



OP Mortgage Bank Green Covered Bond Report

March 2023

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Independent Limited Assurance Report by KPMG Oy Ab

1 Introduction

OP Financial Group (“OP” or “the Group”) is the leading financial institution in Finland, with a history dating back over 120 years. The Group has a strong ambition to contribute to a sustainable future for people, businesses, and society. The Group’s mission and values bind it to take care of the operating region – both locally and nationwide. One of OP’s core values is Responsibility, which is also embedded into OP’s strategy as Responsible Business became a strategic priority in 2021. Thus, sustainability is an integral part of OP’s business, encompassing economic, social, and environmental responsibility.

OP Financial Group is committed to taking action to address the issue of climate change. The Group’s climate targets and the renewed Sustainability Programme¹ are aligned with the Paris Agreement: OP aims to be carbon neutral in 2025 by having zero emissions from the used energy and fuels (Scope 1 and Scope 2), and by helping the supply chain to reduce its emissions. In addition, we will halve the greenhouse gas emission intensity of investments and cut emissions by 25% in our corporate loan portfolios by 2030 compared to 2022. OP Corporate Bank is committed to carbon neutrality in its corporate loan portfolios, and in funds managed by OP Asset Management and OP Fund Management Company, by 2050. A similar goal has been set for OP cooperative banks’ corporate loans.

We encourage our customers actively to act on climate change. The Group offers a range of sustainable financing and investment options, including funds that invest in companies with strong ESG performance. By providing these options, OP is helping to drive investment towards more sustainable businesses and technologies.

OP is also taking a proactive approach to addressing the physical impacts of climate change. The Group is working to identify and mitigate the risks associated with climate change, such as extreme weather events, rising sea levels, and other environmental threats.

In addition to these measures, OP is also involved in a range of initiatives that support climate action and has signed several international commitments that guide the Group’s operations. For more information, see our Commitments and principles². OP is an active member in sustainable finance working groups and aims to contribute to the development of best market practices and standards related to sustainable finance.

OP Mortgage Bank (OPMB) is a part of OP Financial Group, and its role is to raise, together with OP Corporate Bank plc, funding for OP from money and capital markets. OPMB has supported OP’s value-based strategy implementation and has contributed to its mission by issuing green covered bonds under the Green Covered Bond Framework published in 2020³. OPMB contributes to sustainable economy also by playing an active role in The Energy Efficient Financial Institutions Group (EEFIG) and European Covered Bonds Council’s (ECBC) Energy Efficiency Mortgages Initiative (EEMI).

By the end of 2022, OPMB has issued two Green Covered Bonds under the Euro Medium Term Covered Notes (EMTCN) Programme, the first in March 2021 and the second in April 2022. The proceeds from both bonds are allocated to OP Financial Group’s mortgages that finance energy efficient residential buildings.

OP’s Sustainable Finance Actions



¹ [OP Financial Group's Sustainability Programme](#)

² [OP Financial Group's Commitments and principles](#)

³ [OPMB Green Covered Bond Framework 2020](#)

2 Project Evaluation

The Green Projects refer to energy efficient buildings and apartments ("Green Buildings") that serve as collaterals for mortgages in Finland and meet the criteria of the Green Covered Bond Framework. To identify eligible Green Projects, OPMB utilizes data from various sources. The primary method to determine the eligible Green Projects is using the energy performance certificates (EPCs) of buildings securing the mortgages in the cover pool. In case the EPC is not available or cannot be linked to the collateral, the secondary approach is to utilize statistical modeling.

Buildings that are identified to use fossil fuels as their main heating source are automatically excluded.

OPMB manages the mortgages that are used to finance Green Projects and serve as collaterals for the Green Covered Bonds by tagging the eligible Green Collaterals in the existing cover pool. OPMB is responsible for selecting the eligible collaterals, keeping track of them, and reviewing the pool regularly as a part of regular pooling process and managing the net proceeds.

3 OP Mortgage Bank's Green Covered Bonds

OP Mortgage Bank issued its first Green Covered Bond in March 2021.

Green Covered Bond 2021 in brief

Issuer	OP Mortgage Bank
Issuer Ratings	Aaa (stable) by Moody's, AAA (stable) by S&P
ISIN	XS2324321368
EMTN Series Number	26
Nominal Amount	EUR 750 million
Issue Type	Covered Bond, under the OPMB Green Covered Bond Framework 2020
Use of Proceeds	Green buildings
Pricing Date	18.3.2021
Issue Date	25.3.2021
Maturity Date	25.3.2031
Coupon (Annual)	0.05%
Listing	Euronext Dublin
Second Party Opinion (SPO)	Sustainalytics

OP Mortgage Bank issued its second Green Covered Bond in April 2022.

Green Covered Bond 2022 in brief

Issuer	OP Mortgage Bank
Issuer Ratings	Aaa (stable) by Moody's, AAA (stable) by S&P
ISIN	XS2465142755
EMTN Series Number	27
Nominal Amount	EUR 1,000 million
Issue Type	Covered Bond, under the OPMB Green Covered Bond Framework 2020
Use of Proceeds	Green buildings
Pricing Date	29.3.2022
Issue Date	5.4.2022
Maturity Date	5.10.2027
Coupon (Annual)	1.00%
Listing	Euronext Dublin
Second Party Opinion (SPO)	Sustainalytics



4 Use of Proceeds

All OPMB's Green Projects fall under the eligible sector "Green Buildings" as identified in the Green Covered Bond Framework and contribute to the UN Sustainable Development Goals (SDGs) 7 and 11.

For further information on eligible use of proceeds, process for project evaluation, and selection and management of proceeds, please see the [Green Covered Bond Framework](#).



Assets Tagged as Green in the Cover Pool

As of 31st December 2022, the following number of mortgages were tagged as green in OPMB's cover pool under the EMTCN programme. The mortgages have been identified using 'Acquisition and ownership' and 'Construction of new buildings' criteria of the Framework.

Green Building Portfolio	Total loan balance	Number of mortgages	Green LTV ⁴	Eligibility for green bonds	Allocated amount	Building area
Cover pool under the EMTCN programme	€2,968,551,306	25,467	54%	100%	€1,750,000,000	2.0 million m ²

Average time from loan origination, time until maturity and loan period are presented in the following table. All numbers have been weighted by loan balances.

Time from origination	Time until maturity	Loan period
3.9 years	18.9 years	22.8 years

⁴ Weighted average indexed loan-to-value as of 31 Dec 2022. Loan-to-value is calculated by dividing the loan balances by the sum of the values of loans' all Green Collaterals

5 Estimated Environmental Impacts

The impacts are reported in accordance with the Green Covered Bond Framework where impact metrics for Green Buildings based on The International Capital Market Association (ICMA) Guidelines have been identified. The impact metrics are avoided energy consumption and CO₂ emissions. Impacts have been calculated mortgage-by-mortgage using national EPC register⁵ data and statistical modelling. Reporting is however on aggregated level.

It should be noted that the calculated avoided energy consumption and emissions are sensitive to the calculation methodology and used assumptions concerning data. All reported impacts are calculated for full calendar year regardless of how long the mortgages have been in the cover pool.



Benchmark Energy Consumption

Benchmark specific energy consumption (kWh/m²) is the average normalized specific energy consumption of Finnish residential building stock. Energy consumption data is retrieved from Statistics Finland⁶. The data is as of 2021, as this is the most recent data available at the time of impact calculations. In Finland however the average temperature of the year affects considerably the energy consumption of buildings. Therefore, energy consumption of heating of spaces must be normalized for the average temperature of the year to be representative of average year. This is done by using heating degree days retrieved from Finnish Meteorological Institute⁷ and formulas presented by Motiva Oy⁸. Finally, residential building area is retrieved from Statistics Finland⁹ to calculate specific energy consumption of residential building stock in Finland. The average specific energy consumption of residential buildings stock in Finland is calculated to be 212 kWh/m² per year.

Energy Consumption of Collaterals

Specific energy consumption of a collateral is calculated from data of Finnish EPC register if the EPC can be linked to the collateral. In case the EPC does not exist, or it cannot be linked to the collateral, OPMB utilizes statistical modelling of specific energy consumption.

⁵ Finnish EPC register, <https://www.energiatodistusrekisteri.fi/> (in Finnish)

⁶ Statistics Finland, https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__asen/statfin_asen_pxt_11zs.px/

⁷ Finnish Meteorological Institute, <https://www.ilmatieteenlaitos.fi/lammitystarveluvut> (in Finnish)

⁸ Motiva, https://www.motiva.fi/julkinen_sektori/kiinteiston_energian kaytto/kulutuksen_normitus/laskukaavat_lammitysenergian kulutus (in Finnish)

⁹ Statistics Finland, https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__rakke/statfin_rakke_pxt_116h.px/

Avoided Energy Consumption

Avoided energy consumption of a Green Collateral is calculated as follows:

$$\text{Avoided_Consumption}_{\text{Collateral}} = (\text{Specific_Consumption}_{\text{Benchmark}} - \text{Specific_Consumption}_{\text{Collateral}}) * \text{Area}$$

And avoided energy consumption of a Green Mortgage is calculated from all Green Collaterals of the mortgage in proportion to OP Financial Group's share of financing as follows:

$$\text{Avoided_Consumption}_{\text{Mortgage}} = \sum_{\text{Collateral}} (\text{Avoided_Consumption}_{\text{Collateral}}) * \frac{\text{Loan_Balance}_{\text{Mortgage}}}{\sum_{\text{Collateral}} (\text{Current_Value}_{\text{Collateral}})}$$

Current_Value is considered only for those Green Collaterals for which Avoided_Consumption_{Collateral} is available. Loan balances and current values of collaterals are as of 31st December 2022.

The reported avoided energy consumption of the Green Covered Bond eligible portfolio is the sum of avoided energy consumptions of individual Green Mortgages in the portfolio. The avoided energy consumption can be calculated using the aforementioned methodology for 99.7% of the eligible mortgages in the portfolio due to data availability. Therefore, the mortgages for which it can be calculated are assumed to be representative sample of whole portfolio, and for the rest the same avoided energy consumption – loan balance -ratio is applied.



Avoided CO₂-emissions

Average CO₂-emission per energy consumed (gCO₂/kWh) is calculated using emission factors of different energy sources and their shares of total normalized energy consumption of residential buildings in Finland as follows:

Energy source	Share of normalized energy consumption	CO ₂ -emission factor (gCO ₂ /kWh) ¹⁰
Electricity	35%	315
District heat	29%	102
Biofuels	21%	0
Heat pumps, ambient energy	11%	0
Light fuel oil	3%	253
Natural gas	0.5%	199
Peat	0.1%	349
Heavy fuel oil	0.01%	274
Weighted total		151

The average CO₂-emissions per energy consumed in Finnish residential buildings is thus 151 gCO₂/kWh. Avoided CO₂-emissions of the portfolio are calculated using this number as follows:

$$Avoided_Emissions_{portfolio} = Avoided_Consumption_{portfolio} * Emission_Factor$$

Environmental Indicators of Eligible Green Mortgages

	Final energy use			Carbon reductions
	kWh/m ² p.a. ¹¹	% of energy use avoided ¹²	avoided energy use p.a. (MWh)	tonnes of CO ₂ equiv. avoided p.a.
Eligible Green Mortgages in cover pool, OP's financing share	112	47%	104,000	16,000
Outstanding Green Covered Bonds (€1,750 million)			62,000	9,300
Per €1 million invested in OPMB's Green Covered Bonds			35	5.3

Avoided energy use per €1 million invested is unchanged from the previous year. Avoided CO₂ equivalent emissions have decreased slightly from the previous year due to lower benchmark emissions.

¹⁰ Sources of data for CO₂-emission factors:

Peat, oil, gas: Statistics Finland, https://www.stat.fi/static/media/uploads/tup/khkinv/khkaasut_polttoaineluokitus_2022.xlsx

District heat: Finnish Energy, https://energia.fi/files/5650/Kaukolampovuosi_2022.pdf (in Finnish)

Electricity: Nordic Public Sector Issuers, https://www.kuntarahoitus.fi/app/uploads/sites/2/2020/02/NPSI_Position_paper_2020_final.pdf

CO₂-emission factor for renewable energy sources is assumed to be 0 gCO₂/kWh.

¹¹ Average specific energy consumption of green collaterals weighted by loan balances

¹² Benchmark is average specific energy consumption of residential buildings in Finland, 212 kWh/m²

6 External Review and Verification

OP Mortgage Bank engaged KPMG Oy Ab to issue an independent limited assurance on its Green Covered Bond Report. The scope of this limited assurance was the use of proceeds of the Green Covered Bond. Please see the end of the report for the limited assurance report.

7 Second Party Opinion Annual Review

OP Mortgage Bank engaged Sustainalytics to issue an Annual Review following its Second Party Opinion initially published in 2020, which includes assessment of OP's Green Covered Bond Report, including impact reporting. The Second Party Opinion issued by Sustainalytics is available on OP's debt investor relations website¹³.

¹³ <https://www.op.fi/op-financial-group/debt-investors/green-bonds/green-covered-bonds>

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Independent Assurance Report to the Management of OP Mortgage Bank

We have been engaged by the Management of OP Mortgage Bank to provide limited assurance on the use of proceeds and eligibility in OP Mortgage Bank Green Covered Bond Report dated March 2023 (hereafter "Report").

Management's responsibilities

The Management of OP Mortgage Bank is responsible for the preparation and presentation of the Report in accordance with the reporting criteria, i.e. OP Mortgage Bank's *Green Covered Bond Framework*. The Management is also responsible for producing a Report that is free from material misstatement.

Our responsibilities

Our responsibility is to carry out a limited assurance engagement and to express a conclusion based on the work performed. The scope of our assignment is the use of proceeds and eligibility in the Green Covered Bond Report. Our assignment is limited to the historical information presented in the Report and does not encompass earlier periods or future-oriented tasks. We conducted our assurance engagement on the Report in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised), *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board IAASB. This Standard requires that we plan and perform the engagement to obtain limited assurance about whether the Report is free from material misstatement.

KPMG Oy Ab applies International Standard on Quality Management ISQM 1 which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants, (including International Independence Standards) (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Procedures performed

A limited assurance engagement on the Report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other evidence gathering procedures, as appropriate. In the engagement, we have performed the following procedures, among others:

- Interviewed relevant staff responsible for providing the Report;
- Assessed the application of OP Mortgage Bank's *Green Covered Bond Framework* reporting principles in the presentation of the Report;



- Assessed data management processes, information systems and working methods used to gather and consolidate the Report;
- Reviewed the presented Report and assessed its quality and reporting boundary definitions and;
- Assessed the Report's data accuracy and completeness through a review of the original documents and systems on a sample basis;

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Inherent limitations

Inherent limitations exist in all assurance engagements due to the selective testing of the information being examined. Therefore fraud, error or non-compliance may occur and not be detected. Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and estimating such data.

Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Based on the procedures performed and the evidence obtained, as described above, nothing has come to our attention that causes us to believe that the Information subject to the assurance engagement is not prepared, in all material respects, in accordance with OP Mortgage Bank's *Green Covered Bond Framework*.

Helsinki, 30 March 2023

KPMG Oy Ab

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