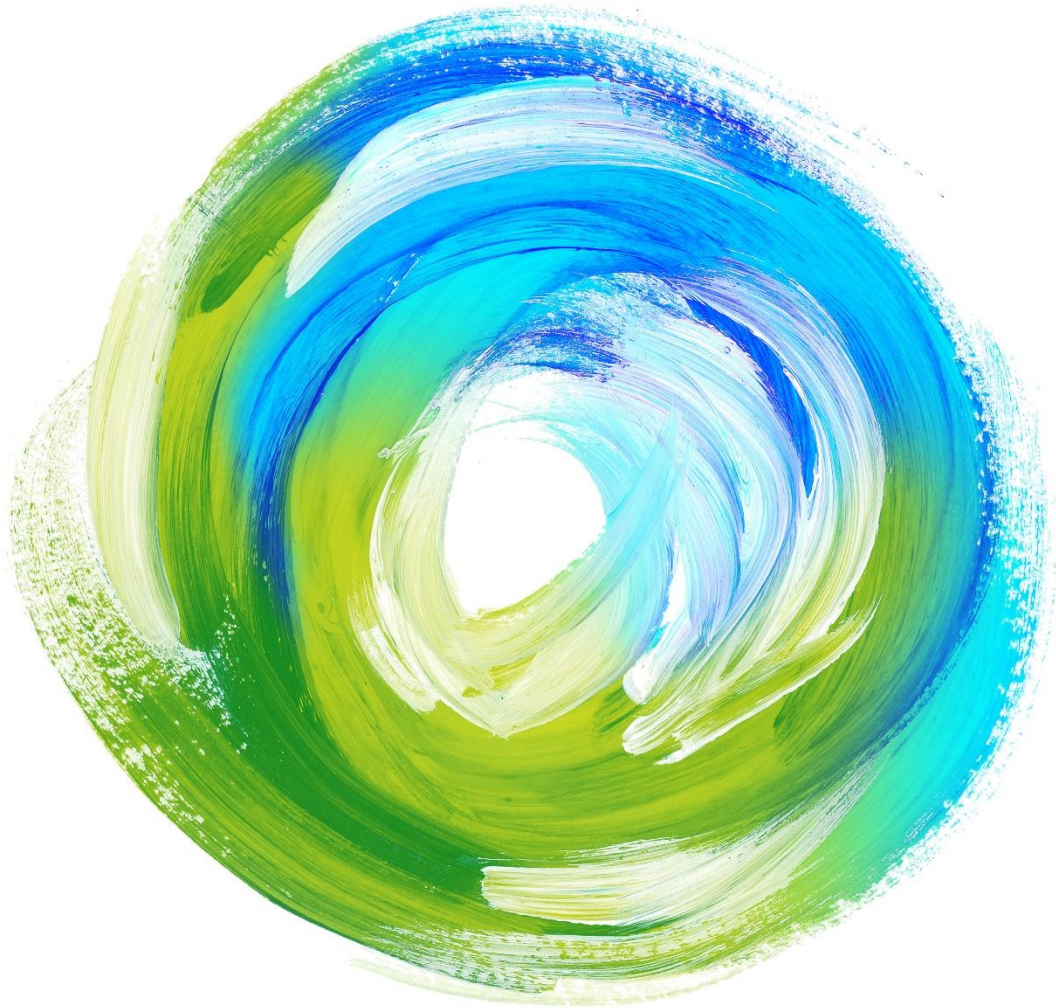




Independent supplementary report

OTP Mortgage Bank Ltd.
Green Mortgage Bond Report

05 July 2023



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Scope of the report

Deloitte Auditing and Consulting Ltd. ('Deloitte') was engaged to provide an independent report supplementing the ISAE 3000 limited assurance report issued by Deloitte on 05 July 2023 on the alignment of OTP Mortgage Bank Ltd.'s ('OTP JZB') 2022 Green Bond Report (the 'Report') as described below:

Subject of the independent supplementary report

The Green Bond Impact Report of OTP JZB as of 28 June 2023 and referenced Annexes (see Appendix, Scope of Assessment – Referenced Documents List).

Scope of Work

To perform the review in accordance with International Capital Markets Association's (ICMA) Guidelines for Green, Social and Sustainability Bonds External Reviews¹, regarding:

The alignment of the Green Bond Report with the Principles and Recommendations of Impact Reporting Framework based on the ICMA Handbook - Harmonized Framework for Impact Reporting (the "ICMA Impact Reporting Framework").²

Relevant Standards

ICMA Handbook - Harmonized Framework for Impact Reporting (as of July 2022)³, henceforth ICMA Impact Reporting Framework.

Validity

OTP JZB's Green Bond Report or referenced documents (last modification on 28 June 2023, see Appendix, Scope of Assessment – Referenced Documents List). The validity of the report does not extend to any future or updated versions of the relevant standards, of the International Capital Market Association (ICMA) Guidelines for Green, Social and Sustainability Bonds External Reviews (ICMA Guidelines for External Reviews"), to any amendments or subsequent reissuance of the ICMA Green Bond Principles (henceforth: ICMA GBP) or to any amendments, modification or review of the Green Bond Framework.

¹ https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/External-Review-Guidelines_June-2022-280622.pdf

² https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Harmonised-Framework-for-Impact-Reporting-Green-Bonds_June-2022-280622.pdf

³ https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Harmonised-Framework-for-Impact-Reporting-Green-Bonds_June-2022-280622.pdf

Executive Summary

Our Responsibility

Our responsibility is to provide supplemental information, on the alignment of OTP JZB's Green Bond Report with the requirements and recommendations of the ICMA Impact Reporting Framework, based on the requirements of the ICMA Guidelines for External Reviews. The preparation of the 2022 Green Bond Report is the responsibility of OTP JZB's management.

The engagement was performed with the assistance of the members of the Sustainability and Climate Change team of Deloitte.

We planned and performed our work to provide supplementary information on the alignment of OTP JZB's Green Bond Report with the ICMA Impact Reporting Framework requirements. The conclusion of the assessment should be read along with the Limitations section of this document.

We applied Deloitte's quality control standards in performing this engagement.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA).

Our Methodology

Deloitte's engagement is performed based on ICMA's "Guidelines for Green, Social and Sustainability Bonds External Reviews".

The document contains the assessment of compliance with the ICMA Impact Reporting Principles and Recommendations, and the alignment of OTP JZB's Green Bond Report with the selected relevant standards as described.

As part of the engagement, Deloitte determines whether OTP JZB's Green Bond Report is in alignment with the core components of ICMA Impact Reporting Framework or not. Deloitte does not assess partial alignment⁴.

General Observations⁵

Based on OTP JZB's Green Bond Report we observed the following:

General Observations

OTP JZB's Green Bond Report aligns with the required criteria set for Green Bonds in ICMA's Impact Reporting Framework. Please note, that the recommendations of the Impact Reporting Framework are not always applicable in the context of the Report and that the evaluation of these elements have been omitted. The latter does not affect the evaluation on alignment with the Impact Reporting Framework.

⁴ Please see further the Limitations section

⁵ Please see the Alignment section regarding the conclusions on the alignment of the Framework with ICMA GBP.

Independent supplementary report

The following analysis should be read in conjunction with Deloitte's ISAE 3000 limited assurance report on OTP JZB's Green Bond Report and related documentation, as described in the Appendix, Scope of Assessment – Referenced Documents List.

Compliance with Impact Reporting Framework and Recommendations based on the ICMA Handbook - Harmonized Framework for Impact Reporting

OTP JZB's 2022 Green Bond Report aims to present the stock of green mortgage bonds and green loans issued and their environmental impacts in such a way as to meet the recommendations of the ICMA – Handbook – Harmonised Framework for Impact Reporting, with special attention to the aspects of the Green Mortgage Bond Program of the National Bank of Hungary (MNB).

The Report sets out to define the interpretation of the green mortgage bonds and to delineate the objectives of green lending and refinancing, as well as to present how these objectives were met during the reporting period.

In our assessment presented below, the Report meets all the criteria required by the Impact Reporting Framework, when the recommendations of the Impact Reporting Framework are not applicable in the context of the Report, evaluation of these elements have been omitted.

The project portfolio included in the framework of OTP JZB is reported according to the criteria for ICMA Green Bond Principles (GBP) Energy Efficiency projects, instead of the criteria for Green Building projects. This is because the latter criteria require the reporting of more detailed indicators than the information available at the portfolio level. The relevant GBP consideration is as follows:

*"The GBP category for Green Buildings is understood to address broad considerations such as water usage and waste management in addition to energy consumption, whereas a focus solely on energy-efficiency and low carbon in buildings would come under the GBP category "energy efficiency (such as in new and refurbished buildings...)", and it is therefore recommended that these projects be reported using the relevant indicators and templates outlined in reference to Energy Efficiency."*⁶

⁶ ICMA – Handbook – Harmonised Framework for Impact Reporting:
https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Harmonised-Framework-for-Impact-Reporting-Green-Bonds_June-2022-280622.pdf

Alignment with ICMA Handbook - Harmonized Framework for Impact Reporting

No.	GBP Impact Reporting Consideration	Parts from the English translation of the report aligning with framework	Alignment
1	Reporting is a core component of the GBP, and green bond issuers are required to report on both the use of green bond proceeds, as well as the expected environmental impacts at least on an annual basis.	<i>"To ensure compliance with investors' requirements and with the recommendation included in the Green Bond Principles, OTP Mortgage Bank publishes an annual Report on the allocation of proceeds from Green Bond issuance into suitable green instruments. It is the Company's intention to provide adequate information to investors in order to enable them to assess the sustainability impacts of their investments."</i>	
Recommendations:			
2	Issuers are recommended to define and disclose the period and process for including projects in their report. There are several options for choosing when to add/remove projects to/from the report. Some of these options are described below. Projects can be added/removed to/from an impact report either directly, or indirectly via adding/removing them to/from a portfolio when reporting on a portfolio level. • Projects can be added to the report once the issuer has approved and determined a project as eligible, or once green bond proceeds have been allocated to eligible disbursements. • Projects can be removed from a report when no allocations to eligible disbursements have taken place in the reporting period, or after the underlying loans have been repaid. As part of its due diligence in monitoring projects included in its green bond programme, an issuer may elect to remove a project from its green bond programme, in which case it could cease reporting on such a project until a subsequent decision to restore the project's eligibility.	Section <i>Green real estate and green loans</i>, furthermore, <i>"The calculations of energy consumption and GHG emissions related to OTP Mortgage Bank's mortgage loan portfolio and energy consumption and GHG emissions avoided through green loans are based on 2022 year-end data and over a one-year time horizon."</i>	
3	It is recommended that the report indicates the total signed amount and the amount of green bond proceeds allocated to eligible disbursements. It would also be beneficial for issuers to show additional information such as year of signing (or other measures to describe the seasoning of a portfolio) or project stage from a financing point of view (such as signed, disbursed, repaying).	<i>"OTP Mortgage Bank used all the funds from the green bonds it has issued to finance green loans. No promissory notes (where the credit institution uses the proceeds from the green bonds to disburse green loans after the issue) were issued."</i> The value of "total signed amount" is not relevant in the context of the report, as green mortgages include already financed loans for which (due to the ongoing repayments of mortgages) the stock of loans at the end of the period is always lower at the portfolio level than contracted loans.	
4	A defining characteristic of green bonds is that the issuance proceeds (or an amount equal to the proceeds) are to be allocated only to those projects that meet the issuer's predefined eligibility criteria. Issuers are encouraged to put in place a formal internal process for the allocation of proceeds linked to their lending and investment operations for Green Projects and to report on the allocation of proceeds. Issuers are encouraged to explain the key characteristics of the approach they select for their allocations and to provide reference to external audit/verification, when applicable, regarding their allocation criteria.	Sections <i>Green real estate and green loans</i>, <i>Allocation and Characteristics of the green portfolio</i>	

No.	GBP Impact Reporting Consideration	Parts from the English translation of the report aligning with framework	Alignment
5	Depending on the process put in place for the allocation of proceeds, it is recommended that issuers either provide a list of projects to which green bond proceeds have been allocated, or report solely on a portfolio level. The latter might be necessary if confidentiality considerations restrict the detail that can be disclosed, or useful if a large number of small-sized projects is financed by a green bond (e.g. green bonds financing a loan programme). Issuers are encouraged to explain the key characteristics of the approach they select for their report.	"The identification of green loans in OTP Mortgage Bank's portfolio, as defined in the Green Bond Framework, has continued. The volume of green loans identified in the Mortgage Bank's loan portfolio exceeded the volume of green bonds issued throughout the year."	
6	Depending on the way in which proceeds are allocated, there can be differences in the approach to impact reporting. If allocations are to individual projects, it is recommended that the report: - Identifies the specific projects and clearly defines, for each project, the total project results (including financing from all financiers) with information about the total project size and/or the issuer's share of total financing (project-by-project report); and/or - Aggregates project-by-project results including only the pro-rated share (as a percentage of the issuer's share of the total financing) of the total projects' results (portfolio report based on project-by-project allocations). If allocations are to a portfolio of projects, issuers typically report on the overall results of the portfolio (portfolio report based on portfolio allocations). Issuers are however encouraged to also report the pro-rated share of the overall results.	Section <i>Total financed and avoided energy consumption and greenhouse gas emissions</i> presents the impact at the portfolio level. Furthermore, the content element "pro rata effects" was considered irrelevant in the context of the OTP JZB report.	
7	The impact report should illustrate the expected environmental impact made possible as a result of projects to which green bond proceeds have been allocated. It should be based on ex-ante estimates (developed prior to project implementation) of expected annual results for a representative year once a project is completed and operating at normal capacity. In the case of reporting on a portfolio level, ex-ante estimates can be based on the annual analyses per portfolio and, if several categories are financed, per category, if possible. The method of estimating the impacts should be made transparent. As the report would include the estimated results of projects that are still in the construction or implementation phase, there is no guarantee that these results will ultimately materialise. The reporting is thus not intended to provide actual results achieved in a specific year or reporting period.	"OTP Jelzálogbank Zrt. (hereinafter: OTP Mortgage Bank or Company) aims to contribute to the achievement of the UN Sustainable Development Goals ¹ by financing the energy renewal of the Hungarian housing stock, primarily by increasing the share of affordable and clean energy and reducing the per capita adverse environmental impact of settlements. We believe that, in addition to the direct environmental benefits of financing green real estate, the initiative's awareness-raising effect will also indirectly contribute to the achievement of sustainability goals."	
8	It could also be beneficial to report the estimated lifetime results and/or project economic life (in years) to provide users with a basis for understanding the impact of the project over its lifetime. A simple multiplication of the project economic life by the estimated annual impact may not always provide a good estimate of the lifetime impact results, because this would not take into account ramp-up and ramp-down phases of the project life cycle. Also, in some project types, it may be difficult to aggregate all the measures being implemented at a project site given the heterogeneous nature of processes and/or equipment.	"Most of OTP Mortgage Bank's loans are granted for a term of 20 years or longer. Lending is ongoing, meaning that loans that are being phased out of the portfolio are constantly replaced by new loans. The end of the lifecycle of the dynamically changing portfolio cannot be determined." Data on the average remaining maturity of the loans is provided in the summary table of the <i>Executive Summary</i> section.	

No.	GBP Impact Reporting Consideration	Parts from the English translation of the report aligning with framework	Alignment
9	In case the issuer samples ex-post verification of specific projects, it is recommended that the relevant results are included in the reporting. An important consideration in estimating impact indicators is that they are often based on a number of assumptions. While technical experts aim to make sound and conservative assumptions that are reasonable based on the information available at the time, the actual environmental impact of the projects may diverge from initial projections. For example, social, economic, technical, political and legal changes can cause deviations from projections. In any case, transparency on the assumptions would clarify the reasons behind divergences between ex-ante and ex-post assessments.	Section <i>Total financed and avoided energy consumption and greenhouse gas emissions</i> presents the calculated impact at the portfolio level.	
10	To facilitate comparison of project results, it is suggested that issuers aim to report on at least a limited number of sector specific core indicators for projects included in their green bond programmes. Primary indicators relevant in the context of OTP JZB: 1) Annual energy savings in MWh/GWh (electricity) and GJ/TJ (other energy savings) 2) Annual GHG emissions reduced/avoided in tonnes of CO ₂ equivalent	The quantified value of the achieved environmental impact and the core indicators are presented in the sections <i>Executive Summary</i> and <i>Total financed and avoided energy consumption and greenhouse gas emissions</i> .	
11	For the calculation of indicators, where there is no single commonly-used standard, issuers may follow their own methodologies while making these available to investors. For the calculation of greenhouse gas ("GHG") emissions reduced/avoided, for instance, there are a number of calculation methodologies both within and across institutions. While there are on-going efforts to harmonise GHG accounting methodologies for relevant sectors among a broad group of IFIs, given the current differences in calculation approaches, reporting GHG emission data based on a uniform, consistent and published methodology remains a challenge. Issuers are encouraged to provide full transparency on the applicable GHG accounting methodology and assumptions, which can be referenced.	Section <i>Applied methodology – PCAF</i> presents the PCAF methodology used for the calculation.	
12	Investors should be aware that comparing projects, sectors, or whole portfolios is difficult because general assumptions on inputs in calculations, like grid factors and calculation methods, also vary significantly. In addition, the cost structures between countries also vary, so that developing cost-efficiency calculations (results per unit of amount invested in eligible projects) could place smaller countries with limited economies of scale at a disadvantage and will not take into consideration country-specific context.	<i>„Quantifying the emissions associated with the financed portfolio faces a number of difficulties, including the lack of data, and where data are available, the options for verifying such data are limited. When assessing sustainability indicators, it is expedient to take into account the outdated condition of the Hungarian real estate stock and the fact that without dedicated energy modernisation programmes, only moderate success can be achieved in the energy renewal of used housing stock.“</i>	

No.	GBP Impact Reporting Consideration	Parts from the English translation of the report aligning with framework	Alignment
13	Issuers may elect, for consistency reasons, to convert units reported for individual projects. This should be based on a standard conversion factor to facilitate comparison and aggregation for example converting tons of coal equivalent ("TCE") to megawatt hours ("MWh"), with appropriate disclosure of the conversion approach. However, complex recalculations that are not publicly disclosed in project documentation, such as re-estimating GHG emissions based on consistent baseline assumptions, should be avoided.	The factors and coefficients used in the calculations are given according to the sources presented in the section <i>Data available for calculations</i> .	
14	Issuers are encouraged to be transparent about projects with partial eligibility. Some projects may have components that meet the issuer's green bond eligibility criteria and other components that do not. Issuers should disclose whether and to what extent they accept partial eligibility. Should an issuer use criteria that require allocating green bond proceeds to a project with partial eligibility, then it is recommended to explain all assumptions about which component each disbursement relates to (e.g., if it is assumed that disbursements are first made to the 'green' component, or pro-rated between the 'green' and 'other' components). In addition, issuers may also report the portion of the total project that is green bond eligible.	The methodology for differentiation is explained in the section <i>High energy efficiency real estate</i> .	
15	The Green Bond Principles highlights the value of qualitative reporting as well as quantitative. This should not only allow a better understanding of the context in which the project's impact is expected to be achieved, but should also provide an understanding of the management of any risks that have been identified.	The risks related to the quality of the information reported and how to manage them are described in the section <i>Data available for calculations</i> and in the following: "The Company has set a lower ratio (adjusted statistical ratio) in order to manage potential risks arising from the statistical method or the application thereof: the adjusted statistical ratio applied in 2021 is 60%, i.e. OTP Mortgage Bank considers 60% of the properties in the CC category to be in the top 15% of the domestic residential property stock."	
16	In case the expected impacts of different project components (such as for example energy efficiency ("EE") and renewable energy ("RE") components of the same project) may not be reported separately, issuers may attribute the results to each component based on their relative share in the related financing, disclosing the attribution approach. Alternatively, issuers could combine the reporting metrics for both sectors into a single table (option 2 in the reference reporting templates).	The proposed content element is not relevant in the context of the OTP JZB report, as the framework only considers impacts related to energy efficiency.	

No.	GBP Impact Reporting Consideration	Parts from the English translation of the report aligning with framework	Alignment
17	Issuers should be transparent on how they report all green bond-related cash-flows in one currency when they allocate green bond proceeds and report on the projects to which green bond proceeds have been allocated.	<i>"All green loans and green bonds are denominated in HUF; thus no foreign currency conversion was performed during the allocation."</i>	
18	Issuers may facilitate the smooth collection and/or transfer of data by investors through using the reporting templates in Chapter V of this handbook and/or through uploading impact data on impact reporting databases. The Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds' Impact Reporting Databases were released in June 2021 and include advice for issuers on engagement with database providers.	Metrics and format proposed in the sample table, which are relevant in the context of the OTP JZB report are presented in the summary table of <i>Executive Summary</i> . No information is available regarding the uploading of information to relevant databases.	

Limitations

The present assessment is valid for OTP JZB's Green Bond Report as of 28 June 2023. The validity of the report does not extend to any future or updated versions of the relevant standard and ICMA Guidelines for External review or to any amendments or subsequent reissuance of the Report. The document is issued in connection with OTP JZB 2022 Green Bond Report only and does not apply to any mortgage bonds mentioned in this Report. The Green Mortgage Bond Impact Report, the issuance of any green mortgage bonds and the allocations of proceeds are the responsibility of Company's management.

As part of this supplementary report we have not carried out an audit or review in accordance with international or national standards or regulations in the course of this assessment and we do not issue an auditor's opinion or any other assurance.

The assessment and information presented is based on information received from OTP JZB. The alignment with the selection criteria is based solely on the documents submitted by OTP JZB. While Deloitte exercised due care in compiling the assessment, it makes no warranty, express or implied, regarding the accuracy, completeness or usefulness of this information and assumes no liability with respect to the consequences of relying on this information for investment or other purposes. The report does not provide any legal, financial or other advice for investment decisions.

Our responsibility in performing this evaluation is to the management of OTP JZB, and we do not accept or assume responsibility for any other purpose or to any other party. Any reliance placed on the Green Bond Report by any third party is entirely at its own risk.

The evaluation, while reflecting on the alignment of the Green Bond Report with relevant standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. The measurement and reporting of the actual impact achieved through projects financed with the proceeds of bonds presented in Green Bond Report is the responsibility of OTP JZB's management.

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Appendix:

Scope of Assessment

Referenced Documents List

OTP JZB's responsibility as part of the engagement was to provide information and documentation regarding the:

- Green Bond Report

The key document reviewed as part of the engagement were:

Document Number	Document name	Description
1.	Green Bond Report	OTP JZB's 2022 Green Bond Report, version of 28 June 2023, which contains the most important data on green mortgage bonds issued and in circulation, as well as the most important data on the expected environmental impact of green lending activity, in addition to the most important data on the stock of green loans that meet the conditions of the Green Bond Framework.

During the assessment, we also learned about the following additional documents that are not covered by the engagement:

Document Number	Document name	Description
1.	PCAF GHG Calculation Tool for OTP JZB's Mortgage Portfolio	The workbook contains the calculations performed using the PCAF methodology presented in the Green Bond Report, the coefficients used and the process of allocating the mortgage portfolio.