



Second-Party Opinion

PKO Bank Hipoteczny SA Green Covered Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the PKO Bank Hipoteczny SA Green Covered Bond Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021. This assessment is based on the following:



USE OF PROCEEDS The eligible category for the use of proceeds, Green Buildings, is aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible category are expected to reduce the carbon footprint of the residential building stock in Poland and advance the UN Sustainable Development Goals, specifically SDG 11.



PROJECT EVALUATION / SELECTION PKO Bank Hipoteczny SA has established a Green Covered Bond Committee, which is responsible for evaluating and selecting eligible assets in line with the eligibility criteria. The Bank implements group-level processes and policies to ensure that environmental and social risks associated with the eligible projects are identified and mitigated. Sustainalytics considers the risk management system to be adequate and the project selection process to be in line with market practice.



MANAGEMENT OF PROCEEDS The Green Covered Bond Committee is responsible for the management and allocation of proceeds. The allocation of proceeds will be monitored and tracked using an internal information system. PKO Bank Hipoteczny SA intends to fully allocate the proceeds to eligible assets within two years of issuance. Pending allocation, unallocated proceeds will be temporarily held or invested in the Bank's liquidity portfolio in money market instruments. This is in line with market practice.



REPORTING PKO Bank Hipoteczny SA intends to report on the allocation of proceeds on its website on an annual basis until full allocation. Allocation reporting includes information such as the total amount of outstanding proceeds allocated to eligible loans and the amount or the percentage of new financing and refinancing. In addition, PKO Bank Hipoteczny SA is committed to reporting on relevant impact metrics on an annual basis. Sustainalytics views PKO Bank Hipoteczny SA's allocation and impact reporting commitments as aligned with market practice.

Evaluation Date	June 2, 2022
Issuer Location	Warsaw, Poland

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Introduction

PKO Bank Hipoteczny SA (“PKO BH” or the “Bank”), a subsidiary of PKO Bank Polski SA (“PKO BP” or the “Group”), is a Polish mortgage bank providing mortgage loans to retail customers. Established in 2014, the Bank is headquartered in Warsaw, Poland. PKO BH utilises the Group’s distribution network, IT infrastructure, risk assessment standards and policies, and mortgage product offering. In addition, PKO BH operates under the Group’s network of branches, agents and intermediaries. As of December 2021, the Group had 975 branches and 447 agencies.

PKO BH has developed the PKO Bank Hipoteczny SA Green Covered Bond Framework (the “Framework”) under which it intends to issue green covered bonds and use the proceeds to finance or refinance, in whole or in part, existing and future projects that are expected to reduce the carbon footprint of Poland’s residential building stock. The Framework defines eligibility criteria in one green category:

1. Green Buildings

PKO BH engaged Sustainalytics to review the PKO Bank Hipoteczny SA Green Covered Bond Framework, dated June 2022, and provide a second-party opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP).¹ The Framework will be available in a separate document.² The Framework updates and replaces PKO BH’s 2019 Green Covered Bond Framework, for which Sustainalytics provided a second-party opinion in June 2019.³

Scope of work and limitations of Sustainalytics’ Second-Party Opinion

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent⁴ opinion on the alignment of the reviewed Framework with the current market standards and the extent to which the eligible project categories are credible and impactful.

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

- The Framework’s alignment with the Green Bond Principles 2021, as administered by ICMA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- 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 1.11, which is informed by market practice and Sustainalytics’ expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of PKO BH’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 the Framework. PKO BH representatives have confirmed that: (1) they understand it is the sole responsibility of PKO BH to ensure that the information provided is complete, accurate and up to date; (2) they have provided Sustainalytics with all relevant information, and (3) 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 that Framework.

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

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

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

² The PKO Bank Hipoteczny SA Green Covered Bond Framework is available on PKO Bank Hipoteczny SA’s website at: <https://www.pkobh.pl/en/covered-bond/green-covered-bonds/>.

³ Sustainalytics’ 2019 Second-Party Opinion is available at: <https://www.sustainalytics.com/corporate-solutions/sustainable-finance-and-lending/published-projects/project/pko-bank-hipoteczny/pko-bank-hipoteczny-sa-green-covered-bond-second-party-opinion/pko-bank-hipoteczny-sa-green-covered-bond-framework-second-party-opinion-pdf>

⁴ 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.

standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects 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. Upon twenty-four (24) months following the evaluation date set stated herein, PKO BH is encouraged to update the Framework, if necessary, and seek an update to the Second-Party Opinion to ensure ongoing alignment of the Framework with market standards and expectations.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realized 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 PKO BH has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the PKO Bank Hipoteczny SA Green Covered Bond Framework

Sustainalytics is of the opinion that the PKO Bank Hipoteczny SA Green Covered Bond Framework is credible, impactful, and aligns with the four core components of the GBP. Sustainalytics highlights the following elements of PKO BH's Green Covered Bond Framework:

- Use of Proceeds:
 - The eligible category – Green Buildings – is aligned with those recognized by the GBP.
 - Sustainalytics notes the Bank will limit refinancing under the Framework to capital expenditures and therefore, no look-back period has been established. This is in line with market practice.
 - Under the Green Buildings category, PKO BH may finance or refinance residential buildings in Poland according to the following criteria.
 - Construction or acquisition of new buildings built after 31 December 2020 with primary energy demand (PED) at least 10% lower than the nearly zero-energy building (NZEB)⁵ requirements in Poland.
 - Acquisition of buildings constructed before 31 December 2020 that belong in the top 15% of low-carbon buildings in Poland based on PED. As a proxy to identify buildings that fall in the top 15% of the Polish building stock, the Bank relies on compliance with Poland's Technical Condition (TC) 2017 or later.⁶
 - Buildings that fulfil one of the following eligibility criteria for low-carbon buildings⁷ under the Climate Bonds Initiative in accordance with the CBI's established residential market proxy for Poland⁸: (i) comply with the TC 2017 or later and established 2050 zero-carbon linear trajectories for residential buildings, or (ii) have a year of construction 2017 or newer and therefore, belong in the top 15% of the Polish building stock based on PED.
 - Renovation costs of existing buildings that lead to at least a 30% reduction in building's GHG emissions compared to pre-renovation levels.
 - Refurbishment or renovation of buildings built before 31 December 2020 that: (i) leads to at least a 30% reduction in PED compared to pre-renovation levels, or (ii) is designed to fulfil the minimum energy performance requirements for major renovations as defined by the Energy Performance of Buildings Directive (EPBD), based on the cost optimal level defined in the TC 2014. Sustainalytics notes that the performance

⁵ European Commission, "Nearly Zero Energy Buildings", (2020), at: https://ec.europa.eu/energy/topics/energy-efficiency/energy-efficient-buildings/nearly-zero-energy-buildings_en

⁶ Sustainalytics notes that buildings built in 2017 or later in Poland account for top 11% of the nation's building stock based on primary energy demand. PKO Bank Hipoteczny, "Sustainability Consulting – Revised Green Bond Methodology", (2022), at: [PowerPoint-Präsentation \(pkobh.pl\)](https://www.pko.pl/portal/pl/PKO_Bank_Hipoteczny_Sustainability_Consulting_-_Revised_Green_Bond_Methodology.pdf)

⁷ CBI, "Low Carbon Buildings", at: <https://www.climatebonds.net/standard/buildings>

⁸ CBI, "Eligible Residential Building – Poland", at: <https://www.climatebonds.net/files/files/Residential%20Proxy%20Poland%281%29.pdf>

standard reflected in the EU Taxonomy,⁹ which requires meeting the relevant cost-optimal minimum energy performance requirements in accordance with the EPBD, could vary by region (EU Member States). Sustainalytics therefore encourages PKO BH to report on the actual PED performance level (or energy savings) achieved compared to the reference buildings as defined based on existing building stock within the region.

- Sustainalytics considers these investments in line with market practice.
- **Project Evaluation and Selection:**
 - PKO BH has established the Green Covered Bond Committee which is responsible for the selection and evaluation of eligible assets in line with the Framework's eligibility criteria. The Committee reports to the Management Board of the Bank and is headed by a member of the Management Board responsible for treasury and product. The Committee consists of representatives from various departments such as Treasury, Products, Risk, Compliance, Controlling and Finance.
 - PKO BH evaluates activities in line with its internal environmental and social requirements as part of its credit appraisal process. In addition, the Bank will ensure compliance with national standards and has internal processes in place to identify and mitigate environmental and social risks associated with the eligible assets under the Framework. Sustainalytics considers these environmental and social risk management systems to be adequate and aligned with market expectation. For additional details, see Section 2.
 - Based on the establishment of the Green Covered Bond Committee and the presence of risk management systems, Sustainalytics considers this process to be in line with market practice.
- **Management of Proceeds:**
 - The Green Covered Bond Committee is responsible for the management and allocation of proceeds. The Committee will manage and track the proceeds on a portfolio basis using internal information systems.
 - PKO BH intends to achieve full allocation of proceeds to eligible assets within 24 months of issuance. Pending allocation, unallocated proceeds will be temporarily held or invested in the Bank's liquidity portfolio in money market instruments.¹⁰ The Bank has further confirmed that unallocated proceeds will not be used to finance carbon intensive activities.
 - Based on the presence of an internal tracking system and disclosure of temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.
- **Reporting:**
 - PKO BH intends to report on the allocation of the proceeds in its allocation report, which will be available on its website on an annual basis until full allocation. Allocation reporting will include, on a portfolio basis, the total amount of outstanding proceeds allocated to eligible loans, the total amount of eligible loans, the balance of unallocated proceeds and the amount or the percentage of new financing and refinancing.
 - The Bank also intends to report corresponding impact of the proceeds in its impact report, which will be available on its website on an annual basis. Impact reporting will include relevant environmental impact metrics such as the estimated annual primary energy savings (MWh) and estimated annual GHG emissions avoided (tCO₂e). The Bank has appointed a specialized consultant to develop the methodology for the estimation and calculation of the impact achieved by eligible projects under the Framework.
 - Based on the commitment to report on both, allocation and impact of proceeds, Sustainalytics considers this process to be in line with market practice.

Alignment with Green Bond Principles 2021

Sustainalytics has determined that the PKO Bank Hipoteczny SA Green Covered Bond Framework aligns with the four core components of the GBP. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

⁹ European Commission, "Taxonomy Report: Technical Annex to the Final report of the Technical Expert Group on Sustainable Finance", (2020), at: https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy-annexes_en.pdf

¹⁰ IMOLIN, "The Banking Act of 29 August 1997", at: https://www.imolin.org/doc/amlid/Poland/Poland_the_banking_act_1997.pdf

Section 2: Sustainability Performance of PKO BH

Contribution of Framework to PKO BH's sustainability performance

Sustainalytics is of the opinion that PKO BH demonstrates a commitment to sustainability by incorporating ESG principles into its lending activities and through the implementation of its parent company, PKO BP's ESG policies and targets.¹¹ The Group's sustainability efforts are focused on: i) reducing the negative environmental impact of its operations, products and services, ii) reducing its exposure to coal-based entities through implementing changes in the loan portfolio structure, and iii) increasing green financing which includes financing activities related to renewable energy, wastewater treatment, waste management, electric rail transport, green buildings and thermo-modernization¹² of buildings.¹³

In 2021, the Group established its sustainability goals including: i) reducing 60% GHG emissions of its operation by 2025 relative to 2019, ii) eliminating its exposure to the coal-mining sector by 2030 and iii) increasing green financing by at least 5% per year.¹⁴ Furthermore, the Group aims to maintain the share of green financing to total assets at three times that of financing for carbon-intensive sectors.¹⁵ In 2021, the Group increased green financing by 83% relative to its goal of 5% per year, which represented three-and-a-half times the value of exposure to carbon-intensive sectors.¹⁶ To further support its green financing, in 2020, the Group adopted the Renewable Energy Sources policy to increase the share of renewable energy projects such as solar and wind in its loan portfolio.¹⁷ PKO BH implements the Group's sustainability strategy and commitments, and participates in group-level programmes to reduce GHG emissions and financing green building to contribute to a 5% increase in green financing.

Additionally, PKO BH joined the Energy Efficient Mortgages Initiative (EEMI) Pilot Scheme in 2019,¹⁸ an initiative designed to encourage borrowers to purchase energy-efficient homes and increase the energy efficiency of existing buildings by installing solar photovoltaic devices.¹⁹ As of March 2022, the Bank has provided more than 26,000 EEMI loans which represents 22.3% of the total loans under its mortgage programme.²⁰ In 2019, the Group and PKO BH launched a joint initiative to offer green mortgage loans in which customers can obtain a lower mortgage margin based on the energy performance certificate issued for the property.²¹ As part of this initiative, PKO BH has offered green mortgage loans amounting to PLN 73.20 million (USD 17.18 million) as of March 2022.²²

Sustainalytics is of the opinion that the PKO Bank Hipoteczny SA Green Covered Bond Framework is aligned with the Bank's overall sustainability initiatives and will further the Group's and the Bank's actions on its key environmental priorities. Nevertheless, Sustainalytics encourages the Bank to established quantitative, time-bound targets and objectives and transparently report on its progress against the targets.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that the Framework will be directed towards eligible projects that are expected to have positive environmental impact. However, Sustainalytics is aware that such eligible projects could also lead to negative environmental and social outcomes. While PKO BH plays a limited role in the development of the specific projects to be financed under the Framework, it is exposed to associated environmental and social risks by offering lending services. Some key environmental and social risks possibly associated with the

¹¹ PKO Bank Polski Group, "The PKO Bank Polski SA Group Directors' Report for 2021", (2021), at: https://www.pkobp.pl/media_files/e29e8ea2-88a5-40ca-ae4b-6023ef7dece8.xhtml#_Toc96541999

¹² The thermo-modernization is the process of increasing the energy efficiency and thermal protection of buildings with insufficient insulation and inefficient heating systems. This involves improving the insulation of outer walls, modernization of ventilation installations, windows and door frames, and internal installations such as the central heating and hot water systems. EEA Grants, "The thermo-modernisation of public buildings", at: <https://eeagrants.org/archive/2009-2014/projects/PL04-0084>

¹³ PKO Bank Polski Group, "PKO Bank Polski took into account ESG ratios in non-financial purposes", (2021), at: <https://en.media.pkobp.pl/149050-pko-bank-polski-took-into-account-esg-ratios-in-non-financial-purposes>

¹⁴ PKO BP, "Environmental Responsibility", at: <https://www.pkobp.pl/investor-relations/esg-at-pko-bank-polski-group/environmental-responsibility/>

¹⁵ Ibid.

¹⁶ PKO BP, "Environmental Responsibility", at: <https://www.pkobp.pl/investor-relations/esg-at-pko-bank-polski-group/environmental-responsibility/>

¹⁷ PKO BP, "The PKO Bank Polski Group supports the energy transformation of Poland", at: <https://media.pkobp.pl/131576-grupa-pko-banku-polskiego-wspiera-transformacje-energetyczna-polski>

¹⁸ Energy Efficient Mortgages initiative, "Lending Institutions", at: <https://energyefficientmortgages.eu/lending-institutions/>

¹⁹ PKO BP, "PKO Bank Polski Group with a green version of the mortgage loan", at: <https://media.pkobp.pl/69024-grupa-pko-banku-polskiego-z-kredytem-hipotecznym-w-zielonej-odslonie>

²⁰ PKO BH, "EEMI Disclosure Reports", at: <https://www.pkobh.pl/raporty/raporty-ujawnien/>

²¹ PKO BP, "PKO Bank Polski Group with a green mortgage", at: <https://media.pkobp.pl/69024-grupa-pko-banku-polskiego-z-kredytem-hipotecznym-w-zielonej-odslonie>

²² PKO BH, "EEMI Disclosure Reports", at: <https://www.pkobh.pl/raporty/raporty-ujawnien/>

eligible projects may include issues involving land use and biodiversity, waste generated during construction, workers' occupational health and safety, and corporate ethics.

Sustainalytics is of the opinion that PKO BH²³ is able to manage and mitigate potential risks through implementation of the following:

- PKO BH integrates environmental and social risk assessment into its lending process.²⁴ As part of the environmental and social risk assessment, the Bank evaluates the impact of ESG-related factors on a borrower's creditworthiness. During credit assessment, the Bank also evaluates the borrower's activity in compliance with domestic regulations on environmental permits and geo-environmental conditions.
- The Bank's operations are in Poland, which is recognized as a Designated Country under the Equator Principles, indicating the presence of robust environmental and social governance systems, legislation and institutional capacity to mitigate the environmental and social risks associated with projects financed or refinanced under the Framework.²⁵
- Regarding worker health and safety, PKO BH has implemented occupational health and safety measures such as conducting assessment of occupational risk and audits, analyzing the accidents and incidents, and providing safety training. The Bank has confirmed that all projects financed under the Framework will comply with the Polish Construction Law 1994. The Law requires developers to prepare a safety and health plan prior to the beginning of construction, considering the specifics of the construction site and the conditions under which the work will be performed.²⁶ In addition, the Law requires developers to appoint a construction manager who is responsible for the construction work and health and safety measures on the site.
- The Bank follows the Group's Code of Ethics which lists out core values and principles such as non-discrimination, human rights, safe work environment, among others.²⁷ The Bank's due diligence on human and labour rights is guided by the International Charter of Human Rights, the Universal Declaration of Human Rights, the United Nations International Covenant on Personal and Political Rights and the United Nations Convention on Economic, Social and Cultural Rights.²⁸

Based on these policies, standards and assessments, Sustainalytics is of the opinion that PKO BH has implemented adequate 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

Importance of residential green buildings in the EU and Poland

In 2020, buildings were responsible for 36% of the total GHG emissions and 40% of the energy consumption in the EU, making them the largest energy consumer in the EU.²⁹ In terms of building stock, 91% of the total number of buildings in the region are residential, 38% being built before the 1970s, when an extensive adoption of energy efficiency measures had not yet begun.³⁰ In 2020, around 75% of the total EU building stock was considered energy inefficient, implying that a large proportion of the energy used was lost, and on average, only 1% of the buildings are renovated every year.³¹ In 2020, the European Commission set the target of reducing GHG emissions by 55% by 2030, compared to 1990 levels, in order to achieve net zero GHG emissions in 2050.³² Renovating existing buildings has the potential to reduce the EU's total energy consumption by 5-6% and total GHG emission by 5%.³³ At the end of 2021, the European Commission proposed to align the EPBD with the European Green Deal and decarbonize the buildings stock by 2050 by moving from NZEB to zero-emission buildings (ZEB) by 2030. This proposal also facilitates putting the

²³ PKO BH implements the Group's policies related to managing and mitigating potential environmental and social risks, including those related to the land use and biodiversity issues, waste generated during construction, workers' occupational health and safety, and community relations.

²⁴ PKO BP, "ESG in the lending process", at: <https://www.pkobp.pl/investor-relations/esg-at-pko-bank-polski-group/environmental-responsibility/>

²⁵ Equator Principles, "Designated Countries", at: <https://equator-principles.com/about-the-equator-principles/designated-countries/>

²⁶ Global-Regulation, "The Act Of 7 July 1994, Construction Law", at: <https://www.global-regulation.com/translation/poland/2986349/the-act-of-7-july-1994%252c-construction-law.html>

²⁷ PKO BP, "Code of Ethics", at: <https://www.pkobp.pl/investor-relations/esg-at-pko-bank-polski-group/policies-and-principles/>

²⁸ PKO BP, "Social Area", at: <https://www.pkobp.pl/relacje-inwestorskie/esg-w-grupie-pko-banku-polskiego/obszar-spoleczny/>

²⁹ European Commission, "Energy efficiency in buildings", (2020), at: https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-lut-17_en

³⁰ RICS, "Energy efficiency of the building stock in the EU", (2020), at: <https://www.rics.org/nl/news-insight/latest-news/news-opinion/energy-efficiency-of-the-building-stock-in-the-eu/>

³¹ European Commission, "Energy efficiency in buildings", (2020), at: https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-lut-17_en

³² European Commission, "Stepping Up Europe's 2030 climate ambition", (2020), at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0562>

³³ European Commission, "New rules for greener and smarter buildings will increase quality of life for all Europeans", (2019), at: https://ec.europa.eu/info/news/new-rules-greener-and-smarter-buildings-will-increase-quality-life-all-europeans-2019-apr-15_en

Renovation Wave strategy into practice through legislative action.^{34,35} The Renovation Wave Strategy aims to double the annual energy renovation rate of residential and non-residential buildings by 2030 through fostering major energy renovations. As part of this strategy, about 35 million building units are expected to be renovated by 2030.³⁶

Poland is among the world's 20 largest GHG emitters, with fossil fuels accounting for 85% of its total energy supply.^{37, 38} Polish buildings account for 33% of the national GHG emissions and 38% of the energy consumption.³⁹ Residential heating is also responsible for high concentrations of particulate matter (PM) and benzoapyrene (BaP) emissions,⁴⁰ affecting air quality and leading to premature deaths.⁴¹ In this context, between 2005 and 2019, Poland reduced its GHG emissions by 12% through implementation of policies focused on decarbonizing different sectors, including construction.⁴² In 2021, Poland established an energy policy for 2040 which targets to reduce buildings' primary energy consumption by 23% by 2030 compared to 2020,⁴³ mostly through the thermal modernization of residential buildings. The Polish government aims to connect an estimated 1.5 million new households to district heating by 2030, with the use of coal as a fuel for individual heating demand being phased out by 2030 in cities and by 2040 in rural areas.⁴⁴ Moreover, in 2021, the Polish Green Building Council created a roadmap for decarbonizing the Polish built environment by 2050.⁴⁵ The report underlines the importance of improving the approach to material production, design, construction process and energy sources used in buildings' construction. Due to the capital-intensive nature of the renovations, the effective implementation of the already existing solutions for achieving net zero buildings relies on the involvement of the financial sector.⁴⁶

Based on the above, Sustainalytics is of the opinion that PKO BH's financing of green buildings offers the potential to support Poland in achieving its emissions reduction targets and is expected to deliver positive environmental impact.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The bonds issued under the PKO Bank Hipoteczny SA Green Covered Bond Framework are expected to advance the following SDG and target:

Use of Proceeds Category	SDG	SDG target
Residential Green Buildings	11. Sustainable Cities and Communities	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

³⁴ European Commission, "Nearly zero-energy buildings", at: https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/nearly-zero-energy-buildings_en

³⁵ European Commission, "Renovation Wave", (2020), at: https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1835

³⁶ European Commission, "A Renovation Wave for Europe", (2020), p.3, at: https://ec.europa.eu/energy/sites/ener/files/eu_renovation_wave_strategy.pdf

³⁷ IMF, "Poland: Staff Concluding Statement of the 2021 Article IV Mission", (2021), at: <https://www.imf.org/en/News/Articles/2021/12/13/poland-staff-concluding-statement-of-the-2021-article-iv-mission>

³⁸ IEA, "Poland needs a stronger push to reduce emissions and ensure secure energy supplies, new IEA policy review says", (2022), at: <https://www.iea.org/news/poland-needs-a-stronger-push-to-reduce-emissions-and-ensure-secure-energy-supplies-new-iea-policy-review-says>

³⁹ Attia, S. (2022), "Energy efficiency in the polish residential building stock: A literature review", Journal of Building Engineering, at: <https://orbi.uliege.be/bitstream/2268/264395/1/Energy%20efficiency%20in%20the%20polish%20residential%20building%20stock.pdf>

⁴⁰ BaP is part of the group of polycyclic aromatic hydrocarbons and is recognized as one of the most carcinogenic of the group with a severe negative effect on human health. Government of the UK, National Atmospheric Emissions Inventory, "About Benzo[a]pyrene", at: [https://naei.beis.gov.uk/overview/pollutants?pollutant_id=41#:~:text=Benzo%5Ba%5Dpyrene%20\(BaP,decreased%20by%2077%25%20since%201990.](https://naei.beis.gov.uk/overview/pollutants?pollutant_id=41#:~:text=Benzo%5Ba%5Dpyrene%20(BaP,decreased%20by%2077%25%20since%201990.)

⁴¹ Buildings Performance Institute Europe, "Financing Renovation of Buildings in Poland", (2018), p.10, at: <https://www.bpie.eu/wp-content/uploads/2018/06/merged-1.pdf>

⁴² EIA, "Greenhouse gas emissions from energy use in buildings in Europe", (2021), at: <https://www.eea.europa.eu/data-and-maps/indicators/greenhouse-gas-emissions-from-energy/assessment>

⁴³ Ibid.

⁴⁴ Government of Poland, "Energy Policy of Poland until 2040 (EPP2040)", (2021), at: <https://www.gov.pl/web/climate/energy-policy-of-poland-until-2040-epp2040>

⁴⁵ EIA, "Greenhouse gas emissions from energy use in buildings in Europe", (2021), at: <https://www.eea.europa.eu/data-and-maps/indicators/greenhouse-gas-emissions-from-energy/assessment>

⁴⁶ Polish Green Building Council, "Whole Life Carbon Roadmap for Poland", (2021), at: <https://www.worldgbc.org/sites/default/files/Whole-life-carbon-roadmap-for-Poland-2050.pdf>

Conclusion

PKO BH has developed the PKO Bank Hipoteczny SA Green Covered Bond Framework under which it may issue green bonds and use the proceeds to finance or refinance projects related to green buildings. Sustainalytics considers that the projects funded by the green bond proceeds are expected to contribute to reducing the carbon footprint of the residential building stock in Poland.

The PKO Bank Hipoteczny SA Green Covered Bond Framework outlines a process by which proceeds will be tracked, allocated and managed, and makes commitments for reporting on the allocation and impact of the use of proceeds. Furthermore, Sustainalytics believes that the PKO Bank Hipoteczny SA Green Covered Bond Framework is aligned with the overall sustainability strategy of the Bank and that the green use of proceeds category will contribute to the advancement of the UN Sustainable Development Goals 11. Additionally, Sustainalytics is of the opinion that PKO BH has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible projects.

Based on the above, Sustainalytics is confident that PKO Bank Hipoteczny SA is well positioned to issue green bonds and that the PKO Bank Hipoteczny SA Green Covered Bond Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles 2021.

Appendix

Appendix 1: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	PKO Bank Hipoteczny SA
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	PKO Bank Hipoteczny SA Green Covered Bond Framework
Review provider's name:	Sustainalytics
Completion date of this form:	June 2, 2022
Publication date of review publication:	
Original publication date <i>[please fill this out for updates]</i>:	June 4, 2019

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:

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

ROLE(S) OF REVIEW PROVIDER

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

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

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

Please refer to Evaluation Summary above.

Section 3. Detailed review

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

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

The eligible category for the use of proceeds, Green Buildings, is aligned with those recognized by the Green Bond Principles. Sustainalytics considers that investments in the eligible category are expected to reduce the carbon footprint of the residential building stock in Poland and advance the UN Sustainable Development Goals, specifically SDG 11.

Use of proceeds categories as per GBP:

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

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

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Overall comment on section *(if applicable)*:

PKO Bank Hipoteczny SA has established a Green Covered Bond Committee, which will be responsible for evaluating and selecting eligible assets in line with the eligibility criteria. The Bank implements group-level processes and policies to ensure that environmental and social risks associated with the eligible projects are identified and mitigated. Sustainalytics considers the risk management system to be adequate and the project selection process to be in line with market practice.

Evaluation and selection

- | | |
|--|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's environmental sustainability objectives | <input checked="" type="checkbox"/> Documented process to determine that projects fit within defined categories |
| <input checked="" type="checkbox"/> Defined and transparent criteria for projects eligible for Green Bond proceeds | <input checked="" type="checkbox"/> 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*):

The Green Covered Bond Committee will be responsible for the management and allocation of proceeds. The allocation of proceeds will be monitored and tracked using an internal information system and a separate register of covered bonds' asset pool. PKO Bank Hipoteczny SA intends to fully allocate the proceeds to eligible assets within two years of issuance. Pending allocation, unallocated proceeds will be temporarily held or invested in the Bank's liquidity portfolio in money market instruments. This is in line 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*):

PKO Bank Hipoteczny SA intends to report on the allocation of proceeds on its website on an annual basis until full allocation. Allocation reporting will include information such as the total amount of outstanding proceeds allocated to eligible loans and the amount or the percentage of new financing and refinancing. In addition, PKO Bank Hipoteczny SA is committed to reporting on relevant impact metrics on an annual basis. Sustainalytics views PKO Bank Hipoteczny SA's allocation and impact reporting commitments 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*):

the total amount of eligible loans, the balance of unallocated proceeds, and the amount or the percentage of new financing and refinancing

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*):

Information reported (expected or ex-post):

- GHG Emissions / Savings
 Energy Savings
- Decrease in water use
 Other ESG indicators (*please specify*):

Frequency

- Annual
 Semi-annual
- Other (*please specify*):

Means of Disclosure

- Information published in financial report
 Information published in sustainability report
- Information published in ad hoc documents
 Other (*please specify*):
 Allocation report and impact report that will be published on PKO Bank Hipoteczny'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:

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

Review provider(s):

Date of publication:

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

- i. **Second-Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognized 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.

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For more information, visit www.sustainalytics.com

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