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Executive Summary

In 2023, Akbank T. A.Ş. (Akbank/the Bank) initiated a Net Zero Project, committing to decarbonization of its loan portfolio emissions in alignment with its 2050 net-zero ambition. The Bank calculated its financed emissions (Scope 3, Category 15) based on 2021 data and in accordance with the PCAF methodology for four different asset classes:

- Motor Vehicle Loans (MVL)
- Commercial Real Estate Loans (CRE)
- Business Loans and
- Project Finance Loans.

Calculated financed emissions formed the basis for Akbank's 2030 emission-reduction targets for four hard-to-abate sectors classified under four above-mentioned classes. In preparation for disclosing its financed emissions and sectoral targets in 2024, Akbank sought limited assurance to validate the accuracy and reliability of its model.

Our engagement focused on providing this limited assurance through assessing the bank's Financed Emissions Calculations and Sectoral Target-Setting processes.

Subject of the Engagement (Scope)

To ensure accuracy and reliability of these calculations and targets, Akbank engaged us to perform a limited assurance audit covering two key topics:

I. Financed Emissions Calculations

- (a). Verify compliance of Akbank's loan portfolio emission calculations with the PCAF methodology for the period January 1, 2021 – December 31, 2021.
- (b). Confirm the accuracy of emission calculations and the underlying input parameters for the four prioritized loan groups, based on a representative sample of loans selected from each group.
- (c). Provide feedback and recommendations for corrective actions.

II. Sectoral Targets

- (a). Assess the alignment of Akbank's 2030 sectoral emission reductions targets with the financed emissions calculations.
- (b). Examine the accuracy and transparency of target setting for the four hard-to-abate sectors, including the correct use and implementation of the SBTi target-setting tool.
- (c). Provide feedback and recommendations for corrective actions.

Our observations throughout this engagement are presented as "**Observation #**" within the report.



Provided documents¹

1. Detailed model calculation methodology documentation
2. Data flow description for model inputs
3. Master file containing inputs for the financed-emissions calculations
4. Sample file illustrating the exact calculation model applied to selected loans
5. Sample loan data
6. Target-setting documentation and model implementation files

¹ Due to confidentiality terms and information security regulations, all data is shared anonymously.

I. Financed Emissions Calculations

The assurance process of financed emissions calculations was structured into five distinct stages, each involving multiple touchpoints with the client to ensure a thorough evaluation. We verified the compliance of Akbank's credit portfolio emission calculations with the PCAF methodology for the period from January 1, 2021, to December 31, 2021, and assessed the accuracy of emission calculations for four main asset classes:

- Motor Vehicle Loans
- Commercial Real Estate Loans
- Business Loans and
- Project Finance Loans

by performing the following steps:

1. Stage: Methodology & Process Design Review

Verification of methodological accuracy with respect to the alignment to PCAF standards, validation of NACE to EXIOBASE mappings conducted by the Bank and verification of parameter assumptions required for calculations. As a result, we flagged potential operational issues, which were later included in the detailed model calculation methodology documentation. This detailed process ensured that the methodology was correctly designed, well-documented, and suitable for producing reliable financed emissions estimates.

2. Stage: Data Collection & Quality Assurance Review

Examination of internal and external data sources (as depicted in client's provided data flow diagram and methodology documentation), validation of data granularity, and assessment of the handling of data gaps (e.g., sector-specific benchmarks for unavailable client data).

As a result, the client agreed to enhance data collection IT infrastructure.

3. Stage: Technical Implementation Review

Analyzed the calculation tool's structure, formulas, and parametrization to ensure accurate estimations across all asset classes. We detected formula inconsistencies (e.g. Excel-function "VLOOKUP" not spanning over the whole table) which were corrected during the engagement. In addition, client provided us with a sample file with model calculations implemented, which contained formulas for the first 100 loans from the overall loan portfolio, to confirm the validity and consistency of formulas.

4. Stage: Output Generation & Sample Review

Evaluation of the generated outputs, including base year emissions, sectoral intensities, to confirm consistency and correctness of calculated results as depicted in the master file with inputs for model calculations. Includes sample testing for each of the four loan groups, covering input validation and calculation checks.

5. Stage: Results Reconciliation & Final Documentation

Consolidated findings and prepared this assurance report.

Akbank's model calculation methodology was disclosed in detail with 2021 as the base year. Our validation was based on the data extracted by the client from their internal system. This data was delivered to us in an Excel format. We had no direct access to the system or raw data exports. Due to confidentiality terms and information security regulations (KVKK vs), all data is shared anonymously.

The loan portfolio is divided into four asset classes: Motor Vehicle Loans, Commercial Real Estate, Business Loans and Project Finance and aligned with the PCAF methodology as outlined in the attached global standard, "PCAF - The Global GHG Accounting and Reporting Standard for the Financial Industry" (later referred to as the PCAF Standard).



PCAF - The Global
GHG Accounting and Reporting Standard for the Financial Industry

The methodology for the calculation of financed emissions is tailored for each of the asset classes:

- i. **Motor Vehicle Loans:** Emissions are estimated based on vehicle type from which the distance traveled is retrieved (we validated these inputs using Turkish Statistical Institute data) and emissions factor based on fuel type multiplied by the outstanding loan value ratio. Conservative assumptions are applied when fuel type data is missing. Emissions Factor in kg CO₂e/km for Petrol, Diesel, Hybrids and Electricity was used depicting CO₂e emitted per distance travelled for each fuel type. The client's financed emissions are calculated as follows:

$$\text{Financed emissions} = \sum_{v,f} \frac{\text{Outstanding amount}}{\text{Total value at origination}} \times \text{Distance traveled}_v \times \text{Efficiency}_{v,f} \times \text{Emission Factor}$$

This calculation is in line with PCAF Methodology:

$$\text{Financed emissions} = \sum_{v,f} \frac{\text{Outstanding amount}_v}{\text{Total value at origination}_v} \times \text{Distance traveled}_v \times \text{Efficiency}_{v,f} \times \text{Emission factor}_f$$

(with v=vehicle or vehicle fleet, f=fuel type)

Figure 1: Calculation Methodology for MVL (Page 104 in the PCAF Standard)

- ii. **Commercial Real Estate Loans:** Financed emissions are estimated using a bottom-up approach that considers the property's energy use intensity (EUI), which varies by real estate type in combination with specific floor area of the underlying property, and a uniform emission factor of 417 kgCO₂e/MWh. Emission Factor for Energy in kgCO₂e/MWh was used, which depicts CO₂e emitted from energy consumption of the building.

$$\text{Financed emissions} = \sum_{b,e} \frac{\text{Outstanding amount}}{\text{Property Value at origination}} \times \text{Energy consumption} \times \text{Emission Factor}$$

This calculation is in line with PCAF Methodology:

$$\text{Financed emissions} = \sum_{b,e} \frac{\text{Outstanding amount}_b}{\text{Property value at origination}_b} \times \text{Energy consumption}_{b,e} \times \text{Emission factor}_e$$

(with b = building and e = energy source)

Figure 2: Calculation Methodology for CRE (Page 91 in the PCAF Standard)

- iii. **Business Loans:** Financed emissions are calculated depending on the data quality score (see below). Due to 99.88% of business loans being attributed to data scores 4 or 5, company emissions are mostly estimated either using client-level financial data or asset turnover ratio with respect to emissions factors mapped to NACE sector adjusted by outstanding loan amount. Emissions factor for Revenue in kg CO₂e/TRY was used, which depicts the emissions per monetary revenue unit. The client's financed emissions are calculated as follows:

For business loans to private companies:

$$\text{Financed emissions} = \sum_c \frac{\text{Outstanding amount}}{\text{Total equity} + \text{Total debt}} \times \text{Company emissions}$$

For business loans to listed companies:

$$\text{Financed emissions} = \sum_c \frac{\text{Outstanding amount}}{\text{EVIC}} \times \text{Company emissions}$$

This calculation is in line with PCAF Methodology:

For business loans and equity investments to/in private companies:

$$\text{Financed emissions} = \sum_c \frac{\text{Outstanding amount}_c}{\text{Total equity} + \text{debt}_c} \times \text{Company emissions}_c$$

For business loans to listed companies:

$$\text{Financed emissions} = \sum_c \frac{\text{Outstanding amount}_c}{\text{Enterprise Value Including Cash}_c} \times \text{Company emissions}_c$$

(with c = borrower or investee company)

Figure 3: Calculation Methodology for Business Loans (Page 71 in the PCAF Standard)

- iv. **Project Finance Loans:** Financed emissions are calculated based on project-level data, leveraging physical activity metrics. For solar, wind, water and biomass powered plants the client assumed a factor of 0. The market practice though suggests applying other methodologies to assess emission position for these projects (outlined in Observation 1). Project emissions are either retrieved through external data providers or estimated depending on the data quality Score (see below). Emissions factor for Production in kg

CO₂e/MWh was used, which depicts the emissions per produced MWh, or Emissions factor for Revenue in kg CO₂e/TRY was used, which depicts the emissions per monetary revenue unit. The client's financed emissions are calculated as follows:

$$\text{Financed emissions} = \sum_p \frac{\text{Outstanding amount}}{\text{Total equity} + \text{Total debt}} \times \text{Company emissions}$$

This calculation is in line with PCAF Methodology:

$$\text{Financed emissions} = \sum_p \frac{\text{Outstanding amount}_p}{\text{Total equity} + \text{debt}_p} \times \text{Project emissions}_p$$

(with $p = \text{project}$)

Figure 4: Calculation Methodology for PFL (Page 82 in the PCAF Standard)

Observation 1: According to the Partnership for Carbon Accounting Financials (PCAF) and International Finance Institution (IFI)-harmonized GHG accounting standards, it is not appropriate to assume zero emissions for renewable energy projects. While these projects do have significantly lower emissions compared to fossil fuel-based energy, they are not entirely emission-free. Especially, IFI-Guideline for a Harmonised Approach to Greenhouse Gas Accounting recommends using project and baseline emissions factors to account for emissions that occurred due to physical-based activity of starting these projects subtracted with equivalent Combined Margin Emissions Factor that would be emitted by having the same energy level output from a different source (cmpr. Page 10 in “IFI - AHG-003_Guideline_on_GHG_Accounting_and_reporting_1Jun_.pdf”). By supporting this calculation, the overall impact can be negative, then we are dealing with “Avoided Emissions” according to PCAF: “Avoided emissions related to renewable power projects are the reduction in emissions of the financed project compared to what would have been emitted in the absence of the project (the baseline emissions)” (cmpr. Page 84 in the PCAF Standard). In this way Akbank can display emissions avoided by re-allocation of their funds towards more green projects.



IFI -
AHG-003_Guideline_



IFI - Renewable
Energy_GHG account

To assess the data quality Akbank defined five Scores, where an increasing score depicts a deterioration of the data availability (score 1 = highest data quality; score 5 = lowest data quality). The client applies these scores, which influence the final calculation methodology for each of the four loan classes:

- **Score 2:** Direct corporate carbon footprint data, as received from external data sources (e.g. Refinitiv).
- **Score 3:** Estimated emissions for renewable projects, reported as zero emissions. The markets practice though suggests at least capturing minimal emissions arising from manufacturing, maintenance and infrastructure of renewable projects adjusted by baseline emissions.
- **Score 4:** NACE-based emissions using Exiobase factors (via mapping), scaled by revenue or by total debt and equity for business and project finance loans. For MVL and CRE, different emission factors are applied based on vehicle fuel type and building type, respectively.
- **Score 5:** Asset turnover ratio estimates (from the Central Bank of the Republic of Türkiye) when revenue or balance sheet data is incomplete. This ratio is scaled relative to the outstanding loan amount.

Loan Type	Data Quality score	Sum of Data Quality Score	Percentage of Data Quality Score
Business Loans	2	92	0,03%
	3	120	0,04%
	4	127.276	37,35%
	5	213.305	62,59%
Commercial Real Estate Loans	4	64	100,00%
Motor Vehicle Loans	4	48.788	96,58%
	5	1.730	3,42%
Project Finance Loans	3	444	80,73%
	4	56	10,18%
	5	50	9,09%

Figure 5: Data Quality Score Table Summary based on All Delivered Loans

The data score attributed to each loan is in line with PCAF guidelines and methodology. Following data score tables can be found in the PCAF Standard in the following tables:

- For Motor Vehicle Loans: Table 5-16. General description of the data quality score table for motor vehicle loans (Page 106 in the PCAF Standard)
- Table 5-14. General description of the data quality score table for CRE (Page 92 in the PCAF Standard)
- For Business Loans: Table 5-7. General description of the data quality score table for business loans and unlisted equity (Page 73 in the PCAF Standard).
- For Project Finance Loans: Table 5-10. General description of the data quality score table for project finance (Page 83 in the PCAF Standard)

Notably, 99.88% of business loans, the portfolio's largest segment, carry a data quality score of 4 (42.7%) or 5 (57.2%). This reflects Akbank's pragmatic approach to balancing methodological rigor with data availability constraints, in line with PCAF standards. As mentioned above, the Bank assigns Score 3 to 86.05% of the Project Finance loans portfolio and by estimating zero emissions, PCAF Score 3 definition for Project Finance: "Outstanding amount in the project and total project equity plus debt are known. Project emissions are not known. Emissions are calculated using primary physical activity data for the project's production and emission factors specific to that primary data." (Page 83 in the PCAF Standard).

The methodology used for Akbank's financed emissions calculations aligns with market standards. The bank primarily relied on internal data sources, which are predominantly audited, ensuring a high degree of accuracy. For listed corporates, Akbank supplemented internal data with emissions figures obtained from external providers. In cases where certain data points were missing, the bank applied approximations, leveraging credible public sources like the Turkish Statistical Institute and the Central Bank of the Republic of Türkiye. These external and internal data sources enhance the overall reliability of the results. While Deloitte did not perform any independent validation of the external sources as part of this limited assurance engagement, we conducted thorough quality checks and sample validations to verify the completeness, consistency, and plausibility of the data.



The methodology outlined in the provided documentation was implemented in the master Excel file containing model for FE calculations. The workbook is designed for usability, with a "Quick Start" tab providing clear guidance on navigation and usage. Calculations are organized into separate tabs for each asset class of loans. Deloitte validated the formulas and the logic within each tab to ensure the calculations were correctly executed and aligned with the documented methodology. Two additional tabs, "Assumptions" and "Mapping," play a critical role in the calculation framework. The "Assumptions" tab transparently outlines all calculation assumptions, addressing the unique characteristics of each asset class. Meanwhile, the "Mapping" tab acts as the core engine of the calculation process, linking NACE codes to Exiobase sectors. This linkage is especially vital for business loans, where emissions are estimated using sector-specific emission factors and asset turnover ratios. By carefully reviewing these components, we confirmed that the technical implementation accurately reflects Akbank's methodology and is robust enough to produce reliable financed emissions estimates.

Sample Testing

As part of I.(b), we have conducted sample testing for each of the 4 loan classes. We have received the following number of sampled loans:

- i. 10 Motor Vehicle Loans
- ii. 10 Commercial Real Estate Loans
- iii. 13 Business Loans
- iv. 7 project finance loans.

Each loan was either a stand-alone loan or consisted of multiple sub-loans due to complex financing structures. As agreed, the client provided us with total outstanding amount for stand-alone loans or in the other case, with an outstanding amount for the first sub-loan. For all loans we were able to confirm the outstanding amount mapped to the outstanding risk disclosed from the client's internal system. Due to confidentiality terms and information security regulations (KVKK vs), all data is shared anonymously.

i. Motor Vehicle Loans

The sample consisted of 10 Motor Vehicle Loans, all of which were provided in the master file, specifically in the "MV DATA" tab. Each loan was accompanied by relevant data including unique identifiers, outstanding risk amounts, origination values, vehicle brand and model, fuel type, and emissions factors. Based on this dataset, we were able to link each loan to a specific vehicle and perform validation procedures on the financial and environmental data provided.

Observation 2: For 8 out of 10 loans we successfully confirmed the accuracy of the inputs used in the Finance Emissions (FE) calculations. These confirmations included validation on the outstanding risk, value at origination, and the supporting documentation for the underlying vehicles. The FE methodology applied by the client was consistent with the assumptions disclosed in the "Assumption" tab, and recalculations aligned with the reported figures.

Observation 3: Two loans presented issues that could not be resolved during our review. For one loan, the vehicle brand and model could not be verified due to insufficient documentation. Although the client provided additional data, it did not allow for reliable confirmation of the vehicle identity.

Observation 4: For one loan we encountered a discrepancy in currency treatment. The client delivered the outstanding risk in EUR, while the principal risk appeared to be in TRY. Furthermore, the value at origination was used in EUR without any conversion to TRY, which resulted in an understatement of the calculated FE. The client acknowledged the issue. They also suggested using the TCMB FX selling rate as a proxy for FX conversion, noting that currency fluctuations may affect the outstanding risk amount.

Conclusion: Most of the sampled loans were validated successfully. The two exceptions underscore the importance of consistent documentation and accurate currency treatment in FE model calculation. According to the PCAF's "Global GHG Accounting and Reporting Standard for the Financial Industry (Second Edition, 2022)", emissions for motor vehicle loans are calculated using vehicle-specific data such as brand, model, fuel type, and emissions factors. The methodology implemented by the client is in line with PCAF standards.

ii. Commercial Real Estate Loans

The sample consisted of 10 Commercial Real Estate (CRE) Loans, all of which were provided in the master file, specifically in the "CRE Sample" tab. Each loan was accompanied by relevant data including unique identifiers, outstanding risk amounts, origination values, floor area of financed projects, energy consumption ratios, and emissions factors. The energy consumption ratios for each CRE type were validated against the assumptions disclosed in the "Assumption" tab, with a constant energy emissions factor of 417 gCO₂/kWh applied across all loans.

The Financed Emissions (FE) calculation methodology used by the client follows the following formula:

$\begin{aligned}\text{Energy Consumption} &= \text{Floor Area (m}^2\text{)} \times \text{Energy Consumption (MWh/m}^2\text{)} \\ \text{FE} &= \text{Energy Consumption} \times \text{Emission Factor}\end{aligned}$

For 8 out of 10 loans, we successfully confirmed the accuracy of the inputs and the resulting FE calculations. These confirmations included validation of floor area figures, energy consumption assumptions, and consistency with the methodology outlined in the assumption's documentation.

Observation 5: For 2 out of 10 loans presented unresolved discrepancies related to the reported floor area. In both cases, the floor areas disclosed in the client's FE calculation model differed from the figures provided in the supporting documentation (e.g., expertise reports). While the calculation methodology itself was correctly applied, the inconsistency in input data led to deviations in the resulting FE figures.

Conclusion: Most of the sampled loans were validated successfully. The exceptions emphasize the need for consistent and traceable documentation, particularly regarding physical asset attributes such as floor area, which directly influence emissions estimates. The methodology implemented by the client is aligned with PCAF Standard which recommends using building-specific energy intensity data and standardized emissions factors for CRE assets.

iii. Business Loans

The sample consisted of 13 Business Loans, provided in the master file, specifically in the “Business Loan Sample” tab. Each loan included relevant data such as outstanding risk amounts, balance sheet items, revenue figures, and emissions factors. The Financed Emissions (FE) calculation methodology applied by the client was based on either disclosed company emissions or, where unavailable, calculated using the formula:

$$\text{Company Emissions} = \text{Company Revenue} \times \text{Emissions Factor}$$

For 5 out of 13 loans, we were able to fully validate the FE calculations and all underlying inputs. In 2 cases the FE calculations were confirmed despite missing financial information, as the methodology applied was consistent with the assumptions disclosed in the “Assumption” tab.

Observation 6: Discrepancies were noted for 4 loans where the values used in FE calculations differed from those in the supporting balance sheet documentation. These differences primarily related to outstanding amounts and equity/debt figures, which led to either overstatement or understatement of emissions. Additionally, one loan exhibited significant data gaps, including missing revenue information and incomplete financial fields in the client’s data table. In this case, recalculation was performed using available balance sheet data, but the absence of complete inputs limits the reliability of the result.

Conclusion: While a portion of the sample was validated successfully, the observed discrepancies and missing data highlight the need for robust data governance and alignment between source documentation and reported figures. The client’s methodology is broadly consistent with PCAF Standard, which recommends using verified financial data and sector-specific emissions factors for accurate calculations.

iv. Project Finance Loans

The sample consisted of 7 Project Finance Loans. Each loan was assessed for outstanding risk amounts, financial inputs (equity and debt), and the correctness of NACE-Emissions Factor mapping used in Financed Emissions (FE) calculations. The client’s methodology followed PCAF guidance, applying either production-based emission factors for energy projects or revenue-based factors for infrastructure and service projects.

For 3 out of 7 loans, we were able to validate the FE calculations and all underlying inputs, including outstanding amounts and financial data.

Observation 7: One loan exhibited incorrect NACE-Emissions Factor mapping, leading to deviations in FE results. This case involved manual errors during EF retrieval and was identified in discussions with the client. Additionally, one loan showed discrepancies between the outstanding amounts used in FE calculations and those derived from pro-rata allocation based on installed capacity. No sufficient explanation or supporting documentation was provided for these differences.

Observation 8: Further observations include missing or insufficient evidence for equity and revenue figures in several cases, which limits the reliability of the denominator used in FE calculations. For renewable projects such as solar and geothermal plants, the assumption of zero emissions for solar and application of 542 kgCO₂e/MWh for geothermal projects were consistent with the assumptions outlined in the “Assumptions” tab.

Conclusion: While nearly half of the sample was validated successfully, issues with NACE-EF mapping and incomplete financial documentation highlight the need for stronger data governance and automated EF retrieval process. These improvements would reduce manual errors, resulting in more accurate and aligned models with PCAF standards.

II. Sectoral target-setting processes

The assurance process of II. was structured to assess the alignment of Akbank’s sectoral emission reduction targets with the interim targets for 2030 in the context of broader 2050 Net Zero target. Targets were set by inputting previously calculated financed emissions from part I. to either an SBTi tool or following IEA NZE2050 scenario. To examine the accuracy and transparency of the targets set for the four prioritized sectors we reviewed client’s delivered model outputs for setting interim targets. This engagement is aimed at ensuring that the bank’s targets are consistent with the latest scientific standards and reflect credible and feasible decarbonization pathways.

Akbank is a member of the Principles for Responsible Banking. It has a commitment to carry out all its activities in parallel with the Sustainable Development Goals. Akbank has been working for years within the scope of SDG13 Climate Action. In recent years, the bank has announced its 2050 Net Zero target. In 2021, Akbank Net Zero Project was initiated within the bank to set interim targets for 2030 and define strategies on the way to the long-term 2050 target. Peer benchmark and gap analyses were conducted by Akbank at the very beginning of the project. They examined which guidelines and standards banks in the sector use to calculate their Loan portfolio emissions, how they select the sectors in which they announce targets, and which methodologies they use to determine their interim targets. NZBA and SBTi memberships were evaluated.

Before prioritizing any sectors to set interim targets, the Bank calculated emissions of the entire Commercial Real Estate portfolio. The purpose was to fully understand the impact of the portfolio on climate change and make a data-driven prioritized sector selection. They made sectoral distribution analysis in terms of portfolio-based absolute emissions (tCO₂e) and portfolio volumes (outstanding risks). They divided the sectoral distribution into 10 groups: coal, power, cement, oil & gas, steel, commercial real estate, aluminum, transport, agriculture, non-nzba. The documents related to sectoral mapping were previously shared with us.

Each created sector was assessed based on the key following metrics:

- Sector-based absolute emissions
- Sector-based emission intensity (i.e. tCO₂e/MWh)
- Emission intensity of the sector-based portfolio (i.e. tCO₂e/ ₺ outstanding risk)
- Sector-based transition risks and the potential of the sector to transition to low carbon activities (i.e. national and global regulations, sectoral road maps, financing possibilities of the transition, etc.)
- Sector-based top 10 companies' share in financed emissions
- Climate action orientated Assessment for Top10 companies (i.e. is there a net zero target, are there targets/investment plans for emission reduction etc.)

Coal was the most intensive emission sector in this analysis. Since Akbank decided to commit to phasing out of coal by 2040, the emission reduction target was not studied for coal portfolio. Due to the phase out commitment, the coal sector was excluded from the energy sector analysis as well. Afterwards, the energy sector was selected as a top priority accompanied by the cement and steel sectors. In the end, commercial real estate sector is a very carbon intensive sector in terms of embedded emissions and emissions related to energy needs of constructed buildings. Therefore, this sector with wide range of activities in Türkiye, was also included among the top priority sectors.

We evaluated the target-setting process Akbank applied, with a particular focus on the power generation, real estate, cement, and steel sectors. Our review included an assessment of the SBTi tool used, the versions applied, the methodological appropriateness of the tool and whether updates were needed to maintain methodological rigor. We validated the feasibility of both interim and long-term targets, as these are generated directly by the tool as part of its outputs. For two sectors, power generation and commercial real estate (CRE), the broad range of assumptions was required to construct activity and production data. Given this the Bank was unable to determine the baseline emissions reliably and decided to set their 2030 targets for these sectors using the IEA NZE2050 scenario, following the “Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – 2023 Update” framework:



NetZeroRoadmap_A
GlobalPathwaytoKe

i. Power Generation Sector

For the power sector, the client did not use the SBTi SDA Power tool because the required production data (e.g., MWh by technology type) had to be created using a broad range of assumptions, making the baseline unreliable. Instead, they used the 2030 target from the IEA Net Zero Emissions by 2050 (NZE2050) scenario, which outlined rapid decarbonization pathways for critical sectors, including the electricity sector. Using the global pathway, they defined a 60% emissions-intensity reduction target, with the intention to revise it after collecting real client-level production data during the 2024 financed-emissions cycle.

Client published in their table clearly outlining that they followed the “Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – 2023 Update” framework, where at the end of page 198 a table with interim 2030 decarbonization milestones is disclosed. We have no evidence, that Akbank incorrectly transferred these scenario-aligned reduction rates into their own financed-emissions modelling or disclosed the resulting absolute emissions-reduction and emissions-intensity-reduction targets for 2030 in the corresponding sector-specific intensity units.

While Akbank discloses absolute emissions for its Power Generation portfolio, its interim 2030 target disclosure aims to represent emissions intensity reductions based on emission intensity metrics. Specifically, for Power Generation sector, the Bank targets a reduction in kgCO₂e per MWh. This metric is considered an appropriate indicator for measuring decarbonization in the power generation sector, as they capture improvements in the carbon efficiency of electricity production independent of generation volume growth. It is also consistent with the IEA Net Zero by 2050 (NZE) scenario, which assesses power-sector decarbonization using emissions intensity indicators, expressed as CO₂ intensity of electricity generation (g CO₂/kWh), alongside absolute emissions (IEA, “Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – 2023 Update”, Page 79, Figure 2.14).

ii. Commercial Real Estate Sector

The same methodology was applied for the Commercial Real Estate (CRE) sector. The client also chose not to use the SBTi SDA tool because their 2021 activity data (floor area, energy use, residential/service split) had to be constructed through assumptions that weakened the reliability of the baseline intensity. Instead, they aligned their 2030 target with the IEA NZE2050 building pathways, which call for major energy-intensity improvements and zero-carbon-ready building standards by 2030. The reference values for absolute emissions and emissions intensity for the Commercial Real Estate sector are taken directly from the “Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – 2023 Update”, using Table A.4 ‘World CO₂ emissions’ (page 198). This provided a credible benchmark and led to a target of roughly 48–49% emissions-intensity reduction. The bank plans to update the CRE target after obtaining high-quality client-level physical data as part of the 2024 financed-emissions calculations.

Akbank applied consistent methodological approach as used for the Power Generation sector. The bank aligned its CRE financed emissions modelling with the IEA NZE2050 scenario into its financed-emissions modelling by distinguishing between Service Buildings and Residential Buildings, with distinct emissions intensity reductions targets defined for each sub-sector over the period from the base year to 2030. For both segments, targets are expressed using the sector-appropriate intensity metric recommended by the IEA NZE2050 framework, namely kilogram of CO₂ emitted per square meter of underlying building (kgCO₂/m²).

III. Cement Sector

For Cement sector client used calculated financed emissions and further aggregated them based on the corresponding NZBA (SBTi) sectors. From here client applied for an assumed allocation to Scope 1 and Scope 2. Lastly for each loan an attribution factor was calculated based on which attributed production was recalculated. This attributed physical activity accompanied by Scope 1 & 2 emissions were key inputs in SBTi tool for creating crucial target setting reductions by SBTi tool in absolute and relative (intensity) terms.

For the Cement sector, the SBTi tool requires Akbank to achieve reductions in both absolute emissions and emissions intensity by 2030, which the bank has correctly reflected in its disclosed targets. Akbank utilized version 2.2 of the SBTi tools when setting interim targets for cement sector.

IV. Steel Sector

For the Steel sector, the client used calculated financed emissions and further aggregated them according to the corresponding NZBA (SBTi) sector classification. An assumed allocation to Scope 1 and Scope 2 emissions was then applied, after which an attribution factor was calculated for each loan to determine the correctly attributed share of production. This attributed physical activity data, combined with attributed Scope 1 and Scope 2 emissions, formed the key inputs into the SBTi tool, enabling the generation of sectors specific absolute and intensity-based reduction requirements.

For the Steel sector, the SBTi tool requires Akbank to achieve both an absolute emissions reduction and a decrease in emissions intensity by 2030, and these values have been fully reflected in the bank's disclosed interim targets. Akbank utilized version 1.0 of the SBTi tools when setting interim targets for the steel sector.

We recommend transitioning to the most recent tool version to reflect the latest sectoral decarbonization pathways. It is also important to note that for the cement, power, commercial real estate and steel sectors, the SBTi target-setting tools used are consistent with IEA NZE2050 scenario. The NZE2050 scenario translates Paris Agreement targets, with goal of limiting global warming to 1,5°C, into a concrete pathway for the energy sector and serves as a benchmark for policymakers and investors to evaluate alignment with a clean-energy transition. The SBTi tool outputs and the IEA NZE2050 scenario form an industry benchmark for credible target setting, and the resulting targets are regarded as technically robust and operationally feasible for financial intermediaries worldwide.

For banks, this tool is crucial for assessing client transition plans and aligning financing portfolios with global climate goals. It also offers a rigorous foundation for evaluating clients' interim and final targets and structuring sustainable finance solutions. As the tool evolves, staying updated with the latest version ensures continued alignment with best practices. We can confirm that implementation and output of the tool results was assessed correctly with, from methodological standpoint appropriately assessed 4 interim target sectors. However, it is important to denote that exact inputs for the SBTi tool model were not disclosed with us.