

REPORT REVIEW

Deutsche Kreditbank AG Impact & Allocation Reporting report

Deutsche Kreditbank AG Impact & Allocation Reporting 2022

6 April 2023

VERIFICATION PARAMETERS

Type(s) of reporting	<ul style="list-style-type: none"> Green and Social Bond Impact & Allocation Reporting 																												
Relevant standard(s)	<ul style="list-style-type: none"> ICMA Harmonized Framework for Impact Reporting (HFIR) and Impact Reporting for Social Bonds (HFIRSB) (as of June 2022) DKB's Impact & Allocation Reporting Report (as of April 4, 2023) DKB's Green Bond Framework (as of July, 2020) DKB's Social Bond Framework (as of September 1, 2018) 																												
Scope of verification	<table border="1"> <thead> <tr> <th>ISIN</th> <th>Bond pool</th> <th>Maturity Date</th> <th>Issuance Amount</th> </tr> </thead> <tbody> <tr> <td>DE000GRN0016</td> <td>Green</td> <td>09.26.2024</td> <td>500 € million</td> </tr> <tr> <td>DE000GRN0024</td> <td>Green</td> <td>02.23.2026</td> <td>500 € million</td> </tr> <tr> <td>DE000SCB0039</td> <td>Social</td> <td>05.05.2032</td> <td>500 € million</td> </tr> <tr> <td>DE000SCB0005</td> <td>Social</td> <td>02.10.2028</td> <td>500 € million</td> </tr> <tr> <td>DE000SCB0013</td> <td>Social</td> <td>06.04.2029</td> <td>6.8 € million</td> </tr> <tr> <td>DE000SCB0021</td> <td>Social</td> <td>11.07.2029</td> <td>500 € million</td> </tr> </tbody> </table>	ISIN	Bond pool	Maturity Date	Issuance Amount	DE000GRN0016	Green	09.26.2024	500 € million	DE000GRN0024	Green	02.23.2026	500 € million	DE000SCB0039	Social	05.05.2032	500 € million	DE000SCB0005	Social	02.10.2028	500 € million	DE000SCB0013	Social	06.04.2029	6.8 € million	DE000SCB0021	Social	11.07.2029	500 € million
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DE000SCB0021	Social	11.07.2029	500 € million																										
Lifecycle	<ul style="list-style-type: none"> Post-issuance verification 																												
Validity	<ul style="list-style-type: none"> As long as no changes are undertaken by the Issuer to its Impact & Allocation Reporting report as of April 4, 2023 																												

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SCOPE OF WORK

Deutsche Kreditbank AG (“DKB”) commissioned ISS Corporate Solutions (ICS) to provide an External Review¹ on its Impact & Allocation Reporting report by assessing:

1. The alignment of the DKB’s Impact & Allocation Reporting report with the commitments set forth in both DKB’s Green Bond Framework (as of July, 2020) and Social Bond Framework (as of September, 2018)².
2. DKB’s Impact & Allocation Reporting report - benchmarked against ICMA’s Harmonized Framework for Impact Reporting (HFIR) updated as of as of June, 2022, and ICMA’s Harmonized Framework for Impact Reporting for Social Bonds (HRISB) updated as of June 2022.
3. The disclosure of proceeds allocation and soundness of reporting indicators – whether the impact metrics align with best market practices and are relevant to the Green Bonds and Social Bonds issued.

¹ A limited or reasonable assurance is not provided on the information presented in DKB’s Impact & Allocation Reporting report. A review of the use of proceeds’ allocation and impact reporting is solely conducted against ICMA’s Green Bond and Social Bond Principles’ core principles and recommendations where applicable, and the criteria outlined in the underlying Framework. The assessment is solely based on the information provided in the allocation and impact reporting. DKB is responsible for the preparation of the report including the application of methods and internal control procedures designed to ensure that the subject matter information is free from material misstatement.

² The Green Bond Framework was assessed as aligned with the Draft Model of EU Green Bond Standard as of July 1, 2020, and the Social Bond Framework was assessed as aligned with the Social Bond Principles as of March 25, 2022.

ASSESSMENT SUMMARY

REVIEW SECTION	SUMMARY	EVALUATION
<p>Part 1.</p> <p>Alignment with the Issuer's commitments set forth in the Framework</p>	<p>DKB's Impact & Allocation Reporting report meets the Issuer's commitments set forth in the Green Bond and Social Bond Frameworks. The proceeds have been used to (re)finance Wind and Solar Photovoltaic projects, as well as, Social Housing, Public Supply, Health and Care, Education and Research projects, respectively, in accordance with the eligibility criteria defined in the Frameworks.</p>	<p>Aligned</p>
<p>Part 2.a</p> <p>Alignment with the Harmonized Framework for Impact Reporting (HFIR)</p>	<p>The Impact & Allocation Reporting report is in line with the ICMA's Harmonized Framework for Impact Reporting (HFIR). The Issuer follows the core principles and where applicable key recommendations.</p> <p>DKB provides transparency on the level of expected reporting as well as on the frequency, scope, and duration, aligned with best market practices. DKB adhered to the core principles by generally reporting the allocation from green bonds annually, illustrating the environmental impacts generated by the green bonds, the ESG risk management process, and disclosed the currency associated with the allocation of green bond proceeds.</p>	<p>Aligned</p>
<p>Part 2.b</p> <p>Alignment with the Harmonized Framework for Impact Reporting for Social Bonds (HFIRSB)</p>	<p>The Impact & Allocation Reporting report is in line with the ICMA's Harmonized Framework for Impact Reporting for Social Bonds (HFIRSB). The Issuer follows the core principles and where applicable key recommendations.</p> <p>DKB provides transparency on the level of expected reporting as well as on the frequency, scope, and duration, aligned with best market practices. DKB adhered to the core principles by generally reporting the allocation from social bonds annually, applying a formal internal process to track proceeds, outlining the allocation of proceeds to the respective social project categories, identifying the target population benefited by the social project categories, when relevant, outlined the outcome of the social categories through impact indicators, and illustrated the social impacts generated by the social bonds.</p>	<p>Aligned</p>

<p>Part 3</p> <p>Disclosure of proceeds allocation and soundness of reporting indicators</p>	<p>The allocation of the bond's proceeds has been disclosed, with a detailed breakdown across different eligible project categories as proposed in the Framework³. DKB's Impact & Allocation Reporting report has adopted appropriate methodologies to report the impact generated by providing comprehensive disclosure on data sourcing, calculations methodologies and granularity reflecting best market practices.</p>	<p>Positive</p>
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³ The assessment is based on the information provided in the Issuer's report. The Issuer is responsible for the preparation of the report including the application of methods and procedures designed to ensure that the subject matter information is free from material misstatement.

REPORT REVIEW ASSESSMENT

PART I: ALIGNMENT WITH COMMITMENTS SET FORTH IN THE GREEN BOND FRAMEWORK⁴ AND SOCIAL BOND FRAMEWORK⁵

The following table evaluates the Impact & Allocation Reporting report against the commitments set forth in DKB's Frameworks, which are based on the core requirements of the Green Bond Principles and Social Bond Principles as well as best market practices.

GBP AND SBP	OPINION	ALIGNMENT WITH COMMITMENT
1. Use of Proceeds	<p>DKB confirms to follow the Use of Proceeds' description provided by DKB's Green Bond Framework and Social Bond Framework. The report is in line with the initial commitments set in DKB's Green Bond Framework and Social Bond Framework. The proceeds have been used to (re)finance Wind and Solar Photovoltaic projects, as well as, Social Housing, Public Supply, Health and Care, Education and Research projects, respectively.</p> <p>The Issuer's green and social categories align with the project categories and are in accordance with the eligibility criteria set in DKB's Green Bond Framework and Social Bond Framework. Environmental and social benefits at the category level are described and quantified.</p> <p>The Issuer defines the percentage of assets that are refinanced or financed (100% refinancing), in line with best market practice.</p>	✓
2. Process for Project Evaluation and Selection	<p>DKB confirms to follow the Process for Project Evaluation and Selection description provided by DKB's Green Bond Framework and Social Bond Framework. The report is in line with the initial commitments set in the DKB's Green Bond Framework and Social Bond Framework. For Green projects, various departments at DKB were involved (the market unit for renewable-energy business, public affairs and sustainability, and treasury) in the selection process to guarantee that the selection criteria were respected, and the selected loans comply with DKB's core bank system as defined in the framework. For Social projects, the selection criteria were assessed by DKB's client segments (housing, local authorities and social infrastructure, energy and public supply, sustainability management and treasury departments).</p>	✓

⁴ The DKB's Green Bond Framework was assessed as aligned with the Draft Model of EU Green Bond Standards as of July 1, 2020.

⁵ The DKB's Social Bond Framework was assessed as aligned with the SBP (2018 ICMA's Social Bond Principles) as of March 25, 2022.

	<p>The projects selected are defined and structured in a congruous manner. The Issuer ensures compliance with the Eligibility Criteria. ESG risks associated with the green and social project categories are identified and managed through an appropriate process.</p> <p>The Issuer involves various stakeholders in the process for project evaluation and selection, in line with best market practices.</p>	
<p>3. Management of Proceeds</p>	<p>DKB confirms to follow the Process for Management of Proceeds description provided by DKB's Green Bond Framework and Social Bond Framework. The report is in line with the initial commitments set in DKB's Green Bond Framework and Social Bond Framework. As long as Green or Social Bonds are outstanding, DKB ensures that loan volume is at least equivalent to the issued volumes of the outstanding bonds. The allocated loans are earmarked in DKB's core banking system (OSPlus) and if loans no longer qualify for the Green or Social Bond Pool, they will be removed and, if necessary, replaced by other loans that meet the respective selection criteria.</p> <p>The proceeds collected are equal to the amount allocated to eligible projects, with no exceptions. The proceeds are tracked in an appropriate manner and attested in a formal internal process. Moreover, the Issuer confirms that proceeds are allocated immediately due to the fact that the proceeds are used to refinance existing projects.</p>	<p>✓</p>
<p>4. Reporting</p>	<p>DKB's Impact Report is coherent with the Reporting description provided by DKB's Green Bond Framework and Social Bond Framework. The report is in line with the initial commitments set in the Green Bond Framework and Social Bond Framework: to publish an Impact and Allocation Report annually during the term of the respective green or social bond.</p> <p>The sections "Allocation Reporting" and "Impact Reporting" of the Impact & Allocation Reporting report comply with the pre-issuance commitment expressed in the framework. The report is intended to be publicly available.</p> <p><i>Further analysis of this section is available in Part III of this report.</i></p>	<p>✓</p>

PART II: ASSESSMENT AGAINST THE ICMA'S HARMONIZED FRAMEWORK FOR IMPACT REPORTING (HFIR) AND HARMONIZED FRAMEWORK FOR IMPACT REPORTING FOR SOCIAL BONDS (HFIRSB)

FOR GREEN BONDS

Reporting is a core component of the GBP and transparency is of particular value in communicating the expected and/or achieved impact of projects in the form of an annual reporting. Green bond Issuers are required to report on both the use of green bond proceeds, as well as the environmental impacts at least on an annual basis until full allocation or maturity of the bond. The Harmonized Framework for Impact Reporting has been chosen as benchmark for this analysis as it represents the most widely adopted standard.

The table below evaluates DKB Impact & Allocation Reporting report against ICMA's Harmonized Framework for Impact Reporting.

CORE PRINCIPLES		
ICMA HFIR	IMPACT & ALLOCATION REPORTING REPORT	ASSESSMENT
Reporting on an annual basis	The Green Bonds have been issued in 2016, 2017 and 2021, and since 2016, DKB has reported yearly within one year from issuance, with the exception of 2020 due to the Covid outbreak. However, no new bonds were issued in 2020 and the 2019 report confirmed full allocation of the bonds proceeds in 2019 or before. All the proceeds have been immediately allocated in 2022. The report will be available on DKB's website.	✓
Illustrating the environmental impacts or outcomes	The assessment and measurement of the impacts generated by DKB Green Bond(s) are related to the wind and photovoltaic projects refinanced covering: <ul style="list-style-type: none"> a. Annual GHG emissions reduced/avoided in tonnes of CO₂. b. Rated power in kilowatts (kWp) c. Energy produced in kilowatt hours per year (kWh pa) d. Number of supplied 2-person households 	✓
ESG Risk Management	DKB has respected its ESG risk management process in line with the Issuer's framework.	✓
Allocation of proceeds - Transparency on the currency	DKB reports the proceeds allocated to eligible projects within the green categories of its Green Bond Framework. The asset pool volume (2,260 EUR million) exceeds the total proceeds (1,000 EUR million) in 2022 and is composed of wind and photovoltaic projects. Allocated proceeds correspond to financings in EUR.	✓

RECOMMENDATIONS		
ICMA HFIR	IMPACT & ALLOCATION REPORTING REPORT	ASSESSMENT
Define and disclose period and process for Project Evaluation and Selection	<p>The loans concern wind or photovoltaic projects only. In addition, the loans selected for the Green Bond Pool are subject to further conditions:</p> <p>Selection criteria</p> <ul style="list-style-type: none"> ▪ Only DKB house bank loans ▪ Exclusively project financing ▪ Only in Germany ▪ Only onshore ▪ Minimum loan amount per project <p>Dynamic selection criteria</p> <ul style="list-style-type: none"> ▪ Selected legal forms ▪ Minimum residual term of the Green Bond Pool loans ▪ Minimum internal rating <p>Additionally, there is a re-evaluation process happening at least annually to determinate the selected projects still comply with the selection criteria.</p>	✓
Disclose total amount of proceeds allocated to eligible disbursements	A total of 1,000 EUR million has been raised through DKB's Green Bond. 100% of the proceeds has been allocated to Green Assets.	✓
Formal internal process for the allocation of proceeds and to report on the allocation of proceeds	The Issuer followed a transparent process for the allocation of proceeds.	✓
Report at project or portfolio level	The Impact & Allocation Reporting report includes the total amount of proceeds allocated per eligible project category, type within categories and per geographical breakdown (provinces).	✓
Describe the approach to impact reporting	The Issuer identifies the specific eligible projects and clearly defines, for each project, the total project's allocated proceeds.	✓
Report the estimated lifetime results and/or project economic life (in years)	DKB does not report on lifetime impacts of projects.	-
Ex-post verification of specific projects	There is no ex-post verification of specific projects.	-
Report on at least a limited number of sector specific core indicators	DKB reports on CO ₂ emissions saved, rated power, energy produced, and number of households supplied with renewable energy, that are core indicators for the Renewable Energy sector.	✓

	<p>A description of core environmental impacts for each target area is available in the report:</p> <ul style="list-style-type: none"> ▪ Annual GHG emissions reduced/avoided in tonnes of CO₂ ▪ Nominal power (kWp) ▪ Energy (production) in kilowatt hours per year (kWh pa) ▪ Number of 2-person households supplied with renewable energy (pa) 	
If there is no single commonly-used standard, Issuers may follow and disclose their own calculation methodologies	To calculate the CO ₂ avoidance in the photovoltaic and wind power projects, the Issuer has disclosed the methodology by using CO ₂ emission factor, a data point published by the Federal Environment Agency for domestic electricity consumption for the German electricity mix. To determine the number of 2 person households served by the renewable energy projects, the Issuer used the energy yield and energy consumption of private households in Germany published by the Federal Statistical Office as basis for the calculation methodology. To calculate the energy yield for wind turbines, the Issuer used 2 independent yield reports for each of the wind project calculation, and used independent energy yield report to calculate the expected future electricity yields for the photovoltaic projects.	✓
Disclosure on the conversion approach (if applicable)	The Issuer has disclosed the conversion approach in the calculation methodology of CO ₂ avoided for the wind and photovoltaic projects.	✓
Projects with partial eligibility	The Issuer has not financed partially eligible projects.	-
When the expected impacts of different project components may not be reported separately, Issuers may use (and disclose) the attribution approach	DKB has reported expected impacts of project components. As such, this requirement is not applicable.	-

OPINION

DKB follows the Harmonized Framework for Impact Reporting's core principles and some key recommendations. DKB provides transparency on the level of expected reporting as well as on the frequency, scope, and duration, aligned with best market practices. DKB adhered to the core principles by generally reporting the allocation from green bonds annually, illustrated the environmental impacts generated by the green bonds, the ESG risk management process, and disclosed the currency associated with the allocation of green bond proceeds.



FOR SOCIAL BONDS

Reporting is a core component of the SBP and transparency is of particular value in communicating the expected and/or achieved impact of projects in the form of an annual reporting. Social bond Issuers are required to report on both the use of social bond proceeds, as well as the social impacts at least on an annual basis until full allocation. The Harmonized Framework for Impact Reporting for Social Bond (HFIRSB) has been chosen as benchmark for this analysis as it represents the most widely adopted standard.

The table below evaluates DKB Impact & Allocation Reporting report against ICMA's Impact Reporting for Social Bond (HFIRSB).

CORE PRINCIPLES		
ICMA HFIRSB	Impact & Allocation Reporting report	ASSESSMENT
Reporting on an annual basis	DKB has reported within one year from issuance on an annual basis since social bonds issuances in 2018, with the exception of 2020 due to the Covid outbreak. However, no new bonds were issued in 2020 and the 2019 report confirmed full allocation of the bonds proceeds in 2019. All the proceeds have been fully allocated in 2022. The report will be available on DKB's website.	✓
Formal internal process to track proceeds	DKB confirms project selection and management of proceeds to be in line with the criteria set forth in the underlying Framework.	✓
Allocation of the proceeds to social project categories	In accordance with the criteria established within the Framework, in compliance with the Social Bond Principles issued by the ICMA, DKB has allocated the net proceeds of the bond issued under this Framework to new and/or existing eligible assets within the following categories: <ul style="list-style-type: none"> ▪ Housing ▪ Public Supply⁶ ▪ Health and Care ▪ Education and Research ▪ Inclusion 	✓
Target Population(s) identified	In this case, funded projects cover essential services that might affect a specific target population (e.g., workshop for disabled people, housing solutions provided by social housing providers) or a general one (e.g., access to education, access to healthcare). The Issuer adopted the growing and shrinking cities and communities in Germany indicator created by the Federal	✓

⁶ This refers to public utilities

	<p>Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)⁷. The indicator is derived from the analysis of population data and other socio-economic key figures such as total migration balance, job development and the development of the employable, the unemployment rate and the trade tax capacity. The indicator can then provide an indication of which regions in Germany are shrinking, growing, or showing no clear direction of development from a socio-economic perspective. The Issuer commits to serve its customers in shrinking communities in terms of equal treatment.</p>	
<p>Output, outcome and/or impact of projects at project or portfolio level</p>	<p>The Issuer referred to existing indicator lists and catalogs from the Annex III of the HFIRSB and reported on an aggregated basis at portfolio level per eligible project category:</p> <ul style="list-style-type: none"> ▪ Number of Inhabitants reached through the educational and research program ▪ Number of patients reached through the health and care program ▪ Number of residents provided with water supply and water sanitation ▪ Volume of water treated by sanitation and water supply projects (m³) ▪ Number of residents benefiting from the municipal housing and housing cooperatives. <p>In addition, the Issuer mapped loan volume in the social loan pool to the Social Bond Principles categories, and also to the Sustainable Development Goals. The Issuer also mapped the loan volumes to the different BBSR regions by the following breakdown of: no clear direction of development, shrinking, disproportionately shrinking, above-average growth, and growing.</p> <p>A detailed analysis of impact indicators is available in Part III of this report.</p>	
<p>Illustrating of the social impacts</p>	<p>The assessment and measurement of the impacts generated by DKB Social Bonds covered the following areas:</p> <ul style="list-style-type: none"> ▪ Number of inhabitants benefitted by the water supply and sanitation projects ▪ Number of patients reached by health and care services 	

⁷ Federal Institute for Research on Building, Urban Affairs and Spatial Development, https://www.bbsr.bund.de/BBSR/EN/home/_node.html

	<ul style="list-style-type: none"> Number of residents benefiting from the municipal housing and housing cooperatives Number of residents reached by the Education & Research 	
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RECOMMENDATIONS

ICMA HFIRSB	Impact & Allocation Reporting report	ASSESSMENT
Disclose the methodology and the assumptions used for the calculation of impact indicators	The Issuer discloses the methodology and assumptions used to calculate the impact indicators.	✓
When the expected impacts of different project components may not be reported separately, Issuers may use (and disclose) the attribution approach	The impact of DKB's projects is reported by portfolio categories and subcategories on an aggregated basis.	✓
Disclose the methodology used to determine the share of eligible project financing being applied to impact calculation	The Issuer discloses the methodology used to determine the share of eligible project financing being applied to impact calculation.	✓
Collaborating with experts if reporting on the estimated lifetime impacts and/or project economic life in years	The Issuer is not reporting the project economic life in years.	-
Assumptions and ex-post verification	Assumptions are not externally verified, and ex-post verification is also not in place.	-
Report Period	The entirety of proceeds has been allocated to Social Assets. However, the Issuer did not define clearly and disclose the period for including/excluding projects in their report.	-

Disbursement reporting	The proceeds from the social bond issuance were used to refinance existing loans. Existing loans are those which have reached financial close one year or more before the issuance.	✓
Projects with partial eligibility	The Issuer has not financed partially eligible projects.	-

OPINION

DKB follows the Harmonized Framework for Impact Reporting for Social Bond's core principles and some key recommendations. The Issuer provides transparency on the level of expected reporting as well as on the frequency, scope, and duration, aligned with best market practices. DKB adhered to the core principles by generally reporting the allocation from social bonds annually, applying a formal internal process to track proceeds, outlining the allocation of proceeds to the respective social project categories, identifying the target population benefited by the social project categories, when relevant, outlined the outcome of the social categories through impact indicators, and illustrated the social impacts generated by the social bonds.

PART III: DISCLOSURE OF PROCEEDS ALLOCATION AND SOUNDNESS OF THE IMPACT REPORTING INDICATORS

Use of Proceeds Allocation

Use of Proceeds allocation reporting is key to put the impacts into perspective with the number of investments allocated to the respective Use of Proceeds categories.

The Use of Proceeds allocation reporting occurred within one year from the green bonds and social bond issuances in 2022, after full allocation of the proceeds.

This is the 6th and 4th year of allocation reporting, for green and social bonds respectively. 100% of allocation of bond proceeds in 2022 compares with the 100% bond proceeds allocation in 2021. The Use of Proceeds allocation reporting occurred within the regular annual cycle from the issuance.

Proceeds allocated to eligible projects/assets

The proceeds allocation is broken down at the project category level. The Issuer has provided details about the type of projects included in the green and social loan portfolios. The Issuer included the number of loans and loan volume allocated to photovoltaic and wind projects within the Green Bond Pool, and also the loan volume allocated to public housing, water supply and sanitation, health and care, education and research, and inclusion projects within the Social Bond Pool.

The report does not provide information about projects which were removed from the allocation register, due to no longer meeting at least one of the defined selection criteria.

The allocation report section of the Impact & Allocation Reporting report of DKB aligns with best-market practices by providing information on:

- The number of projects (re-)financed
- 100% of proceeds allocated to refinance underlying loans
- The size of the green and social assets pool (2,260 million EUR in Green Bonds Proceeds, and 4,780 million EUR in Social Bonds Proceeds)
- The % of Social Bond Pool loan volume (million EUR) and % of DKB paid out loan volume (million EUR) out of the total investment volume in Germany (million EUR) in specific social subcategories.
- The allocation to different BBSR regions by loan volume associated to the social bond pool
- The number of wind and photovoltaic projects by geographical breakdown within the green bond pool
- The style of photovoltaic systems and distribution of wind turbines within the green bond pool

Impact Reporting Indicators

The table below presents an independent assessment of the Issuer's report and disclosure on the output, outcome, and/or impact of projects/assets using impact indicators.





ELEMENT	ASSESSMENT
<p>Relevance</p>	<p>The impact indicators chosen by the Issuer for this bond are the following:</p> <p>Green Bond Pool</p> <ul style="list-style-type: none"> ▪ Annual GHG emissions reduced/avoided in tonnes of CO₂ ▪ Nominal power (kWp) ▪ Energy (production) in kilowatt hours per year (kWh pa) ▪ Number of 2-person households supplied with renewable energy (pa) <p>Social Bond Pool</p> <ul style="list-style-type: none"> ▪ Number of Inhabitants reached through the educational and research program ▪ Number of patients reached through the health and care program ▪ Number of residents provided with water supply and water sanitation ▪ Volume of water treated by sanitation and water supply projects (m³) ▪ Number of residents benefiting from the municipal housing and housing cooperatives. ▪ Loan volume mapped to the Social Bond Principles ▪ Loan volume mapped to the Sustainable Development Goals ▪ Loan volume mapped to BBSR indicator distribution ▪ DKB financing share compared investment volume in Germany <p>These indicators are qualitative, quantitative, and material to the Use of Proceeds categories financed through this bond and are broadly in line with the Suggested Impact Reporting metrics for Green and Social Projects by the ICMA Harmonized Framework for Impact Reporting for Environmental and Social Bonds.</p> <p>All of the above indicators, besides the last four within the social bond, are within the suggested impact reporting metrics by the ICMA Harmonized Framework for Impact Reporting.</p>
<p>Data sourcing and methodologies of quantitative assessment</p>	<p>For its Green Bond impact indicator(s), the Issuer uses net wind yield or the actual feed-in into the grid to calculate the energy generation in wind projects. For photovoltaic projects, the Issuer uses the specific yield by calculating the energy produced. After getting the energy generation results for the wind and photovoltaic projects, the Issuer used the CO₂ emission factor⁸ to calculate the CO₂ avoided annually. The Issuer has also outlined the calculation methodologies for Rated power in kW(p), the energy yield in kWh pa, and determination of the 2 person households served. Some of the sources from external databases are</p>

⁸ DKB adopted 420 g/kWh as CO₂ emission factor as of 2021 to calculate CO₂ emissions avoided. According to DKB, the CO₂ emission factor is published by the Federal Environment Agency for domestic electricity consumption for the Germany electricity mix.







	<p>from Federal Statistical Office, the Federal Environment Agency, and the Federal Association of Energy and Water Management (BDEW) in Germany. The impact reporting indicators, except the number of 2 person households served, within the Green Bond Pool are aligned with the core indicator proposed by the ICMA Harmonized Framework for Impact Reporting.</p> <p>For Social Bond impact indicators, the Issuer has disclosed calculation methodologies. In addition, the Issuer has disclosed sources used by external databases from the Federal Association of German Housing and Real Estate, German Association for Water Management, Wastewater and Waste, Federal Association of Energy and Water Management, Federal Statistical Office, and Cologne Institute from Economic Research in calculating these impact indicators. All of the social bond impact indicators, except the SDG mapping, loan volume mapped to SBP, regional distribution of loans according to BBSR, and DKB financing share compared investment volume in Germany, are in line with the core indicators proposed by the ICMA Harmonized Framework for Impact Reporting (for Social Bonds).</p> <p>Please note that both the Green Bond and Social Bond impact indicators are not verified externally.</p>
Baseline selection	The Issuer has opted to use CO ₂ emission factor 2021 published by the Federal Environment Agency for domestic electricity consumption for the German electricity mix as a baseline to calculate the CO ₂ avoided (tonnes) by the photovoltaic and wind projects within the green bond pool.
Scale and granularity	The impact data are presented at the Use of Proceed category level for the indicator(s).

High-level mapping of the impact indicators with the UN Sustainable Development Goals

Based on the project categories financed and refinanced by the bonds as disclosed in the Issuer's Impact & Allocation Reporting report, the impact indicator(s) adopted by DKB for its Impact & Allocation Reporting report can be mapped to the following SDGs, according to the ICMA "A High - Level Mapping to the Sustainable Development Goals"⁹.

IMPACT INDICATORS	SUSTAINABLE DEVELOPMENT GOALS
Saved CO₂ emissions (tons/year)	 
Nominal power in kilowatts (kW)	 

⁹ [ICMA's Mapping-SDGs-to-Green-Social-and-Sustainability-Bonds](#)

<p>Energy (production) in kilowatt hours per year (kWh, p.a.)</p>	
<p>Number of 2-person household supplied by wind and photovoltaic projects (p.a.)</p>	
<p>Number of Inhabitants reached through the educational and research program</p>	
<p>Number of patients reached through the health and care program</p>	
<p>Number of residents provided with water supply and water sanitation Amount of water (in m³) associated with water supply and sanitation projects</p>	
<p>Number of residents benefiting from the municipal housing and housing cooperatives</p>	

OPINION

The allocation of the bond's proceeds has been disclosed, with a detailed breakdown across different eligible project categories as proposed in DKB's Green Bond and Social Bond Frameworks. DKB's Impact and Allocation Reporting report has adopted appropriate methodologies to report the impact generated by providing comprehensive disclosure on data sourcing, calculations methodologies and granularity reflecting best market practices. Besides, the impact indicators used are broadly aligned with best market practices using ICMA's recommended metrics, the HFIR and the HFIRSB.

DISCLAIMER

1. Validity of the External Review (“External Review”): Valid as long as the cited Impact & Allocation Reporting report published on April 4, 2023 remains unchanged.
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ANNEX 1: Methodology

Review of the post-issuance Reports

The external review of post-issuance reports provides the Issuer with an independent opinion on the soundness of its post-issuance report and of its alignment with recognized market guidelines and it provides investors with independent information regarding the reliability of the report produced. On the basis of the information provided by the Issuer, the alignment of the report is assessed with recognized market guidelines, the metrics chosen by the Issuer and the soundness of process and methodology of reporting. The metrics are analyzed based on specific sets of indicators using proprietary method referring to common market guidelines.

High-level mapping to the SDG

The 17 Sustainable Development Goals (SDGs) were endorsed in September 2015 by the United Nations and provide a benchmark for key opportunities and challenges toward a more sustainable future. Using a proprietary method based on ICMA's Green, Social and Sustainability Bonds: A High-Level Mapping to the Sustainable Development Goals, the extent to the Issuers reporting and project categories contribute to related SDGs is identified.

ANNEX 2: Quality management processes

SCOPE

DKB commissioned ICS to compile an External Review on its Bond Report. The External Review process includes verifying whether the Bond Report aligns with the Issuer's Green, Social and Sustainability Bond Framework and the respective market standards, i.e. the Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines and to assess the robustness and completeness of the reporting methodologies.

CRITERIA

Relevant Standards for this Report Review:

- ICMA Social Bond Principles
- ICMA Harmonized Framework for Impact Reporting
- ICMA Harmonized Framework for Impact Reporting for Social Bonds
- ICMA A High -Level Mapping to the Sustainable Development Goals

ISSUER'S RESPONSIBILITY

Issuer's responsibility was to provide information and documentation on:

- Impact & Allocation Reporting report
- DKB's Social Bond Framework
- DKB's Green Bond Framework
- Proceeds Allocation
- Reporting Impact Indicators
- Methodologies, and assumptions for data gathering and calculation

ISS ESG'S VERIFICATION PROCESS

ISS ESG is one of the world's leading independent environmental, social and governance (ESG) research, analysis and rating houses. The company has been actively involved in the sustainable capital markets for over 25 years. Since 2014, ISS ESG has built up a reputation as a highly-reputed thought leader in the green and social bond market and has become one of the first CBI approved verifiers.

This independent External Review has been conducted by following the ICMA Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds External Reviews, and its methodology, considering, when relevant, the ISAE 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information.

The engagement with Issuer Name took place from March to April 2023.

ISS' BUSINESS PRACTICES

ISS has conducted this verification in strict compliance with the ISS Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behavior and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

About this External Review

ISS ESG is one of the world's leading rating agencies in the field of sustainable investment. The agency analyzes companies and countries regarding their environmental and social performance.

We assess alignment with external principles (e.g. the ICMA Green Bond Principles, Social Bond Principles and Sustainable Bond Guidelines), analyze the sustainability quality of the assets and review the sustainability performance of the Issuer themselves. Following these three steps, we draw up an independent External Review so that investors are as well informed as possible about the quality of the bond/loan from a sustainability perspective.

Learn more: <https://www.isscorporatesolutions.com/solutions/esg-solutions/green-bond-services/>

For information on External Review services, contact: SPOsales@isscorporatesolutions.com

For more information on this specific Impact and Allocation Reporting Report Review, please contact: SPOOperations@iss-esg.com

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