarantee the realised allocation of the bond proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that UOB has made available to Sustainalytics for the purpose of this SPO.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the UOB Sustainable Bond Framework

Sustainalytics is of the opinion that the Framework is credible and impactful, and aligns with the four core components of the GBP, SBP, SBG, ASEAN SBS, ASEAN GBS, and ASEAN SUS. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
 - The eligible categories for the use of proceeds Renewable Energy, Energy Efficiency, Clean Transportation, Green Buildings, Sustainable Water and Wastewater Management, Pollution Prevention and Control, Circular Economy Adapted Products, Processes and Production Technologies, Climate Change Adaptation and Resilience, Sustainable Management of Living Natural Resources and Land Use, Access to Essential Services, Affordable Housing, and Employment Generation are aligned with those recognized by the GBP, SBP, SBG, ASEAN SBS, ASEAN GBS and ASEAN SUS. Sustainalytics views that UOB's financing can reduce environmental footprint of ASEAN countries while advancing the socioeconomic development of the targeted countries. Please see Section 3 for Sustainalytics' assessment on impact of the use of proceeds.
 - The Renewable Energy category includes investments in the research, development, production, transmission and distribution of wind power, solar photovoltaic power, solar thermals,



hydropower (< 25 megawatts), biomass energy, geothermal energy, and ocean energy, and the purchase of renewable energy. Sustainalytics considers the following elements of the Framework:

- Biomass energy projects are restricted to power generation facilities with lifecycle emissions below 100gCO2/kWh, excluding feedstock competing with food production. UOB has confirmed to Sustainalytics that the Bank will also exclude waste from non-RSPO-certified palm oil operations, as well as peat, palm oil, and noncertified feedstock in non-waste biomass energy projects.
- Geothermal energy projects are subject to lifecycle emissions threshold below 100gC02/kWh.
- Regarding the purchase of renewable energy, the Bank, in the Framework, has committed to restricting to bundled and unbundled Renewable Energy Certificates (RECs). UOB has confirmed to Sustainalytics that procurement projects will be directly tied to specific and identifiable renewable energy projects, and exclude onetime, short-term purchases of unbundled renewable energy certificates.
- For ocean energy, in the case of the projects for heating/cooling, UOB has confirmed to Sustainalytics that fossil fuel backup be limited to power monitoring, operating and maintenance equipment, as well as resilience or protection measures/restart capabilities.
- Under the Energy Efficiency Category, the proceeds will be allocated towards development and implementation of products or technologies that reduce energy use or recover energy, which intends to be used for buildings (including lighting, air conditioning, waste heat recovery and district cooling), public utility networks, agriculture and aquaculture processes, transmission and distribution systems, and energy-efficient transport infrastructure. Sustainalytics notes the following elements and considers the projects to be financed in this category to be in line with market practice:
 - Regarding public utility networks, UOB intends to finance the installation of energyefficient lighting and improve energy efficiency of public utilities including electricity, telecommunications and water. The Bank has confirmed to Sustainalytics that it will exclude projects powered by fossil fuel.
 - In the agriculture and aquaculture process projects, the proceeds will be used for projects that will improve energy efficiency, including traction, irrigation, and other processes in plant-based agriculture and in aquaculture farming and processing. The Bank has committed to Sustainalytics that tractions are restricted to those fueled by electricity.
 - Regarding transmission and distribution systems, UOB has committed to financing technologies including smart grid that will improve energy efficiency.
 - For the energy-efficient transport infrastructure projects, UOB has confirmed to Sustainalytics that the projects are related to transport that meet thresholds defined in the Clean Transportation category under the Framework, excluding fossil-fuel power infrastructure, equipment or vehicles.
- Within the Clean Transportation category, the Bank intends to finance expenditures related to i) the development, manufacture and acquisition of low carbon land transport including passenger cars and commercial vehicles and hybrid vehicles, trains¹⁰ and vehicles for public transport and other fleets, ii) the development of infrastructure for low carbon land transport, both private and public (including station upgrade, improved signaling equipment), electric charging stations, electricity grid connection upgrade), iii) infrastructure for water transport, and iv) infrastructure and systems (e.g. Electronic Road Pricing) to manage transport demand that leads to a reduction in GHG emissions (excluding road construction). Sustainalytics positively views the following elements of the Framework and UOB's commitment:
 - Passenger cars and commercial vehicles are restricted to those with zero direct emissions, and hybrid vehicles are restricted to those with tailpipe CO2 emissions below 75gCO2/p-km.

¹⁰ UOB has confirmed that freight trains are not included under the Framework.

- a Morningstar company
- Regarding trains and vehicles for public transport, UOB has committed to financing projects restricted to those either with zero direct emissions, direct CO2 emissions below 75gCO2/p-km for public land transport, or CO2 emissions intensity below 75 gCO2e/p-km for passenger trains.
- Infrastructure for water transport is restricted to zero direct emission transport.
- Sustainalytics recognizes that infrastructure investments for fleet management such as Electronic Road Pricing support the optimization of transport use, duration and/or distance in many cases, thus holds potential to reduce fuel consumption and associated GHG emissions. However, Sustainalytics recommends UOB to prioritize financing of those projects that removes barriers to modal shift to public transit, and/or incentivizes the use of low-carbon vehicles and car-sharing schemes.
- With respect to the Green Building category, UOB may finance or refinance the following:
 - Buildings that meet eligibility criteria based on the following international and regional third-party certification standards: (i) Singapore Green Mark Gold or above, (ii) LEED Gold or above, (iii) BREEAM Excellent or above, (iv) China Green Building Evaluation Standard Three Star or above, (v) Hong Kong BEAM Plus Gold or above, or other comparable green building certifications. Sustainalytics views that the focus on the top two levels of certifications aligns with market practice considering that they provide a higher level of positive impact and are generally preferred by investors as a benchmark. (Please see Appendix 1 for overview of these certification.)
 - Under the same category, UOB has communicated to Sustainalytics that the Bank may invest in data centers certified to (i) NABERS 4.5 or above, or (ii) SS564 Singapore Green Data Center Standard. While Sustainalytics notes positively UOB's investment in existing data centers that achieve these certifications (Please see Appendix 1 for overview of these certification), Sustainalytics encourages the Bank to invest in new data centers that achieve Power Usage Effectiveness (PUE) below 1.5.¹¹
- For the Sustainable Water and Wastewater Management category, UOB has confirmed that wastewater treatment from fossil-fuel operations is excluded and desalination technologies financed will be primarily powered by low-carbon sources.
- Under the Pollution Prevention and Control category, UOB will allocate the green, social or sustainability bond proceeds into the expenditures related to waste-to-energy power plants and pollution prevention and control for air emissions. UOB has confirmed to Sustainalytics that the Bank will exclude i) plastics, rubber, tire-derived fuels, and landfill gas capture for flaring for waste to energy projects and ii) CCUS applied to industrial activities related to the cement and steel industries or the promotion of fossil fuel usage will be excluded.
- For the Circular Economy Adapted Products, Processes and Production Technologies category, UOB intends to finance the projects focused on i) collection of waste materials for material and resource recovery, ii) secondary materials originating from the recovery of materials, which will substitute virgin materials, iii) design to reduce waste and eliminate hazardous inputs, (iv) product lifetime extension through reuse, refurbishment, or remanufacturing, (v) product as a service, and (vi) technology development such as setting up of marketplace for used materials, managing data repositories for used materials; knowledge gathering and/or sharing; reverse logistics.
- Within the Climate Change Adaptation and Resilience category, UOB intends to finance activities increasing the resilience of natural and urban eco-systems (e.g. integrated watershed management, public health, food security, drainage, network infrastructure) and infrastructure (e.g. flood defense, climate observation and early warning systems). UOB confirmed that the Bank will conduct the vulnerability assessments and implementing adaptation plans per project.
 For the Sustainable Management of Living Natural Resources and Land Use category, the proceeds will be financed towards environmentally sustainable fishery based on third-party standards including the Marine Stewardship Council (MSC) and forestry based on the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC).

¹¹ Sustainalytics notes the Green Grid's PUE is a de facto ratio which measures infrastructure energy efficiency for data centers, and has an estimated global average of 1.58 in 2018. Sustainalytics recognizes that there are only a few data centers with exemplary energy efficiency having PUE of 1.2 or less; nevertheless, a data center with a PUE of 1.5 or less is considered "efficient" in the market.



(Please see Appendix 2 and 3 for overview of these certification schemes.) Other investments in this category include climate-smart farm inputs including biological crop protection, dripirrigation, which is in line with market practice.

- With regards to the Access to Essential Services category, UOB will finance construction, operation and supply of equipment of public hospitals and healthcare facilities as well as public education facilities and relevant infrastructures, which is in line with market practice.
- For the Affordable Housing category, UOB intends to finance loans to public housing agencies for the development and construction of public housing and/or housing mandated for lowincome individuals. The Bank has confirmed to Sustainalytics that affordable housing is defined under the various national schemes, which targets low-income individuals and ensures the housing rent is below market average in the jurisdiction.
- Within the category of Employment Generation, UOB will provide loans to Small and Medium Enterprises (SME) defined by the Singapore Ministry of Trade and Industry, or equivalent in other jurisdictions. While Sustainalytics notes positively UOB's efforts to prioritize SMEs that face significant adversity as a result of a natural or health disaster including COVID-19, Sustainalytics encourages the Bank to concentrate its efforts on targeted segments of SMEs in order to maximize the social benefit of such financing.
- Under the Framework, UOB has established an exclusionary list including, but not limited to, (i) large scale hydro projects (less than 25 MW), (ii) electricity transmission infrastructure / systems where 25% or more of electricity transmitted to the grid is generated using fossil fuels, (iii) extraction, refining or transportation of fossil fuels, (iv) nuclear energy, (v) agricultural or afforestation operations on land designated as primary forest, high conservation value areas, or legally preserved areas, (vi) production and refining of palm oil, (vii) payday loans and predatory lending activities, (viii) adult entertainment, (ix) alcohol/alcoholic beverages, (X)tobacco products, (xi)Gambling, and (xii) weapons and small arms.
- UOB does not indicate a look-back period for refinancing activities in the Framework. Though
 the market may view refinancing of older projects to reduce additionally, Sustainalytics views
 positively the Bank's efforts to be transparent in reporting the allocation between financing and
 refinancing. Sustainalytics acknowledges UOB has provided for a look-back period for OPEX of
 36 months from the issue date.
- "Eligible Assets " are defined in the Framework, in which i) loans to businesses and projects for which the use of proceeds must meet the above mentioned Eligibility Criteria, ii) loans to businesses that derive 90% or more of their revenues from activities must meet the above mentioned Eligibility Criteria and / or iii) UOB's own operating or capital expenditures must meet the above mentioned Eligibility Criteria, subject to operating expenditures having been disbursed within no more than 36 months prior to the relevant Green, Social or Sustainability Bond issue date.
- Project Evaluation and Selection:
 - UOB's project evaluation and selection will first be conducted by its business units and then by a working group (the "Working Group") within UOB's Environmental Sustainable Governance Committee which is composed of representatives from relevant business units responsible for originating Eligible Assets as well as UOB's Corporate Sustainability Office, Central Treasury Unit and Credit and Country Risk Management.
 - UOB has established a two-step project evaluation and selection process. First, the eligible assets will be evaluated and selected by the business units. Second, the eligible assets suggested by the business units will be reviewed and approved by the Working Group. The net environment and/or social benefits of each potential eligible asset will also be considered as part of the evaluation. Additionally, after the issuances of Green, Social or Sustainability Bonds, the portfolio of eligible assets will be regularly reviewed by the Working Group to determine continued eligibility.
 - Based on the clear process and responsibilities for selecting eligible projects, Sustainalytics considers this process to be in line with market practice.
- Management of Proceeds:
 - The Working Group oversees the management of proceeds on a portfolio basis. Use of proceeds
 will be tracked by a register using internal accounting and information systems.



- Pending full allocation, unallocated proceeds will be aligned with UOB's liquidity management policy. Any assets which are repaid or divested will be replaced by new ones as soon as reasonably practicable.
- Based on the existence of internal tracking mechanisms to allocate proceeds in a timely manner and the disclosure on temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
 - UOB intends to disclose allocation and impact reporting on its website on an annual basis, until the maturity of the relevant Green, Social or Sustainability Bonds.
 - Allocation reporting will include confirmation that Eligible Assets included in the Portfolio comply with the Framework, total amount of Eligible Assets, list of Green, Social or Sustainability Bonds issued with their outstanding amount, breakdown of Eligible Assets by Eligible Category, breakdown of Eligible Assets by geographic location, share of new financing and refinancing, balance of unallocated proceeds at the reporting end-period, and where feasible and subject to confidentiality constraints, case studies of projects.
 - Impact reporting will include environmental and social impact indicators including, but not limited to, GHG emissions avoided per year (tonnes CO2-quivalent or tCO2e), new clean transportation infrastructure built (km), building assets by type and green building certification level, water reduced, reused or purified per year (m3), wastewater treated per year (m3), pollutants reduced/avoided per year (tCO2e), material reused, recycled, refurbished, manufactured per year (tonnes), number and type of adaptation and resilience measures installed, area covered by sustainable agricultural land management practices (hectares), number of people served, number of housing units built or refurbished, and amount of loans to SMEs.
 - Based on UOB's allocation and impact reporting commitments, Sustainalytics considers this
 process to be in line with market practice.

Alignment with Sustainability Bond Principles 2018

Sustainalytics has determined that the UOB Sustainable Bond Framework aligns to the four core components of the GBP and SBP. For detailed information please refer to Appendix 5: Sustainability Bond/ Sustainability Bond Programme External Review Form.

Alignment with ASEAN Sustainability Bond Standards 2018

The ASEAN Sustainability Bond Standards provide guidance to issuers and communicate more specifically about what an issuer should do to issue credible green, social, and sustainability bonds within Southeast Asia. Sustainalytics is of the opinion that the eligible green and social project categories under the UOB Sustainable Bond Framework align with the ASEAN Sustainability Bond Standards (ASEAN SUS). For detailed information please refer to Appendix 4: Alignment with ASEAN Sustainability Bond Standards (ASEAN SUS).

Section 2: Sustainability Strategy of UOB

Contribution of framework to UOB's sustainability strategy

The four pillars of UOB's sustainability strategy are to grow sustainably, keep customers at the centre, develop professionals of principle and uphold corporate responsibility. ¹² Sustainalytics highlights the following policies, targets, and initiatives for being particularly relevant to the Framework:

• The Bank has identified the following eight sectoral areas for its green financing: (i) energy-efficient buildings, (ii) expansion of renewables and transition energy, (iii) mass public transport, (iv) electric and hybrid vehicles and associated charging infrastructure, (v) waste recycling, energy efficiency in energy intensive sectors, (vi) reducing food and packaging waste, and (vii) end-use steel efficiency.⁸

¹² UOB, "Annual Report", (2019), at: https://www.uobgroup.com/investor-relations/assets/pdfs/investor/annual/UOB_Annual_Report_2019.pdf



- UOB is committed to providing its clients with sustainable solutions for the aforementioned sectoral areas while developing ESG-related Frameworks including the "UOB Green Financing for Circular Economy Framework" in 2019, "UOB Smart City Sustainable Finance Framework" and "UOB Real Estate Sustainable Finance Framework" in 2020.⁸
- UOB, through its sustainability targets, has demonstrated its commitment to mitigating climate change and promote a sustainable growth. From 2017 onward, UOB has set a series of Sustainability targets in the areas of renewable energy, energy efficiency, green transport infrastructure, water and waste management portfolio, implementing programs to support the growth of emerging 3R (Reduce, Reuse, Recycle) businesses, making impact and/or responsible investments as well as incorporating sustainability in its own operation. Some of these targets have been achieved over time. For example, UOB increased its financing for renewable energy, energy efficiency, green transport infrastructure, water and waste management by 94%. Consequently, the share of renewable energy in its power-related portfolio increased to 24% from 11% in 2018.¹² UOB will refresh sustainability targets in its 2020 sustainability report, which will be released in late March or beginning of April 2021 according to UOB.
- On the social front, UOB is dedicated to financial inclusion and has started different initiatives to make their services and products accessible and affordable to diverse segments of society. As an example, in Singapore, UOB supports the elderly on digital banking solutions.¹²

Sustainalytics is of the opinion that the UOB Sustainable Bond Framework is aligned with the Bank's overall sustainability strategy and initiatives and will further the Bank's action on its key environmental and social priorities.

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

While Sustainalytics recognizes that the use of proceeds from the bonds issued under the Framework will be directed towards eligible projects that are anticipated to have positive environmental and social impact, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. Some key environmental and social risks associated with the eligible projects could include occupational health and safety, community relations/stakeholder participation, land use and biodiversity issues associated with large-scale infrastructure development, emissions, effluents, waste generated in construction, and predatory lending. Furthermore, financial institutions are exposed to risks of financing environmentally and socially harmful activities while offering lending services. Sustainalytics is of the opinion that UOB is able to manage and/or mitigate potential risks through implementation of the following:

- To ensure the appropriate and effective environmental and social risk management in place, UOB's ESG Committee, comprised of senior executives, has identified environmental and social risks and policies.¹²
- The Bank has integrated ESG considerations into their credit evaluation and approval processes. The Group Credit Policy of the Bank includes enhanced due diligence processes for new and existing borrowers operating in ESG-sensitive industries. To monitor the ESG risk of the Bank's portfolio, all borrowers are assigned to an ESG risk rating in different categories.¹³
- In regard to an occupational health and safety, land use and biodiversity issues associated with largescale development or construction projects, Sustainalytics notes that UOB is not directly involved in the undertakings financed, and further that the Bank relies upon regulatory safeguards to ensure occupational health and safety risks at construction sites are mitigated. The Bank's Group Credit Policy lays out a checklist for ESG related risks in the financing process which includes checking on health and safety.¹²
- UOB has set out the Group Supplier Sustainability Principles (GSSP) stating that the Bank's suppliers shall implement effective policies or systems in the areas of corporate governance, compliance, labour, human rights, environment and health and safety.¹²
- UOB has a stakeholder engagement process seeking regular feedback from customers, employees, communities, suppliers, NGO's and other relevant stakeholders on its ESG related activities.¹²
- The bank is prohibited from financing companies in projects which impact the following: (i) critical natural habitats, (ii) animal cruelty and trade of endangered species, (iii) exploitation of labour, (iv) violation of the rights of indigenous or local communities, (v) open burning for land clearance, (vi) any projects where no measures are in place to mitigate the risk of air, soil and water pollution which may negatively impact terrestrial or marine ecosystems. Furthermore, the Bank identifies agriculture, forestry, metals and mining, defense, chemical, energy, infrastructure, and waste management sectors as socially and environmentally sensitive sectors, and therefore conducts enhanced due diligence on aforementioned sectors.⁸

¹³ UOB shared internal document regarding the Group Credit Policy of the Bank.



 Under the Framework, UOB excludes any loans or expenditures associated with (i) extraction, refining or transportation of fossil fuels, (ii) nuclear energy, (iii) agricultural or afforestation operations on land designated as primary forest, high conservation value areas, or legally preserved areas, (iv) production and refining of palm oil, (v) payday loans and predatory lending activities, and (vi) weapons and small arms.⁸

Given the above, Sustainalytics is of the opinion that UOB has sufficient measures to manage and mitigate environmental and social risks commonly associated with the eligible categories.

Section 3: Impact of Use of Proceeds

All twelve use of proceeds categories are aligned with those recognized by GBP, SBP, SBG, ASEAN SBS, ASEAN GBS, and ASEAN SUS. Sustainalytics has focused on several issue areas below where the impact is specifically relevant in the regions served by UOB.

Importance of Deploying Renewable Energy in Singapore and ASEAN

The rapid economic growth in ASEAN is expected to lead to a 50% rise in regional energy demand within a decade. In 2014, the renewable energy share in ASEAN was at 9.4% and the region has set out to make 23% of its primary energy renewable by 2025.¹⁴ Singapore is a small island city-state with urban density, low wind speeds, relatively flat land, and lack of geothermal resources, Singapore is heavily dependent on fossil fuels, with 95% of electricity generated from natural gas,¹⁵ and faces difficulty in implementing alternative energy options to reduce GHG emissions.¹⁶ Given this situation, the Government of Singapore identifies solar energy to be the most viable renewable energy source, and is promoting its adoption as one of the four key strategies for the low-carbonization of its power sector.¹⁷ The Government explains that it is on track to achieve 350 MWp in 2020, and aims to deploy at least 2 GWp by 2030.¹⁷ To meet this goal, the Government is promoting the deployment of solar panels on rooftops of buildings to overcome land constraints as well as streamlining regulations, and making continuous investment in research, development, and demonstration.¹⁷

Based on the above, Sustainalytics views that UOB's planned investments for renewable energy assets are expected to provide meaningful contribution to Singapore's low-carbon electricity generation by expanding solar power generation and reducing GHG emissions in the power sector. Increased reliance on renewables would bring cleaner cities, and a more secure and robust energy supply for ASEAN.

Importance of Green Buildings Projects in Singapore and ASEAN

To reduce CO₂ emissions in ASEAN, the green building councils in Singapore, Malaysia, Indonesia, Philippines, and Vietnam have launched green building tools with the aim of reducing environmental impacts for both construction and management phases of a building.¹⁸ For example, Singapore sets out an absolute GHG emission limitation target with peak emissions at 65 MtCO2e around 2030.¹⁹ The building sector consumes more than one-third of the Country's electricity²⁰ and accounts for 14.6% of the total emissions, and therefore is a key sector in driving Singapore's emission reduction.²¹ In order to reduce energy use and to improve sustainability performance of buildings, the Singapore Government introduced the Green Mark Scheme, a green building rating system in 2005,²² and has set the target of achieving 80% of buildings to be certified by

 ¹⁴ ASEAN Centre for Energy, "Renewable Energy Outlook for ASEAN", (2016), at: <u>Renewable Energy Outlook for ASEAN: A REmap Analysis (irena.org)</u>
 ¹⁵ Energy Market Authority, "Singapore Energy Statistics 2019", (2019) at:

https://www.ema.gov.sg/cmsmedia/Publications_and_Statistics/Publications/SES19/Infographics_Singapore_Energy_Statistics_2019_v20190927.pdf ¹⁶ "Singapore's Update of its first Nationally Determined Contribution (NDC) and accompanying information", at:

https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Singapore%20First/Singapore's%20Update%20of%201st%20NDC.pdf

¹⁷ National Climate Change Secretariat Strategy Group, Prime Minister's Office, "Charting Singapore's Low-Carbon and Climate Resilient Future", at: https://www.nccs.gov.sg/docs/default-source/publications/nccsleds.pdf

¹⁸ Kanasan V. et al. (2018), "EFFECTIVENESS OF IMPLEMENTING GREEN BUILDING TOOLS IN FIVE ASEAN COUNTRIES", (2018), Prosper.net, Japan at: <u>ProSPER.Net-YRS-2018-Group-1-Research-Proposal.pdf (unu.edu)</u>

¹⁹ The Government of the Republic of Singapore, "Singapore's Update of its first Nationally Determined Contribution (NDC) and accompanying

information", at: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Singapore%20First/Singapore's%20Update%20of%201st%20NDC.pdf ²⁰ Energy Market Authority, "Singapore Energy Statistics 2019", (2019), at:

https://www.ema.gov.sg/cmsmedia/Publications_and_Statistics/Publications/SES19/Infographics_Singapore_Energy_Statistics_2019_v20190927.pdf ²¹ National Climate Change Secretariat Strategy Group, Prime Minister's Office, "Charting Singapore's Low-Carbon and Climate Resilient Future", at: https://www.nccs.gov.sg/docs/default-source/publications/nccsleds.pdf

²² Building and Construction Authority, "Green Mark Certification Scheme", at: <u>https://www1.bca.gov.sg/buildsg/sustainability/green-mark-certification-scheme</u>



2030.²³ As of March 2020, more than 40% of total buildings has been certified, and the Government has committed to continuously implementing initiatives to improve building energy efficiency, and plans to raise the minimum energy performance standards for all new and existing buildings.²⁴

Considering the above, Sustainalytics expects that UOB's investments in green building projects will reduce the environmental footprint associated with buildings and support the climate goals of Singapore and the region.

Importance of Increasing the Share of Clean Transportation in Singapore and ASEAN

The transport sector in ASEAN consumes approximately one-quarter of final energy consumption and related CO2 emissions and is over 90% dependent on oil. ASEAN countries consider transport a key sector for carbon emissions mitigation.²⁵ Singapore's emissions from the transport sector accounted for 14% of total GHG emissions in 2016.²⁶ The government has launched the Singapore Green Plan 2030 this year. Part of the plan is to have all newly registered cars to be cleaner-energy models from 2030. Moreover, the government has introduced several initiatives to promote low-emission vehicles via granting rebates or imposing surcharges based on vehicles emissions. Singapore is promoting active mobility like cycling and walking to cover short commutes and complement public transport. The country aims to achieve 75% of all peak-period journeys to be undertaken on public transport by 2030 (from 63% in 2012).²⁷

UOB intends to use proceeds to fund projects related to development, manufacture and acquisition of low carbon land transport. Considering the above, Sustainalytics is of the opinion that UOB's clean transportation use of proceeds category is in line with the government's targets and expected to deliver positive environmental impact by contributing to the reduction of GHG emissions in the Singapore transport sector.

Importance of SMEs in ASEAN to Facilitate Employment Generation

In ASEAN, Small and medium-sized enterprises (SMEs) account for more than 96% of all Asian businesses and are providing two out of three private-sector jobs on the continent. ²⁸ Given that SMEs are a significant driver for job creation, governments like Singapore are promoting financing to SMEs through different financing channels.²⁹ For example, given the limited domestic market in Singapore, accessing foreign markets is critical to support local businesses.³⁰ As such, the Government supports SMEs to access export financing through the Loan Insurance Scheme (LIS/LIS+), the Trade Credit Insurance Scheme (TCIS), the Trade Facilitation Scheme (TFS), and the Internationalization Finance Scheme (IFS), which supported approximately 240 international trade-related loans totaled SGD 730 million in 2017.³⁰

Banks are playing an integral part of facilitating SME access to finance through credit-based loan products.³⁰ Based on the above, Sustainalytics expects that UOB's financing of SME's projects may contribute to fostering ASEAN SME's and thereby supporting job creation in the region.

The Role of Affordable Housing in ASEAN and Singapore

The rapid urbanization in many ASEAN cities causes a shortage of affordable housing. The resulting pressure on the cost of housing forces residents to substitute housing expenses for other basic needs including food, health care and schooling for children. Substandard housing also impacts disaster resilience. A study from ADB shows that 115 million urban residents across Southeast Asia will be vulnerable to coastal flooding. Affordable housing solutions often encounter challenges and City governments play a crucial role in delivering those solutions. They are in the best position to work with the public, national government agencies, and the local private sector.³⁰ Singapore is a leading example for successful public housing. The housing market is

²³ Building and Construction Authority, "Realizing Singapore's Green Building Dream", at:

https://www.bca.gov.sg/GreenMark/others/BCA_Green_Mark_10th_Anniversary_Commemorative_Book.pdf

²⁴ National Climate Change Secretariat Strategy Group, Prime Minister's Office, "Charting Singapore's Low-Carbon and Climate Resilient Future", at:

https://www.nccs.gov.sg/docs/default-source/publications/nccsleds.pdf

²⁵ Bakker, S. et al. (2017), "ASEAN Cooperation on Sustainable Transport), UNESCAP, at: <u>bulletin87_1 ASEAN Cooperation on Sustainable Transport.pdf</u> (<u>unescap.org</u>)

²⁶ Climate Action Tracker, "Singapore", (2020), at: <u>Singapore | Climate Action Tracker</u>

²⁷ Land Transport Authority, "Vehicle Emission Schemes", at: Vehicle Emission Schemes | Upfront Vehicle Costs | Buying | OneMotoring (Ita.gov.sg)

²⁸ ADB, "The Role of SMEs in Asia and Their Difficulties in Accessing Finance", (2018), at: <u>The Role of SMEs in Asia and Their Difficulties in Accessing</u> <u>Finance | Asian Development Bank (adb.org)</u>

²⁹ OECD, "SME Policy Index: ASEAN 2018", (2018), at: https://www.oecd-ilibrary.org/sites/9789264305328-23-

en/index.html?itemId=/content/component/9789264305328-23-en

³⁰ The ASEAN secretariat, "ASEAN Sustainable Urbanisation Strategy", (2018), at: ASEAN-Sustainable-Urbanisation-Strategy-ASUS.pdf



dominated by the Housing Development Board (HDB). It is a government-controlled public housing authority. Today, more than 80% of Singaporeans live in HDB flats, with about 90% of these resident households owing the property.³¹ The public housing model in Singapore is generally be regarded as a success and has been promoted to be adapted in other cities.³² HDB has implemented a number of grant schemes and the flats are provided with priority access to orphans, the elderly, and newly married couples.³³

Sustinalaytics is of the opinion that UOB's financing of loans to public housing agencies for development and construction of public housing and/or housing mandated for low-income individuals can deliver positive social impacts in Singapore and the region.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 by the United Nations General Assembly and form an agenda for achieving sustainable development by the year 2030. The bonds issued under the UOB Sustainable Bond Framework advances the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Renewable Energy	7. Affordable and Clean Energy	7.2 Increase substantially the share of renewable energy in the global energy mix
Energy Efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
Clean Transportation	11. Sustainable Cities and Communities	11.2 Ensure 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
Green Buildings	11. Sustainable Cities and Communities	7.3 Double the global rate of improvement in energy efficiency
Sustainable Water and Wastewater Management	6. Clean Water and Sanitation	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 Substantially reduce waste generation through prevention, reduction, recycling and reuse
Circular Economy Adapted Products, Processes and Production Technologies	 9. Industry, Innovation, and Infrastructure 12. Responsible 	 9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes 12.5 By 2030, substantially reduce waste
	Consumption and Production	generation through prevention, reduction, recycling and reuse
Climate Change Adaptation and Resilience	13. Climate Action	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Sustainable Management of Living Natural Resources and Land Use	14. Life Below Water	14.2 by 2020, sustainably manage, and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience and take action

³¹ HDB: "About us", (2021), at: <u>About Us - Housing & Development Board (HDB)</u>

³² Worldbank at: "But what about Singapore?" Lessons from the best public housing program in the world (worldbank.org)

³³ HDB, "Priority Schemes", (2021), at: Priority Schemes - Housing & Development Board (HDB)

ond Framework		
		for their restoration, to achieve healthy and productive oceans
	15. Life on Land	15.a Mobilize and significantly increase financial resources to conserve and sustainably use biodiversity and ecosystem
Access to Essential Services	3. Good Health and Well- Being	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
	4. Quality Education	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
Affordable Housing	 No Poverty Sustainable Cities and Communities 	 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions 11.1 Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
Employment Generation	8. Decent work and economic growth	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized

Conclusion

UOB has developed the UOB Sustainable Bond Framework to finance or refinance a broad range of Eligible Assets that intend to deliver positive environmental and social outcomes.

enterprises, including through access to

financial services

UOB Sustainable 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. Furthermore, Sustainalytics believes that the UOB Sustainable Bond Framework is aligned with the overall sustainability strategy of the Bank and that the use of proceeds categories will contribute to the advancement of the UN Sustainable Development Goals, specifically SDGs 1, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, and 15. Additionally, Sustainalytics is of the opinion that UOB has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects funded by the proceeds.

Overall, Sustainalytics is of the opinion that UOB is well-positioned to issue Green, Social or Sustainability Bonds and that the UOB Sustainable Bond Framework is robust, transparent, and in alignment with the four core components of the GBP, SBP, SBG, ASEAN SBS, ASEAN GBS, and ASEAN SUS.

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Appendices

Appendix 1	: Overview	of Green	Building	Certifications
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	Singapore BCA Green Mark ³⁴	BREEAM ³⁵	LEED ³⁶	Chinese Green Building Evaluation Label (CHINA 3- STAR)	HK BEAM ³⁷
Background	The BCA Green Mark Scheme provides real estate certifications in Singapore to promote sustainability in the built environment during project conceptualisation and design, as well as during construction.	BREEAM (Building Research Establishment Environmental Assessment Method) was first published by the Building Research Establishment (BRE) in 1990. Based in the UK. Used for new, refurbished and extension of existing buildings.	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.	The Chinese 3-Star Green Building Standard is a Certification System used in China for residential and public buildings (including commercial, hotel and government- owned) that was introduced in 2006 by MOHURD (Ministry of Housing and Urban- Rural Development).	BEAM Society Limited (BSL) developed the Hong Kong Building Environmental Assessment Method ("HK- BEAM"), a green building assessment tool established in 1996 with the issue of two assessment methods, one for 'new' and one for 'new' and one for 'existing' office buildings, largely based on the UK Building Research Establishments' BREEAM. The HK- BEAM aims to promote buildings that are more sustainable through enhanced design, construction, commissioning, management, operation and maintenance practices.
Certification levels	Certified Gold Gold Plus Platinum	Pass Good Very Good Excellent Outstanding	Certified Silver Gold Platinum	1-Star 2-Star 3-Star	Bronze Silver Gold Platinum
Areas of Assessment: Environmental Performance of the Building	 Climate Responsive Design Building Energy Performance Resource Stewardship Smart and Healthy Buildings 	Energy Land Use and Ecology Pollution Transport Materials Water Waste Health and Wellbeing Innovation	Energy and Atmosphere Sustainable Sites Location and Transportation Materials and Resources Water efficiency	 Land savings and outdoor environment; Energy savings and utilization; Water savings and utilization; Material savings and utilization; 	 Site Aspects (location, planning and design, emissions from the site) Materials Aspects (efficient use of materials, selection of

³⁴ Building and Construction Authority, Green Mark Certification Scheme, at: <u>https://www1.bca.gov.sg/buildsg/sustainability/green-mark-certification-</u> scheme

 ³⁵ BREEAM, Building Research Establishment LTD, at: <u>https://breeam.com/</u>
 ³⁶ USGBC, LEED, at: <u>www.usgbc.org/LEED</u>

³⁷ https://www.beamsociety.org.hk/files/_4-04%20New%20Buildings%20(Full%20Version).pdf



EffortsQuality Innovation in Design Regional Priorityenvironment; • Operations and management.materials) • Energy Use (annual energy use, energy efficient equipment, facilities for energy, management)• Waterials) • Energy Use (annual energy use, energy efficient equipment, facilities for energy, management)• Water Use (upment, facilities for energy, management)• Indoor Environmental Quality, water conservation, effluent)• Indoor Environmental Quality, (safety, hygiene, indoor• Indoor Environmental Quality, ventilation,						
RequirementsPrerequisites (independent of level of certification) and point score.Prerequisites (independent of level of certification) and point score.Prerequisites depending on the levels of certification + Credits with associated pointsPrerequisites (independent of level of certification) + the Credits with associated pointsPrerequisites: (independent of level of certification) + the system functions on a checklist basis, with 1-Star buildings. Ifters and weighting sub-criteria and weighting systems within LEED based on the overall seed on the overall serving errentage). Majority of BREEAM level of of certification which to build their BREEAM a BREEAM Design a	Requirements	Efforts Prerequisites (independent of level of certification) and point score. Prerequisites for each performance area to demonstrate minimum criteria met. Numerical scores achieved in accordance with the criteria in each performance area. Performance area. Performance Areas have different weights. Depending on the level of building performance area, building's level of certification is	depending on the levels of certification + Credits with associated points This number of points is then weighted by item ³⁸ and gives a BREEAM level of certification, which is based on the overall score obtained (expressed as a percentage). Majority of BREEAM issues are flexible, meaning that the client can choose which to comply with to build their BREEAM performance score. BREAAM has two stages/ audit reports: a 'BREEAM Design Stage' and a 'Post Construction Stage', with different	Quality Innovation in Design Regional Priority Prerequisites (independent of level of certification) + Credits with associated points These points are then added together to obtain the LEED level of certification There are several different rating systems within LEED. Each rating system is designed to apply to a specific sector (e.g. New Construction, Major Renovation, Core and Shell Development, Schools-/Retail- /Healthcare New Construction and Major Renovations, Existing Buildings: Operation and	environment; • Operations and management. Prerequisites: The system functions on a checklist basis, with 1-Star buildings meeting 26 criteria, 2- Star an additional 43 items, and 3-Star on a further 14 items. Criteria and weighting differ for public and residential buildings. In public buildings, more weight is given to energy and material savings, while the standard for residential buildings places greater importance on urban land saving and outdoor	 Energy Use (annual energy use, energy efficient systems, energy efficient equipment, facilities for energy, management) Water Use (water quality, water conservation, effluent) Indoor Environmental Quality (safety, hygiene, indoor air quality, ventilation, thermal comfort, lighting quality, acoustics and noise, building amenities) Innovations and Additions HK BEAM is a creditbased system where the overall weighting is given by the relative number of credits given for the compliance with sub-criteria derived from the above- mentioned areas of assessment. For some of the environmental aspects detailed in HK-BEAM, compliance with legal requirements is taken as a prerequisite for the award of credits. Consequently, when an assessed issue becomes subject to legislation, it will no longer count for an award of credits,

³⁸ BREEAM weighting: Management 12%, Health and wellbeing 15%, Energy 19%, Transport 8%, Water 6%, Materials 12.5%, Waste 7.5%, Land Use and ecology 10%, Pollution 10% and Innovation 10%. One point scored in the Energy item is therefore worth twice as much in the overall score as one point scored in the Pollution item



	Assessment of compliance with Green Mark criteria is done by the Singapore Building and Construction Authority (BCA).			revisions of HK- BEAM. The Overall Assessment Grade is based on the percentage of applicable credits gained. The award classifications are: Platinum 75% - Excellent Gold 65% - Very Good Silver 55% - Good Bronze 40% - Above
Performance display		★★★★☆☆☆ Pess Cutatraling		Average

	NABERS	SS 564 Singapore Green Data Center Standard ³⁹
Background	The National Australian Built Environment Rating System (NABERS) is a performance rating tool for existing buildings in Australia. It is administered by the NSW Office of Environment and Heritage, and is used to measure building's energy efficiency, carbon emissions, water consumed, waste produced, and compare it with similar buildings.	SS 564 is a green data center standard which helps organizations establish systems and processes in order to improve the energy performance of their data center. The standard is modelled after the ISO 50001 standard on energy management, but is specifically catered to meet the needs of data centers in Singapore through a Plan-Do- Check-Act (PDCA) methodology that encourages continuous improvement. The standard can be used to audit and certify an organization's environmental management system for its data center(s).
Certification levels	1-star (Poor) 2-stars (Below Average) 3-stars (Average) 4-stars (Good) 5-stars (Excellent) 6-stars (Market Leading)	N/A
Areas of Assessment: Environmental Project Management	There are several ratings available based on the type of building and the applicant (building tenant, or owner and/or manager). The rating tools available for office buildings are: -Energy (without Greenpower) -Energy (with Greenpower) -Carbon Neutral -Waste -Water -Indoor Environment	 ICT Equipment and Services Cooling DC Power
Areas of Assessment: Environmental Performance of the Building	NABERS ratings for office buildings and tenancies are based on 12 months of (real) operational data, rather than potential performance estimate.	Only applicable to data centers

³⁹ SS 564 Singapore Green Data Center Standard: <u>https://www.epi-ap.com/services/9/18/109/SS564</u>



	There is a Carbon Neutral Certification available, as an extension to NABERS Energy rating, for buildings of NABERS Energy rating of 4-stars or above. There are rating system for different types of buildings, including apartment buildings, office buildings, office tenancies, shopping centers, data centres, and hotels.	
Requirements		SS 564 does not mandate any minimum requirements that must be met other than the objectives and targets set by the organization in support of its data center sustainability policy. The standard does however require organizations to establish and maintain an energy and environmental management system in order to achieve continual improvement of energy and water performance in its data center. This includes aligning with best practices in the design of a sustainable data center by using relevant indicators such as PUE and WUE to represent improvement over time.
Performance display	ENERGY WATER	CONTRACTOR OF



	Marine Stewardship Council ⁴⁰
Background	Marine Stewardship Council (MSC) is a non-profit organization founded in 1996, that issues eco-label certifications for fisheries which are sustainable and well-managed.
Clear positive impact	Promoting sustainable fisheries practices.
Minimum standards	A minimum score must be met across each of the performance indicators.
	As a condition to certification, low-scoring indicators must be accompanied by action plans for improvement.
Scope of certification or programme	The MSC standard consists of a fisheries standard and a chain of custody standard.
	The Fishery Standard assesse three core principles: sustainable fish stocks, minimising environmental impact, and effective fisheries management; collectively these account for the major environmental and social impacts.
	The Chain of Custody standard addresses certified spearfishing, product identification, seperation, traceability and records, and good management.
Verification of standards and risk mitigation	Third-party conformity assessment bodies (CABs), certified by Accreditation Service International (ASI) carry out assessments in line with the MSC standard and ISO 17065.
	Certification is valid for up to five years.
Third party expertise and multi-stakeholder process	Aligned with the UN Code of Conduct for Reponsible Fishing, and further informed by the Global Sustainable Seafood Initiative (GSSI), World Trade Organization (WTO), and International Social and Environmental Accreditation and Labelling (ISEAL)
Performance display	CERTIFIED SUSTAINABLE SUSCOO Weremiscorg
Qualitative considerations	The MSC label is the most widely recognized sustainable fisheries label worldwide, and is generally accepted to have positive impacts on marine environments.
	Proponents of the label cite the transparent science-based process for approval and its successful engagement with industry groups. Criticism from various observers include lack of focus on preventing by-catch, protecting marine mammals and endangered species, follow-up on conditions, crew safety, and live tracking of supply chains.

⁴⁰ MSC, The MSC Fisheries Standard: <u>https://www.msc.org/standards-and-certification/fisheries-standard</u>



Appendix 3: Overview and Assessment of forestry certification schemes

	Forest Stewardship Council (FSC) ⁴¹	Programme for the Endorsement of Forest Certification (PEFC) ⁴²
Background	The Forest Stewardship (FSC) is a non-profit organization established in 1993 that aims to promote sustainable forest management practice by evaluating forest management planning and practices independently against FSC's standards.	Founded in 1999, the Programme for the Endorsement of Forest Certification (PEFC) is a non-profit organization that promotes sustainable forest management through independent third-party certification, this includes assessments, endorsements and recognition of national forest certification systems. PEFC was created in response to the specific requirements of small- and family forest owners as an international umbrella organization.
Basic Principles	 Compliance with laws and FSC principles Tenure and use rights and responsibilities Indigenous peoples' rights Community relations and workers' rights Benefits from the forests Environmental impact Management plans Monitoring and assessment Special sites – high conservation value forests (HCVF) Plantations 	 Maintenance and appropriate enhancement of forest resources and their contribution to the global carbon cycle Maintenance and enhancement of forest ecosystem health and vitality Maintenance and encouragement of productive functions of forests (wood and no-wood) Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems Maintenance and appropriate enhancement of protective functions in forest management (notably soil and water) Maintenance of socioeconomic functions and conditions Compliance with legal requirements
Types of standards/benc hmarks	 Forest Management certification (for single/multiple applicant(s) – industrial or private forest owners, forest license holders, community forests, and government-managed forests) Small and Low Intensity Management Forests (SLIMFs) program (for small forests and forests that are managed at low intensity would be eligible) Chain of Custody (CoC) certification (for supply chain companies' planning, practices and products – all operations that want to produce or make claims related to FSC-certified products must possess this certificate) Controlled Wood verification (for assurance that 100% virgin fiber mixed with FSC-certified and recycled fiber originates from a verified and approved source) 	 Sustainable Forest Management benchmark – international requirements for sustainable forest management. National forest management standards must meet these requirements in order to obtain PEFC endorsement Group Forest Management Certification – outlines the requirements for national forest certification systems who have group forest management certification Standard Setting – covers the processes that must be adhered to during the development, review and revision of national forest management standards Chain of Custody – outlines the conditions for obtaining CoC certification for forest-based products PEFC logo Usage Rules – outlines the requirements entities must abide by when using the PEFC logo

⁴¹ Forest Stewardship Council, FSC Principles and Criteria for Forest Stewardship: <u>https://ca.fsc.org/preview.principles-criteria-v5.a-1112.pdf</u>

⁴² PEFC, Standards and Implementation: <u>https://www.pefc.org/standards-implementation</u>



		 Endorsement of National Systems – outlines the process that national systems must go through to achieve PEFC endorsement
Governance	The General Assembly is comprised of all FSC members and constitutes the highest decision-making body. Members can apply to join one of three chambers – environmental, social, or economic – that are further divided into northern and southern sub-chambers. Each chamber maintains 33.3% of the weight in votes, and votes are weighted so that the North and South hold an equal portion of authority in each chamber, to ensure influence is shared equitably between interest groups and countries with different levels of economic development.	PEFC's governance structure is formed by the General Assembly (GA) which is the highest authority and decision-making body. It is made up of all PEFC members, including national and international stakeholders. In general, PEFC's governance structure is more representative of industry and government stakeholders than of social or environmental groups. Members vote on key decisions including endorsements, international standards, new members, statutes and budgets. All national members have between one and seven votes, depending on membership fees, while international stakeholder members have one vote each.
Scope	FSC is a global, multi-stakeholder owned system. All FSC standards and policies are set by a consultative process. There is an FSC Global standard and for certain countries FSC National standards. Economic, social, and environmental interests have equal weight in the standard setting process. FSC follows the ISEAL Code of Good Practice for Setting Social and Environmental Standards.	Multi-stakeholder participation is required in the governance of national schemes as well as in the standard-setting process. Standards and normative documents are reviewed periodically at intervals that do not exceed five years. The PEFC Standard Setting standard is based on ISO/IEC Code for good practice for standardization (Guide 59) ⁴³ and the ISEAL Code of Good Practice for Setting Social and Environmental Standards.
Chain-of- Custody	 The Chain-of-Custody (CoC) standard is evaluated by a third-party body that is accredited by FSC and compliant with international standards CoC standard includes procedures for tracking wood origin CoC standard includes specifications for the physical separation of certified and non-certified wood, and for the percentage of mixed content (certified and non-certified) of products CoC certificates state the geographical location of the producer and the standards against which the process was evaluated. Certificates also state the starting and finishing point of the CoC 	 Quality or environmental management systems (ISO 9001:2008 or ISO 14001:2004 respectively) may be used to implement the minimum requirements for chain-of-custody management systems required by PEFC Only accredited certification bodies can undertake certification CoC requirements include specifications for physical separation of wood and percentage-based methods for products with mixed content. The CoC standard includes specifications for tracking and collecting and maintaining documentation about the origin of the materials The CoC standard includes specifications for the physical separation of certified and non-certified wood The CoC standard includes specifications for the physical separation of certified and non-certified wood The CoC standard includes specifications about procedures for dealing with complains related to participant's chain of custody

⁴³ ISO, ISO/IEC Guide 59:2019: <u>https://www.iso.org/standard/23390.html</u>



Non-certified	FSC's Controlled Wood Standard	The PEFC's Due Diligence System requires			
wood sources	establishes requirements to participants to establish supply-chain control systems, and	participants to establish systems to minimize the risk of sourcing raw material			
	documentation to avoid sourcing materials	from:			
	from controversial sources, including:				
		a. forest management activities that			
	a. Illegally harvested wood, including	do not comply with local, nationa or international laws related to:			
	wood that is harvested without legal authorization, from protected	- operations and			
	areas, without payment of	harvesting, including lar			
	appropriate taxes and fees, using	use conversion,			
	fraudulent papers and	- management of areas			
	mechanisms, in violation of CITES	with designated high			
	requirements, and others, b. Wood harvested in violation of	environmental and			
	traditional and civil rights,	cultural values,			
	c. Wood harvested in forests where	 protected and endangered species, 			
	high conservation values are	including CITES species			
	threatened by management	- health and labour issue			
	activities, d. Wood harvested in forests being	- indigenous peoples'			
	 a. wood narvested in forests being converted from forests and other 	property, tenure and use			
	wooded ecosystems to plantations	rights,			
	or non-forest uses,	 payment of royalties an toxoo 			
	Wood from management units in which	taxes. b. genetically modified organisms,			
	genetically modified trees are planted.	forest conversion, including conversion of			
		primary forests to forest plantations.			
Accreditation/ve	FSC-accredited Certification Bodies (CB)	Accreditation is carried out by an			
rification	conduct an initial assessment, upon successful completion companies are	accreditation body (AB). In the same way that a certification body checks that a			
	granted a 5-year certificate. Companies	company meets the PEFC standard, the			
	must undergo an annual audit and a	accreditation body checks that a			
	reassessment audit every 5 years.	certification body meets specific PEFC an			
	Certification Bodies undergo annual audits	ISO requirements. Through the			
	from Accreditation Services International (ASI) to ensure conformance with ISO	accreditation process, PEFC has assurance that certification bodies are independent			
	standard requirements.	and impartial, that they follow PEFC			
		certification procedures.			
		PEFC does not have their own accreditation			
		body. Like with the majority of ISO based			
		certifications, PEFC relies on national ABs			
		under the umbrella of the International			
		Accreditation Forum (IAF). National ABs need to be a member of the IAF, which			
		means they must follow IAF's rules and			
		regulations.			
Qualitative	Sustainalytics views both FSC and PEFC as b				
considerations	on comprehensive principles and criteria that				
		ntribution to sustainable forest management practices ⁴⁴ and ism from civil society actors. ^{45,46} In certain instances, these			
	standards go above and beyond national regulation and are capable of providing a high				
	level of assurance that sustainable forest ma	nagement practices are in place. However, i			
	other cases, the standards are similar or equa				
	additional assurance. Ultimately, the level of a				
	scheme is contingent upon several factors in	ciuding the certification bodies conducting			

⁴⁴ FESPA, FSC, PEFC and ISO 38200: <u>https://www.fespa.com/en/news-media/blog/fsc-pefc-and-iso-38200</u>

⁴⁵ Yale Environment 360, Greenwashed Timber: How Sustainable Forest Certification Has Failed: <u>https://e360.yale.edu/features/greenwashed-timber-how-sustainable-forest-certification-has-failed</u>

⁴⁶ EIA, PEFC: A Fig Leaf for Stolen Timber: <u>https://eia-global.org/blog-posts/PEFC-fig-leaf-for-stolen-timber</u>



Appendix 4: Alignment with ASEAN Sustainability Bond Standards (ASEAN SUS)

ASEAN SUS Criteria	Alignment with the ASEAN SUS	Sustainalytics' comments on alignment with the ASEAN SUS
Eligibility	Yes	The ASEAN SUS requires that issuers must be in or that the proceeds be directed to assets in an ASEAN country. UOB qualifies given that UOB intends to finance in Singapore and other ASEAN countries.
Use of Proceeds	Yes	The ASEAN SUS offers specific clarification that fossil fuel power generation projects and projects which involve activities that pose a negative social impact related to adult entertainment, alcohol, gambling, tobacco products and weapon are excluded. UOB has included exclusion criteria in the Framework to this effect.
Process for Project Evaluation and Selection	Yes	The ASEAN SUS specifies information that must be clearly communicated to investors before issuance regarding project selection. UOB's business units will be responsible for identifying potential eligible assets for Green, Social or Sustainability Bonds to select projects. Then, a working group (the "Working Group") within UOB's Environmental Sustainable Governance Committee, comprised of relevant business units responsible for originating Eligible Assets as well as UOB's Corporate Sustainability Office, Central Treasury Unit and Credit and Country Risk Management, will review and approve potential eligible assets.
Management of Proceeds	Yes	The ASEAN SUS mandates that proceeds must be appropriately tracked and that temporary investments be disclosed. Within the Framework, UOB disclosed that it will track and monitor the use of proceeds using its internal accounting and information systems. Unallocated proceeds will be invested in accordance with UOB's liquidity management policy.
Reporting	Yes	The ASEAN SUS requires annual reporting on the allocation of funds and the expected impacts. UOB states that it will provide an annual allocation report until full allocation and report on the impact of the use of proceeds.
Annual Review	Yes	The ASEAN SUS encourages, but does not require, annual reviews. UOB intends to engage a third party verifier to provide an independent verification and assurance on its Annual Review.



Appendix 3: Sustainability Bond / Sustainability Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	United Overseas Bank Limited
Sustainability Bond ISIN or Issuer Sustainability Framework Name, if applicable:	y Bond UOB Sustainable Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	March 17, 2020

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 GBP and SBP:

\boxtimes	Use of Proceeds	\boxtimes	Process for Selection	Project	Evaluation	and
\boxtimes	Management of Proceeds	\boxtimes	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 are aligned with those recognized by the GBP, SBP, SBG, ASEAN SBS, ASEAN GBS, and ASEAN SUS. Sustainalytics considers that the eligible categories will lead to positive environmental and social impacts and advance the UN Sustainable Development Goals, specifically SDG 1, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14 and 15.

Use of proceeds categories as per GBP:

\boxtimes	Renewable energy		Energy efficiency		
\boxtimes	Pollution prevention and control		Environmentally sustainable management of living natural resources and land use		
	Terrestrial and aquatic biodiversity conservation	\boxtimes	Clean transportation		
\boxtimes	Sustainable water and wastewater management	\boxtimes	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 <i>(please specify)</i> .		
If applicable please specify the environmental taxonomy, if other than GBPs:					
Use of proceeds categories as per SBP:					
	Affordable basic infrastructure	\boxtimes	Access to essential services		
\boxtimes	Affordable housing	\boxtimes	Employment generation (through SME financing		

and microfinance)

- Food security
 Socioeconomic advancement and empowerment
 Unknown at issuance but currently expected
 Other (please specify):

If applicable please specify the social taxonomy, if other than SBP:

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section (if applicable):



UOB's project evaluation and selection will be conducted by its business units and a working group (the "Working Group") within UOB's Environmental Sustainable Governance Committee ("the Committee"). The eligible assets will be initially identified by the business units, and approved by the Working Group. This is in line with market practice.

Evaluation and selection

\boxtimes	Credentials on the issuer's social and green objectives	\boxtimes	Documented process to determine that projects fit within defined categories	
	Defined and transparent criteria for projects eligible for Sustainability Bond proceeds	\boxtimes	Documented process to identify and manage potential ESG risks associated with the project	
	Summary criteria for project evaluation and selection publicly available		Other <i>(please specify):</i>	
Information on Responsibilities and Accountability				

- ☑ Evaluation / Selection criteria subject to □ In-house assessment external advice or verification
- □ Other (please specify):

3. MANAGEMENT OF PROCEEDS

Overall comment on section (if applicable):

The processes for management of proceeds are handled by the Working Group using a portfolio approach. Use of proceeds will be tracked by a register using internal accounting and information systems. If the assets are no longer eligible, they will be removed from the portfolio and replaced as soon as practically feasible. Pending full allocation, unallocated proceeds will be invested in line with UOB's liquidity management policy. This is in line with market practice.

Tracking of proceeds:

- Sustainability 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 \square П investments Allocation to individual disbursements Allocation to a portfolio of disbursements Disclosure of portfolio Other (please specify): balance of unallocated proceeds



4. REPORTING

Overall comment on section (if applicable):

Until full allocation, UOB intends to report on allocation and impact of financing on its website on an annual basis. Allocation reporting will include total amount of eligible assets, share of new financing and refinancing, and balance of unallocated proceeds. Additionally, UOB is committed to reporting on relevant quantitative and qualitative impact where feasible. This is in line with market practice.

Use of proceeds reporting:

- $\hfill\square$ Project-by-project $\hfill\square$ On a project portfolio basis
- □ Linkage to individual bond(s) □ Other (please specify):

Information reported:

- ☑ Allocated amounts
 □ Sustainability Bond financed share of total investment
- ☑ Other *(please specify):*

Confirmation that Eligible Assets included in the Portfolio comply with this Framework, total amount of Eligible Assets, list of Green, Social or Sustainability Bonds issued with their outstanding amount, breakdown of Eligible Assets by Eligible Category, breakdown of Eligible Assets by geographic location, share of new financing and refinancing, balance of unallocated proceeds at the reporting end-period, and where and feasible subject to confidentiality constraints, case studies of projects

Frequency:

🖂 Annual

- □ Semi-annual
- □ Other (please specify):

Impact reporting:

Project-by-project

- On a project portfolio basis
- □ Linkage to individual bond(s)

 \boxtimes

□ Other (please specify):

Information reported (expected or ex-post):

- GHG Emissions / Savings
- Energy Savings
- Decrease in water use \Box Number of beneficiaries
- 25



□ Target populations

Other ESG indicators (please specify):

New clean transportation infrastructure built (km), building assets by type and green building certification level, water reduced, reused or purified per year (m3), wastewater treated per year (m3), pollutants reduced/avoided per year (tCO2e), material reused, recycled, refurbished, manufactured per year (tonnes), number and type of adaptation and resilience measures installed, area covered by sustainable agricultural land management practices (hectares), number of people served, and number of housing units built or refurbished, amount of loans to SMEs

Semi-annual

Frequency

- 🛛 Annual
- □ Other (please specify):

Means of Disclosure

Information published in financial report	Information published in sustainability
	report

- \Box Information published in ad hoc documents \boxtimes Other (please specify): UOB's website
- □ 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 REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP

- i. Second-Party Opinion: An institution with sustainability expertise that is independent from the issuer may provide a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Sustainability 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 Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy, and/or processes relating to sustainability and an evaluation of the environmental and social 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 sustainability criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally or socially 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 Sustainability Bond proceeds, statement of environmental or social impact or alignment of reporting with the Principles may also be termed verification.
- iii. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against a recognised external sustainability 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, Social and Sustainability Bond Scoring/Rating: An issuer can have its Sustainability Bond, associated Sustainability 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 and/or social performance data, process relative to the Principles, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material sustainability risks.



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Sustainalytics

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