



Initial Transition Plan

Status quo and the way forward

October 19, 2023

Contents

[Statement of the Chief Executive Officer](#) ↘

[Statement of the Chief Sustainability Officer](#) ↘

1 – Sustainability strategy

[Sustainability as a core element of our corporate strategy](#) ↘

[Our sustainability strategy](#) ↘

[Our ambition level](#) ↘

3 – Enablers

[Governance](#) ↘

[Transition risk management](#) ↘

[Sustainable finance frameworks](#) ↘

[Financial planning, steering, and reporting](#) ↘

[Data and technology](#) ↘

[External engagement](#) ↘

[Disclaimer](#) ↘

[Imprint](#) ↘

2 – Status quo and the plan

[Scope 1 and 2 emissions: decarbonizing our own operations](#) ↘ 16

[Scope 3 emissions \(Category 1–14\): decarbonizing our supply chain](#) ↘ 20

[Scope 3 emissions \(Category 15\): decarbonizing our loan portfolio](#) ↘ 27

[Private mortgage portfolio](#) ↘ 28

[Corporate loan portfolio](#) ↘ 35

4 – Broadening our ambitions

[Broadening the scope of decarbonization](#) ↘ 82

[Financed and facilitated emissions](#) ↘ 82

[Assets under management](#) ↘ 83

[Beyond carbon](#) ↘ 85

[Nature and biodiversity](#) ↘ 85

[Just transition](#) ↘ 88

[Transition planning and reporting](#) ↘ 89

Statement of the Chief Executive Officer



Christian Sewing

Dear readers,

When we made sustainability a management priority in 2019, we knew we were embarking on a challenging journey. Four years later it is evident how complex the transformation of our economies will be, especially with regard to net zero. Decoupling economic growth from CO₂ emissions and the extensive use of natural resources will be decisive as our planet's ecosystem comes close to going beyond tipping points.

The task is made more complex by the fact that we are managing this transition in times of significant geopolitical and macroeconomic uncertainties. This transition has the potential to disrupt entire industries as adapting business and operating models will require considerable investments.

However, there is reason for optimism. Corporates have been developing their transition strategies rapidly and are making considerable progress. They are increasingly turning to us for advice and financing of their low-carbon transition. And private clients are now also much more aware of the risks and challenges ahead, whether as investors or property owners.

Regulators are focusing increasingly on integrating net-zero transition into regulatory and supervisory frameworks, and it falls to us to put these rules into practice diligently. The basis for this is a constant dialogue to ensure that the regulation supports our common endeavor: fighting against climate change and ensuring the stability of the financial system.

Our imperative is to continue our sustainability journey with vigor, focus, and vigilance:

First, we aim to be a bank at the heart of society. As climate change increasingly impacts our daily lives, our task is first and foremost to serve our clients, and society as a whole, by helping to mitigate the harmful effects and adapt to them.

Second, we need to be vigilant from a risk perspective. Transition and physical risks are growing, and their long-term effects are difficult to assess today. At the same time, sudden catastrophic events may trigger political action that can change the regulatory environment within a short period and thus sets new limits for our business.

Third, we see a significant opportunity in our own transition. We are convinced that it is imperative for a global bank headquartered in Europe to position itself as a credible sustainability leader if it is to have lasting success in serving its clients.

Our initial Transition Plan reflects this approach. While we still have a lot of work to do, we want to document transparently where we stand on our path to net zero. We are confident that this effort will help our stakeholders to better understand the scale of our transition, as well as the challenges ahead for banks like ours.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'C. Sewing', written over a thin blue vertical line.

Statement of the Chief Sustainability Officer



Jörg Eigendorf

Dear readers,

Writing a Transition Plan for a global bank is a challenging, but essential undertaking.

Challenging, because guidelines and regulatory requirements for such plans and the disclosure landscape are still evolving. The data landscape is full of assumptions, and the debate continues over the best way for banks to engage with clients that are not net-zero committed.

Essential, because we nonetheless see great value in publishing a comprehensive report on our own net-zero journey. The initial Deutsche Bank Transition Plan provides transparency on our status quo, the challenges we face, and how we intend to tackle them. It sets out what you can expect from us as we scope out our role in decarbonizing the economy.

While Deutsche Bank's overall sustainability strategy is wide-ranging, our Transition Plan focuses on decarbonization in three dimensions: own operations (Scope 1 and 2); supply chain (Scope 3, Category 1–14); and the financing we provide to clients (Scope 3, Category 15).

The emissions we finance through our lending portfolios are our biggest challenge. The key drivers are our European residential real estate portfolio and our corporate loan book. The latter makes up by far the biggest part of our overall emissions, particularly in the most carbon-intensive industries. Therefore, this document includes net-zero pathways for seven sectors.

This Transition Plan is just a beginning. We do not claim to have answers to all questions, but rather make transparent where there are gaps. As the economy progresses toward net zero, policies,

regulations, reporting standards, and the role of the banking industry will evolve. This will allow us to fill in the gaps in what we know today and continuously refine our own Transition Plan.

In addition, there is clear evidence that climate change, nature loss, and social inequality have strong interdependencies and present significant opportunities and risks for the global economy. Accordingly, we are also accelerating our efforts to incorporate nature-related and social aspects into our decision-making and control processes.

Deutsche Bank's initial Transition Plan is the result of a collective effort across Deutsche Bank's businesses, infrastructure functions and regions alongside the Chief Sustainability Office. It is a testament to the significant change we have initiated within our bank in pursuit of a common goal: to play our part in the transition to net zero.

I hope that this document offers you, our readers, many insights and a deeper understanding of how we, as Deutsche Bank, are tackling the greatest challenge that we are all facing together.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Jörg Eigendorf'. The signature is fluid and cursive, written over a white background.



1 – Sustainability strategy

Sustainability as a core element of our corporate strategy ↘

Our sustainability strategy ↘

Our ambition level ↘

1 – Sustainability strategy

Sustainability as a core element of our corporate strategy

Economies and societies worldwide are striving to become sustainable and socially inclusive. A vital aspect of this is tackling one of humanity's biggest challenges: climate change. The global economy is seeking more clarity and confidence in considering climate risks, opportunities, and impact, and governments worldwide are creating incentives for change. At the same time recent macroeconomic developments, including inflation and the war in Ukraine, are posing severe challenges for the success of this transformation.

As a global financial institution with a loan book of almost €500 billion and assets under management of €518 billion in the Private Bank (excluding DWS), Deutsche Bank sees it as part of its responsibility to support and where possible, accelerate this historic transformation toward a more sustainable society and economy.

This transformation affects the bank's relationship with all its stakeholders. Clients need advice, products, and services to make progress on their transformation journeys. Investors increasingly want to entrust their capital to companies with a credible sustainability strategy. Following a clear path to

sustainability is also a key factor in attracting talented people who expect their employer to act decisively and to be purpose driven. Finally, political leaders and regulators are increasingly focusing on the topic of ecological transformation.

The transition to a sustainable society and economy requires huge investment commitments and is therefore a major challenge for all of us. At Deutsche Bank, we see the transition effort not only as a challenge, but also as a growth opportunity. Consequently sustainability, which encompasses

environmental, social, and governance dimensions, became one element of Deutsche Bank's Global Hausbank strategy in 2019. Since then we have embedded sustainability into products and services, policies, and processes in all key areas of the bank. It has become one of the three thematic pillars that underpin our corporate strategy—along with macroeconomic shifts and technology. The quarterly progress reports which form part of our regular capital market communication underline the importance of sustainability in the bank's overall strategy.

“We are convinced that it is imperative for a global bank headquartered in Europe to position itself as a sustainability leader if it is to have lasting success in serving its clients.”

Our sustainability strategy

Our mission

We aspire to contribute to an environmentally sound, socially inclusive, and well-governed world. We strive to support our clients in accelerating their own transformation. Our advice as well as our products and solutions shall be built on this commitment.

Deutsche Bank has a long history of integrating sustainability into its business and operating model and has been taking concrete steps to support the four pillars outlined on the left. We recently provided a comprehensive update on our progress and strategic outlook as part of our [2nd Sustainability Deep Dive](#) in March 2023.

Our strategic goals



Sustainable Finance

Navigate our clients on their sustainability journey by being deeply embedded in their decision-making and process, supported by an innovative and data-driven offering



Policies & Commitments

Maintain and develop dedicated control frameworks and processes to turn regulatory challenges into business opportunities and steer decision-making based on impact measurement



People & Own Operations

Build a sustainability-led organization driven by value-based leadership, with empowered employees—embedding environmental and social aspects deeply in our processes

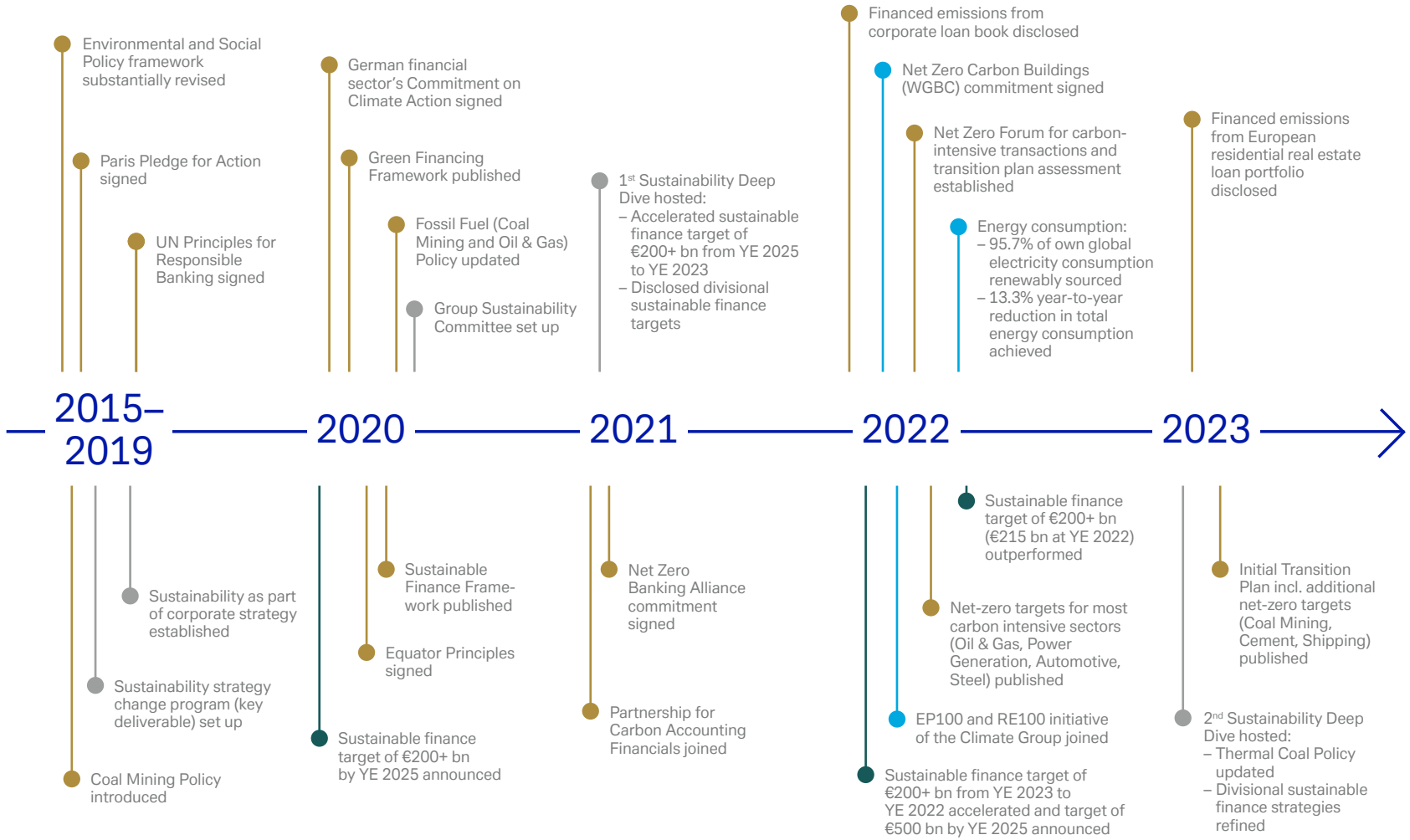


Thought Leadership & Stakeholder Engagement

Play a pivotal role for government agencies, academia, and interest groups to accelerate standard setting locally and internationally

Some of the milestones on the bank's journey so far are outlined on the following page.

Sustainability journey to date, focusing on net zero



The road ahead: transition to net zero

Since becoming a founding member of the Net Zero Banking Alliance (NZBA) in the spring of 2021, Deutsche Bank has made significant progress on its transition journey. Our initial Transition Plan describes the progress made to date as well as our plan to reach net zero by 2050, and is part of Deutsche Bank's NZBA commitment.

Building on existing industry-specific transition plan guidance, the plan's focus is on the carbon emissions linked to our own operations and supply chain as well as the financed emissions associated with our European residential mortgage and global corporate lending portfolios. In all these areas, the plan outlines the bank's progress to date and approach to decarbonization.

At the same time, our ambitions go beyond reducing our carbon footprint. We aim to integrate dimensions beyond carbon reduction into our business and operating model. In particular, the global economy's efforts to combat climate change can only be successful if we take account of the interdependencies between the climate and the natural environment and the need for a socially just transition to net zero. Accordingly, Deutsche Bank's Transition Plan sets out our approach in both these dimensions.

Robust governance plays an important role across Deutsche Bank's sustainability strategy, and this Transition Plan is no exception. All net-zero pathways, decarbonization targets, and enabling actions described herein have been approved by the Group Sustainability Committee, the highest decision-making body on sustainability-related matters

established by the Management Board. Working closely with the bank's businesses and Chief Risk Office and through the engagement of external stakeholders, Deutsche Bank's Chief Sustainability Office drives the operationalization of the bank's initial Transition Plan and the development of the broader sustainability agenda.

Overall approach to decarbonization

1 Status quo assessment

- Determine emissions according to globally accepted standards and industry-specific guidelines
- Identify areas of greatest impact to allocate resources most efficiently and effectively

2 Target setting

- Determine appropriate baseline and quantitative target for emission categories, based on data availability and external benchmarks where appropriate

3 Strategy development

- Define tangible actions and implementation plans to achieve emission reduction targets
- Quantify changes required to business and operating model

4 Progress reporting and verification

- Report progress on emissions and implementation of strategic actions on a regular basis
- Continually enhance quality of data used for target setting and reporting (e.g., via client or vendor engagement on actual emission data)

Our ambition level

For Deutsche Bank, reaching net zero by 2050 means not only living up to our social responsibilities, but also seizing the business opportunity arising from the economy's low-carbon transition as well as managing climate-related risks and impacts linked to our financing and investment business. To support these objectives, Deutsche Bank's ambition level includes clear, quantifiable targets—both for growing sustainable business and for decarbonizing portfolios in high-carbon emission industries.

Client strategies

Our ambition is to support our clients on their journey to net zero and to help shape the real economy's transition to net zero. To achieve this, Deutsche Bank pursues three financing strategies for its corporate clients: green/sustainable; transition; and phase-out:

- **Green/sustainable strategies** include providing financing and assisting companies that enable emission reduction through their range of green products and services. In this way, Deutsche Bank contributes to the scale-up of the technologies required to combat climate change.

- **Transition strategies** reflect our commitment to supporting companies worldwide which have embarked on the journey of decarbonizing their business models. In carbon-intensive sectors, we encourage clients to meet certain requirements such as actionable transition plans.
- **Phase-out strategies** reflect our commitment to steadily phase out business with not-to-abate industries such as thermal coal, and with clients not willing to align to our transition pathway.

Both the green/sustainable and transition financing strategies also apply to our business with private clients. Deutsche Bank engages in depth with our private clients to help them reduce their carbon footprint by financing investments in green assets such as electric vehicles, and the energy modernization of their property.

Growing sustainable financing and investments: volume targets and modeled revenues

The bank's ambition level is underpinned by near-term targets for our businesses. We are committed to achieving cumulative sustainable financing and investment volumes¹ of €500 billion from January 1, 2020 to year-end 2025 (excluding DWS). This target reflects our role in directing financial flows toward more sustainable business models, supported by a comprehensive Sustainable Finance Framework.

Between January 1, 2020, and year-end 2022, the bank exceeded its €200+-billion interim target in sustainable financing and investment volumes with a cumulative total of €215 billion. The contributions by the businesses to this total and the expected future contributions through year-end 2025 are as follows:

- The Corporate Bank contributed €40 billion toward Deutsche Bank's sustainable financing and investment volumes from 2020 to year-end 2022 and envisages contributing a further €70–85 billion from 2023 to year-end 2025;

¹ Sustainable financing and investment activities as defined in Deutsche Bank's Sustainable Finance Framework and related documents, which are published on our website

— The Investment Bank generated €128 billion in sustainable financing and investment volumes from 2020 to year-end 2022 and envisages adding a further €125–160 billion from 2023 to year-end 2025;

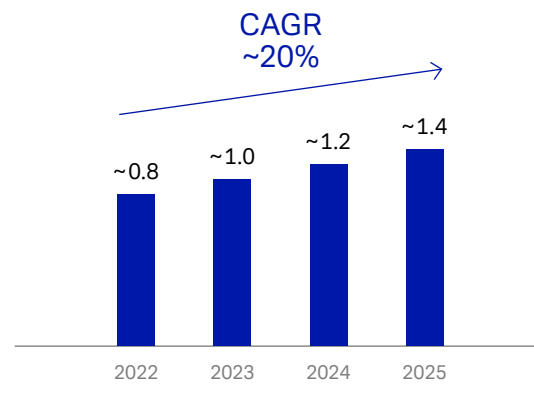
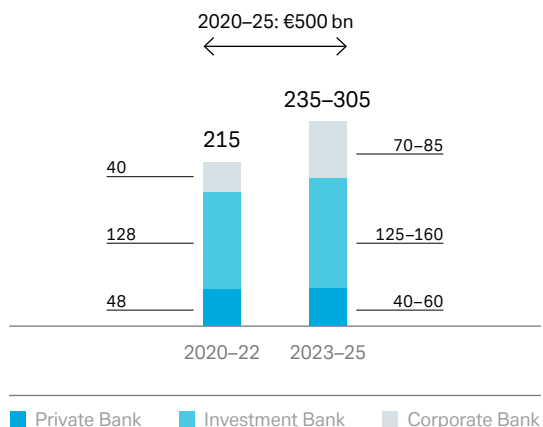
— The Private Bank contributed €48 billion from 2020 to year-end 2022 and envisages generating a further €40–60 billion from 2023 through year-end 2025.

The modeled revenues associated with these volumes are expected to be close to €1 billion in 2023 and to reach around €1.4 billion by the end of 2025, implying a Compound Annual Growth Rate (CAGR) of approximately 20% for the years 2022 to 2025. Revenues will partly replace existing revenues. Modeling these revenues marks the first step for us in quantifying the business opportunity arising from sustainability, and net zero in particular. Revenue tracking will become more granular over time as data availability and systems integration improve. In addition, the opportunity will be substantiated by business cases for each division on both revenues and associated costs.

Target for sustainable financing and investment volumes and associated modeled revenues^{2,3}

In € bn; cumulative

In € bn; p. a.



² Sustainable financing and investment activities as defined in Deutsche Bank's Sustainable Finance Framework and related documents, which are published on our website

³ Modeled revenues are based on margin assumptions on product level and are not intended to be seen as officially reported revenues

Decarbonizing high-carbon portfolios: net-zero pathways

Deutsche Bank aims to progress the decarbonization of our high-carbon intensity portfolios in line with science-based pathways and to deploy capital to support the net-zero transition. Accordingly, the bank has set sectoral decarbonization targets for 2030 and 2050 for the seven most carbon-intensive sectors in the corporate loan portfolio, which, as described in detail in the following pages, account for 55% of our total financed emissions as of year-end 2022.

Reaching these targets will require close partnership with clients in these sectors. To complement and underpin our ambition as a bank at the forefront of transition finance, we set ourselves a further ambition at our Sustainability Deep Dive in March 2023: from 2026 onward, at least 90% of the high-emitting clients in the most carbon-intensive sectors who seek to engage in new corporate lending transactions with us shall have a net-zero commitment in place.

To be a credible partner for our clients' transition to net zero, Deutsche Bank aims to lead by example. Accordingly, we have set clear goals for decarbonizing our own operations and actively managing carbon emissions and related climate and environmental risks across our supply chain.

The following table summarizes Deutsche Bank's ambitions across sustainable finance and the decarbonization of our own operations and our supply chain as well as of our corporate loan book.

“With net-zero targets for the seven most carbon-intensive sectors, 55% of the total financed emissions of the corporate loan portfolio are covered by net-zero pathways as of year-end 2022.”

Ambition level at a glance

Sustainable finance

€500 bn → **~€1.4 bn**
sustainable finance⁴
target for 2020–2025

associated modeled
revenue ambition by
end of 2025

€5 bn

accumulated
sustainability-linked
working capital loans
by 2025

€3 bn

sustainable finance
for emerging markets
from 2023–2025

> 25%

of net new assets in
discretionary portfolio
management in ESG
in 2023 onward

Emissions linked to our own operations and supply chain

46%

reduction of Scope 1
emissions by 2030
(2019 baseline)

46%

reduction of Scope 2
emissions by 2030
(2019 baseline)

46%

reduction of Scope 3
(Category 1–14) emissions
by 2030 (2019 baseline)

- Reduce total energy consumption by 30% by 2025 compared with 2019
- Source 100% renewable electricity by 2025
- Reduce car fleet gasoline consumption by 30% by 2025 and carbon zero by 2030 in Germany

80% of total vendor spend expected to submit greenhouse gas emissions to the Carbon Disclosure Project (CDP) by 2025

Financed emissions

	Scope	Metric	Baseline (2021/22)	Target (2030)	Target (2050)
Oil & Gas (Upstream)	3	Absolute financed emissions (MtCO ₂ /y)	23.4	–23%	–90%
Power Generation	1	Physical emission intensity (kgCO ₂ e/MWh)	396	–69%	–100%
Automotive (Light Duty Vehicle)	3	Tailpipe (tank-to-wheel) emission intensity (gCO ₂ /vehicle km)	190	–59%	–100%
Steel	1 + 2	Physical emission intensity (kgCO ₂ e/t steel)	1,519	–34%	–92%
Coal Mining	3	Absolute financed emissions (MtCO ₂ /y)	7.9	–49%	–97%
Cement	1 + 2	Physical emission intensity (kgCO ₂ e/t cement)	731	–29%	–98%
Shipping	1	Poseidon Principles Portfolio Level Alignment Score (in %)	1.05 ⁵	0%	0%

Net-zero requirement for new corporate lending

At least 90% of the high-emitting clients in the most carbon intensive sectors who seek to engage in new corporate lending transactions with us shall have a net-zero commitment in place from 2026 onward

Thermal coal:

- Phase-out from thermal coal is expected for companies in Organization for Economic Cooperation and Development (OECD) countries by 2030 and for companies in non-OECD countries by 2040
- End financing for thermal coal companies with a thermal coal revenue dependency of more than 50% which have no credible plans to reduce this dependency to below 50% by 2025 in OECD countries or below 30% by 2030 in non-OECD countries
- State-owned enterprises in Just Energy Transition Partnership (JETP) countries will be allowed to have trajectories for phase-out from thermal coal business which are aligned with the country's commitments under the JETP program

⁴ Sustainable financing and investment activities as defined in Deutsche Bank's Sustainable Finance Framework and related documents, which are published on our website

⁵ The climate alignment score for shipping is as of year-end 2021 (please note that the Poseidon Principles have their own baseline year of 2008)



2 – Status quo and the plan

Scope 1 and 2 emissions:
decarbonizing our own operations ↘

Scope 3 emissions (Category 1–14):
decarbonizing our supply chain ↘

Scope 3 emissions (Category 15):
decarbonizing our loan portfolio ↘

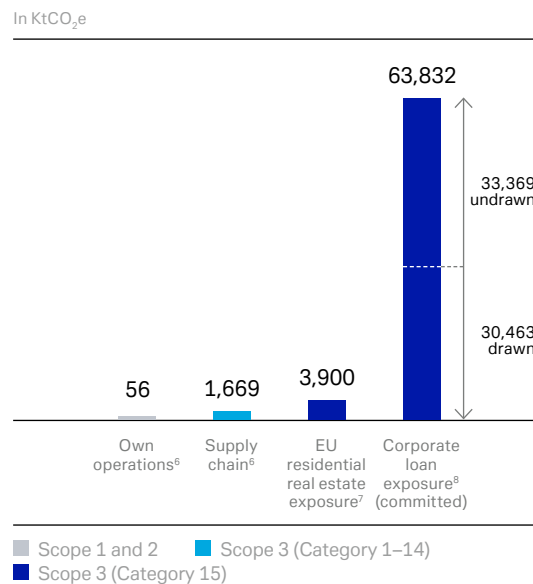
Private mortgage portfolio ↘

Corporate loan portfolio ↘

2 – Status quo and the plan

As described above, Deutsche Bank’s Transition Plan and wider sustainability strategy include a holistic approach to net-zero transition. This covers emissions from the bank’s own operations (Scope 1 and 2); the bank’s supply chain, including products and services purchased from outside vendors (Scope 3, Category 1–14); and financed emissions arising from the bank’s business with clients (Scope 3, Category 15), including European residential real estate financing and the corporate loan portfolio. Currently, carbon emissions across these four areas are as follows:

Carbon footprint status quo



Partnering with our clients to support them on the path toward net zero is the main lever for Deutsche Bank’s contribution to the transition of the wider economy. At year-end 2022, financed emissions related to the bank’s corporate loan book totaled 30.5 MtCO₂e (as measured by loans at amortized cost), or 63.8⁸ MtCO₂e/y (as measured by total loan commitments), and 3.9 MtCO₂e/y attributable to the European residential real estate portfolio. As of September 2022⁹, the Scope 1, 2, and 3 (Category 1–14) greenhouse gas (GHG) emissions associated with the bank’s own operations and supply chain totaled 1.7 MtCO₂e (market based). We are currently working to further expand our carbon footprint disclosures to include emissions related to our commercial real estate exposure, capital markets activities and assets under management, as outlined in more detail in [section 4 Broadening our ambitions](#) below.

⁶ As of September 2022; reporting period October 1, 2021 to September 30, 2022

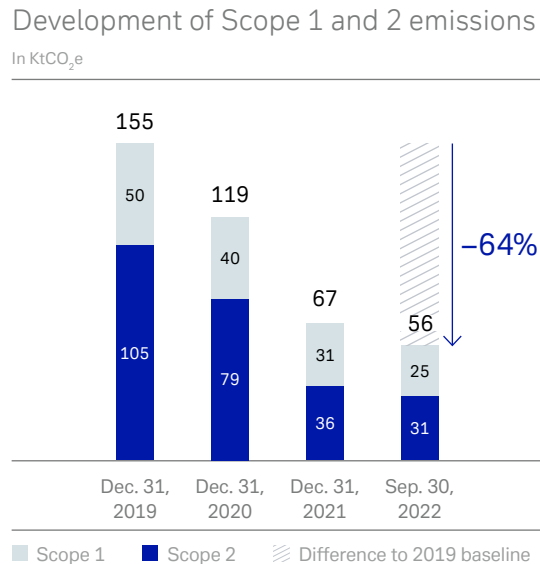
⁷ As of year-end 2022

⁸ As of year-end 2022; financed emissions related to bank’s corporate loan portfolio (Scope 3.15) restated due to revised product classification resulting in additional corporate loan exposure of €2.7 billion generating 7.2 MtCO₂e/y of Scope 1 and 2 financed emissions

⁹ September 2022 data, because manual reach out to Deutsche Bank real estate takes place annually at year-end

Scope 1 and 2 emissions: decarbonizing our own operations

Levers to reduce Scope 1 and 2 emissions include reducing energy consumption, sourcing more electricity from renewables, reducing business travel, and reducing residual emissions by using offsets. From 2019 to the end of the third quarter of 2022 Deutsche Bank reduced Scope 1 and 2 emissions by 64%, to 56 KtCO₂e:



Renewable energy plays a highly important role in emissions reduction. In 2022 the bank received 95.7% of its own global electricity consumption from renewable sources, already exceeding its 2022 target by 10.7%. In addition, the total energy consumption was reduced by 13.3% compared to 2021.

Market-based Scope 1 and 2 emissions from the bank's own operations and business travel (including the effect of buying zero-carbon renewable electricity) amounted to 74,300 tCO₂e in 2022, while emissions from these sources using location-based reporting (excluding renewables and using the grid average emission factor) totaled 174,236 tCO₂e. The difference between the two types of reporting is due to renewable electricity contracts or Energy Attribute Certificates (EACs) purchased in 29 countries, particularly in Germany, the United Kingdom, and the United States, where most electricity is consumed by the bank.

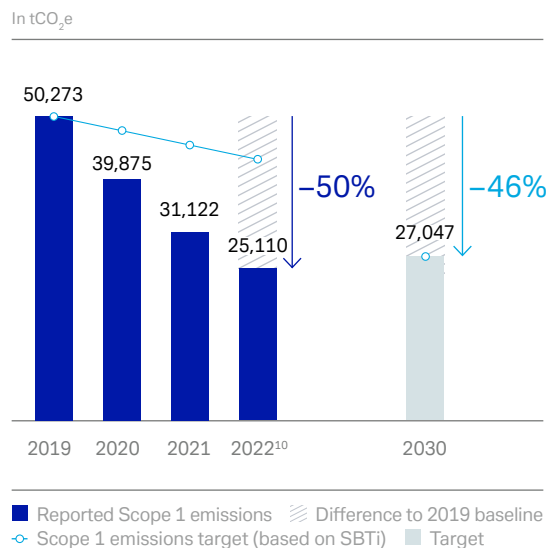
A differentiated approach: The main levers for reaching net zero by 2050 differ between Scope 1 and 2 (including business travel) and Scope 3 (Category 1–14). For Scope 1 and 2, the most important levers are to reduce energy consumption; purchase 100% renewable electricity; reduce fossil use in vehicles and change to electric vehicles; minimize emissions of hydrofluorocarbons (HFCs) and move to lower or zero global warming potential refrigerant gases; and finally, offset any residual emissions.

Outperformance against targets (i): Scope 1 emissions

The bank has set specific Scope 1 and 2 emission targets, using 2019 as the baseline year as this was the last year of normal operations before COVID-19. Deutsche Bank has committed to reducing Scope 1 emissions by 46% by 2030. This includes emissions from natural gas, liquid fossil fuels, hydrofluorocarbons (HFCs), owned/leased vehicles, and emissions generated by heating or cooling interior office space and water and by the car fleet program.

As of September 2022, Deutsche Bank had already reduced its Scope 1 emissions by 50% compared to the base year 2019—ahead of expectations, partly due to the gradual return to office space in the wake of COVID-19:

Development of Scope 1 emissions and 2030 target (based on Science Based Target initiative – SBTi)



Early gains through office space reduction: This reduction was primarily due to the acceleration of the bank’s office space reduction program, which has materially shrunk the size of the real estate portfolio. The pace of reduction is expected to moderate in the next few years as this program is now complete.

However, other measures will likely continue to reduce emissions. These include reducing office utilization through hybrid ways of working, re-locating to lower emission buildings, such as 1 Deutsche Bank Centre in New York, and further efficiency measures in the real estate portfolio.

Focused targets for key drivers: This outperformance was achieved in part through target-setting for the key drivers of Scope 1 emissions and setting up programs accordingly. These included:

- Reducing total energy consumption by 30% by 2025 versus 2019
- Sourcing 100% renewable electricity by 2025

- Compensating for emissions of own operations (Scope 1 and 2) and business travel
- Reducing Deutsche Bank’s car fleet fuel consumption by 30% by 2025 and reaching carbon zero in Germany by 2030

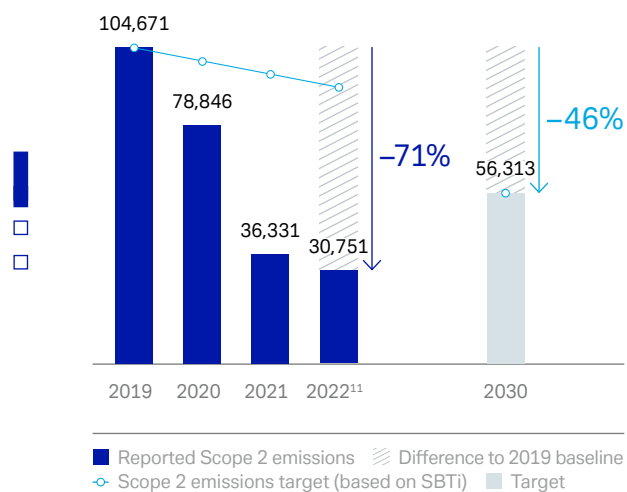
**Outperformance against targets (ii):
Scope 2 emissions**

Deutsche Bank also aims to reduce Scope 2 emissions from electricity and district heating/cooling, the bank’s lighting, elevators, and computers, and office heating/cooling by 25% by year-end 2025 and 46% by 2030. From the 2019 base year, we had already reduced Scope 2 emissions by 71% by September 2022.

¹⁰ As of September 2022; reporting period October 1, 2021 to September 30, 2022

Development of Scope 2 emissions and 2030 target (based on SBTi)

In tCO₂e



This outperformance was largely due to the acceleration of the green electricity program in line with the bank's objective of reaching 100% renewable electricity by 2025. This is achieved by engaging in green contracts and purchasing Energy Attribute Certificates (EACs) where a direct purchase of green energy or installment of capacity is not possible.

Approach to decarbonizing our own operations

The reduction of Scope 1 and 2 GHG emissions follows a comprehensive approach consisting of four steps—emission assessment and prioritization, definition of measures, implementation and oversight, and continuous improvement.

Systematic and regular monitoring: Based on the bank's ISO 14064-certified framework for emission quantification and reporting, Deutsche Bank assesses and quantifies the sources of its Scope 1 and 2 emissions monthly. Since 2012 the bank has used its in-house Eco-Performance Management Office (EcoPMO) system to conduct individual project assessments and annual in-depth assessments of energy-conservation initiatives, share best practice across regions, and measure and verify the outcome of environmental efficiency measures. In addition, the bank's energy management system in Germany is certified to ISO 50001, which includes monthly monitoring of progress toward energy and cost reduction targets.

A data-driven approach helps identify and prioritize measures with the highest improvement potential.

The following measures are already underway to reduce the bank's Scope 1 and Scope 2 emissions, and will continue to form the core of our efforts:

- Efficiency measures to reduce overall energy consumption (e.g., via equipment upgrades, recommissioning building energy management systems, improved insulation)
- Long-term procurement of renewable energy and installation of onsite renewable energy sources
- Switching from high-emission fuels to low-carbon alternatives in areas such as heating, car fleet

Addressing key challenges—real estate: The main challenge is ensuring the energy efficiency of our buildings. While this is more complex if the building infrastructure is managed by the landlord, these buildings represent a minority of our portfolio.

¹¹ As of September 2022; reporting period October 1, 2021 to September 30, 2022

Addressing key challenges—compensating residual emissions: The bank’s residual Scope 1 and 2 emissions plus business travel are compensated by purchasing and retiring high-quality Verified Emission Reduction (VER) certificates representing a diversified portfolio of projects that promote climate protection and economic development in Africa, Latin America, and Asia. All projects comply with global standards, such as the Gold Standard and the Verified Carbon Standard (VERRA). In 2022 Deutsche Bank compensated 87,000 tonnes of carbon.

According to industry experts and reported in news sources such as Bloomberg, the cost of offsets is expected to rise 10–20-fold by the end of the decade as demand exceeds supply. Given the probability of a material increase in carbon offset costs, the focus of our future emission reduction initiatives is on reducing carbon consumption as much as possible. Net-zero protocols dictate that all efforts at reduction must be made before compensating is considered. Therefore, we are currently developing a strategic roadmap and evaluating different steering metrics to increase the impact of our interventions by the end of 2024.

The progress toward emission targets and efficiency measures is monitored and reported to global and regional senior management and the Chief Sustainability Office regularly. The Global Real Estate Sustainability Council, consisting of representatives of Global Real Estate, the Chief Sustainability Office, and Global Procurement, was set up in June 2023 to encourage innovation in emission reduction and identify additional efficiency measures, and is mandated to make recommendations on sustainability-related strategy, decisions, and investments. We are continuously developing our capabilities to further reduce our emissions across regions.

“Raised ambition to reduce total energy consumption from 20% to 30% by 2025 compared to 2019 baseline.”

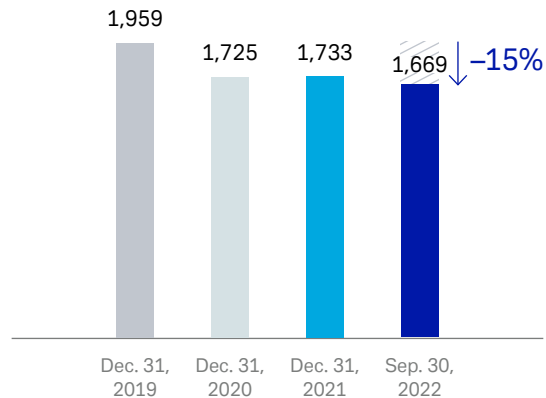
Scope 3 emissions (Category 1–14): decarbonizing our supply chain

As of September 2022, Deutsche Bank’s operational Scope 3 emissions amounted to approximately 1.7 MtCO₂e, or 97% of total GHG emissions associated with the bank’s own operations and supply chain combined. This has been reduced by around 290,000 tCO₂e, or 15%, in the past three years:

As of September 2022, Scope 3.1/Purchased goods and services is the largest contributor, accounting for 76% of operational Scope 3 emissions. Around half of the remainder consists of Scope 3.7/ Employee commuting/working from home (7%) and Scope 3.12/End-of-life treatment of sold products (5%):

Development of Scope 3 emissions (Category 1–14)

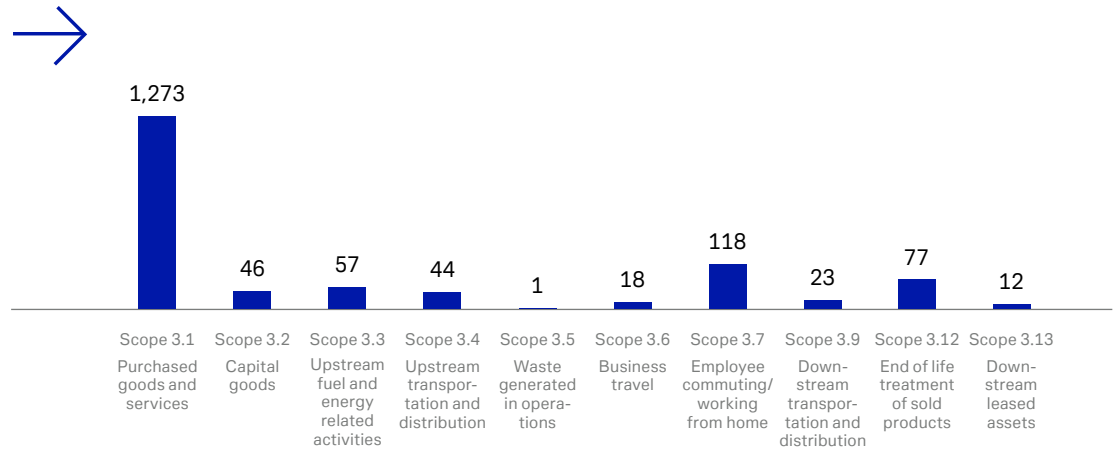
In KtCO₂e



▨ Difference to 2019 baseline

Breakdown of Scope 3 emissions (Category 1–14)¹²

In KtCO₂e



¹² As of September 2022; reporting period October 1, 2021, to September 30, 2022

Addressing data quality and availability issues: Operational Scope 3 emissions are mainly estimated based on secondary data¹³, given the limited availability of primary data from our vendors. Accordingly, the bank's approach is tailored to different categories as follows:

— **Scope 3.1/Purchased goods and services, 3.2/Capital goods, and 3.4/Upstream transportation and distribution:** The bank uses an environmentally extended economic input-output (EEIO) model¹⁴ based on the amount of spend in each economic sector. Shifting the calculation methodology toward more primary data¹⁵ requires significant effort to prepare and evaluate different options of data sources, especially given the complexity of supply chain emissions of our vendors. Accordingly, Deutsche Bank has initiated engagement with top vendors and the Carbon Disclosure Project (CDP) to capture vendor-specific information.

— **Scope 3.7/Employee commuting/working from home:** Deutsche Bank obtains information from an external provider that divides GHG emissions into two buckets: (i) working from home; and (ii) employee commuting.

— **Scope 3.3/Upstream fuel- and energy-related activities, 3.5/Waste generated in operations, and 3.6/Business travel:** Primary data is collected from Deutsche Bank's travel systems.

Downstream Scope 3 categories (3.9/Downstream transportation and distribution, 3.12/End-of-life treatment of sold products, 3.13/Downstream leased assets) represent 7% of total operational Scope 3 emissions and are calculated mainly based on secondary data.

Addressing operational Scope 3 emissions: initiatives underway in leading categories
The activities with the greatest impact on operational Scope 3 emissions include engaging with vendors

to collect data on their emissions, embedding sustainability in the vendor lifecycle, and limiting business travel. Specific initiatives underway in these categories include:

Vendor engagement:

— An **impact valuation project** was conducted in 2020 as part of Deutsche Bank's contribution to the efforts of the Value Balancing Alliance¹⁶. The project modeled the impact on Deutsche Bank's direct and indirect supply chain, based on historic procurement data with special focus on environmental and human rights issues. It found the **majority of Deutsche Bank's supply chain GHG emissions originated from a small number of vendors and the indirect supply chain**. These findings have shaped the Supply Chain Sustainability strategy.

— The bank has launched a **Supply Chain Sustainability program** to embed sustainability including climate-related risks in every step of the

¹³ The Greenhouse Gas Protocol defines secondary data as "Data that is not from specific activities within a company's value chain," e.g., industry-average data, financial data, proxy data, and other generic data. Source: Greenhouse Gas Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, p. 70–71

¹⁴ The Greenhouse Gas Protocol defines the EEIO model as follows: "Environmentally extended input-output" (EEIO) models estimate energy use and/or GHG emissions resulting from the production and upstream supply chain activities of different sectors and products within an economy; the resulting EEIO emission factors can be used to estimate GHG emissions for a given industry or product category" (source: Greenhouse Gas Protocol, Corporate Value Chain (Scope 3), Accounting and Reporting Standard, p. 67; Deutsche Bank uses CEDA (Comprehensive Environmental Data Archive), which is the EEIO lifecycle inventory for the United States)

¹⁵ The Greenhouse Gas Protocol defines primary data as "Data from specific activities within a company's value chain," e.g., data provided by suppliers or other value chain partners related to specific activities in the reporting company's value chain (source: Greenhouse Gas Protocol, Corporate Value Chain (Scope 3), Accounting and Reporting Standard, p. 70–71)

¹⁶ [Value-balancing.com](https://www.value-balancing.com)

vendor lifecycle. In May 2021 Deutsche Bank announced targets for a more sustainable supply chain: From 2022 all bank’s vendors with an annual order volume of more than €500,000 will be required to have an external ESG rating; from 2023 a minimum rating will be a requirement in all new tender procedures or follow-on agreements with this minimum volume.

- Deutsche Bank joined the CDP Supply Chain Program in 2021 and is increasing engagement with vendors to get vendor-specific data. In 2022 Deutsche Bank requested its largest 147 vendors to respond to the CDP climate change questionnaire. 92 did so.
- Sustainability is also embedded in Deutsche Bank’s Supplier Code of Conduct (SCoC), which contains environmental clauses, e.g., regular assessments to identify ways to reduce the operational environmental impact. The SCoC references established sustainability frameworks such as the United Nations Global Compact and Sustainability Development Goals, e.g., Goal 13 on climate action.

- The Vendor Risk Management process identifies, assesses, mitigates, and controls sustainability risks. Vendors are screened and monitored for environmental control standards, e.g., environmental violations, management systems, and regulatory compliance.

Business travel:

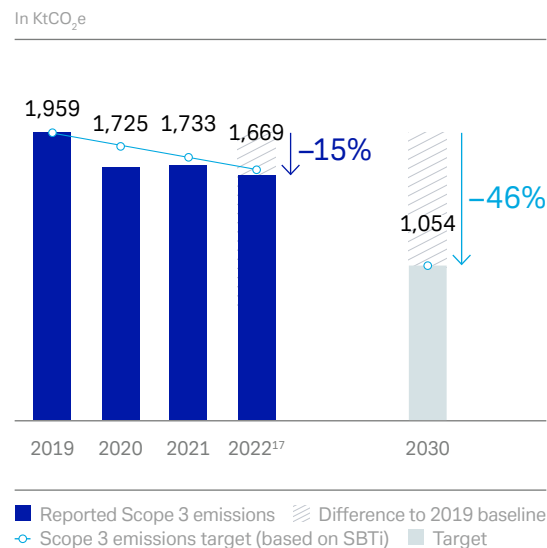
- Deutsche Bank’s travel policies and approvals processes are designed to limit business travel (particularly by air) to reduce costs as well as emissions. For example, the travel policies have made train travel in Germany the standard means of transport for all employees. Exceptions need to be granted by the manager.
- In 2022/2023 Deutsche Bank continued to install charging points in its parking facilities to encourage employees to switch to eMobility. By July 2023 80 charging points had been set up in Germany alone.

The targets for decarbonizing our supply chain

While Deutsche Bank has not formally joined the Science-Based Targets initiative (SBTi), Deutsche

Bank has adopted SBTi targets and as such, commits to a reduction in operational Scope 3 emissions (excluding financed emission—Category 15) of 46% by 2030 compared to the 2019 baseline, equivalent to 4.2% per year.

Development of Scope 3 emissions (Category 1–14) and 2030 target (based on SBTi)



¹⁷ As of September 2022; reporting period October 1, 2021, to September 30, 2022

Between 2019 and September 2022, Deutsche Bank reduced operational Scope 3 emissions by 15%, in line with the expected yearly 4.2% reduction based on the SBTi targets. This positive trajectory was achieved with concrete activities detailed above. With further initiatives in the development phase, Deutsche Bank is confident of remaining below the announced targets until 2030. The approach to achieve and better monitor this progress is outlined in the following section.

Scope 3 (Category 1–14) emission reduction framework

Stakeholders

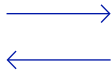
Framework

Employees

Vendors

Peers

NZBA/CDP



Steering, governance and oversight

Set bank-wide targets and monitor adherence

Implement concrete measures to:

A.

Reduce usage/
eliminate
need

B.

Substitute
for a low
carbon
alternative¹⁸

C.

If not
possible,
compensate
emissions¹⁹

← Across Scope 3 categories →

Data capabilities

Provide data foundation to produce reports and embed GHG metrics into decision-making

Awareness, education, and cultural change

Educate and incentivize cultural change

Policies and processes

Incorporate changes into existing policies and process documentation

¹⁸ Deutsche Bank or vendor substituting goods, services, providers to reduce the emissions generated by their offering

¹⁹ Objective is to minimize the level of emissions to be compensated while acknowledging economic viability

The framework recognizes that reducing GHG emissions requires collaboration with various stakeholders such as suppliers and employees, but is also influenced by industry trends and expectations from external governance bodies.

Levers: A) Reduce, B) Substitute, C) Compensate:

As set out in the framework, net zero will be achieved through three complementary levers. The first is to reduce the use of resources. The second is to substitute current resources with a lower carbon alternative and, where this is not possible, to compensate residual emissions fully through offsetting.

Enablers: data capabilities, awareness, education and cultural change, policies and processes

The objective is to reach net zero while minimizing the need for offsetting. This can only be achieved through a continued and ambitious transformation on multiple fronts:

- Strengthen existing data capabilities to embed GHG metrics into strategic and operational decision-making processes

- Educate employees, to raise the awareness level on GHG emissions and drive the cultural change required to meet committed targets
- Continue to integrate sustainability into processes and policies to drive the transformation of the bank's operating model

Steering, governance, and oversight:

Finally, central steering and governance will be required to confirm bank-wide targets, monitor adherence, and ensure that the necessary activities are taken to secure the path to net zero.

The core structure of the framework has been used as a basis for deriving key initiatives to drive the path to net zero. Three of these key initiatives are highlighted below.

Key initiatives to reduce operational Scope 3 emissions and associated timeline:

Deutsche Bank has a number of plans in place to extend and develop the key areas, some of which are already underway:

- Vendor engagement and collaboration

- Governance and accountability framework
- Employee awareness and competencies

Scope 3 (Category 1–14) emission reduction roadmap

Phase 1
Get ready

Oct.–Dec. 2023

- – Compile status quo on top vendors' CO₂ emissions and net-zero commitments
- Gather key data available on CDP platform pertaining to vendors
- – Confirm mandate to define CO₂ targets across functions
- Start leadership activation



Phase 2
Design and prepare

~Q1–Q2 2024

- – Develop structured engagement plan targeting top vendors
- Define minimum requirements on vendors' net-zero commitments
- – Determine KPIs to establish accountability and track progress on CO₂ emission reduction
- – Design trainings and communication campaigns



Phase 3
Mobilize

~Q3–Q4 2024

- – Ongoing vendor interaction to encourage CDP disclosure
- – Embed KPIs and targets into business decisions-making
- – Educate staff on best practices and support them in becoming GHG role-models



Phase 4
Ongoing operations

2025–onward

- – Discuss jointly ways to reduce emission and enforce minimum requirements on net zero
- – Monitor targets and steer progress
- – Build ESG competencies in management team to apply skills in running business/infrastructure teams

- Vendor engagement and collaboration
- Governance and accountability framework
- Employee awareness and competencies

Vendor engagement and collaboration:

Deutsche Bank will continue to use the [CDP Supply Chain Program](#) to engage with its key vendors and collect their GHG emissions data. The intent is to collaborate with the vendors to continuously improve the quality of the data received and to obtain transparency on their plans and commitment to net zero. By 2025 Deutsche Bank expects its key vendors, representing an overall 80% of total vendor spend, to submit their GHG emissions to the CDP.

[Deutsche Bank is prepared to discontinue relationships with vendors who do not meet minimum requirements.](#) This initiative will drive the reduction of most operational Scope 3 emissions, as Scope 3.1/ Purchased goods and services accounted for 76% of total operational Scope 3 emissions as per September 2022 (excluding financed emissions).

Governance and accountability framework:

Deutsche Bank will further strengthen the existing governance and accountability framework to ensure that particular focus is placed on operational Scope 3 emissions. Internal targets and key performance indicators (KPIs) are set to further hone the bank's ambition and commitment to net zero.

Employee awareness and competencies:

Deutsche Bank's objective is to educate employees on the nature of operational Scope 3 emissions, their causes and impacts, and concrete actions to prevent or reduce them.

This knowledge transfer will be achieved through communication campaigns on operational Scope 3 emissions, followed by two types of targeted training. This will contribute to raising the awareness level and education on Scope 3 emissions for key stakeholders.

Given its progress in line with targets so far, the initiatives in key areas already underway, and the further initiatives planned and agreed, Deutsche Bank is confident of delivering at or ahead of its 2030 reduction targets for operational Scope 3 emissions.

Scope 3 emissions (Category 15): decarbonizing our loan portfolio

As of year-end 2022 Deutsche Bank has published financed emissions figures totaling 34.4 MtCO₂e/y, which cover approximately 60% of its total loan exposure of €489 billion on an amortized costs basis. 11% of these financed emissions, or 3.9 MtCO₂e/y, derive from the bank's €175-billion portfolio of loans secured by European residential real estate; the remaining 89%, or 30.5 MtCO₂e/y, derive from its €106.6-billion corporate loan portfolio.

Loan exposure and financed emissions

As of year-end 2022	Loan exposure (€ bn)	Financed emissions (Scope 1 and 2; in MtCO ₂ e/y)	
		Drawn	Committed
Total loans at amortized costs	489		
Of which corporate loan exposure	106.6	30.5	63.8 ²¹
Of which secured by European residential real estate	175.0	3.9	
Of which other ²⁰	207.4		

²⁰ This includes commercial real estate exposure as well as lower-intensity lending to e.g. consumer finance, financial institutes, and sovereigns

²¹ As of year-end 2022; financed emissions related to bank's corporate loan portfolio (Scope 3.15) restated due to revised product classification resulting in additional corporate loan exposure of €2.7 billion generating 7.2 MtCO₂e/y of Scope 1 and 2 financed emissions

The following sections provide more transparency on the financed emissions related to both portfolios by describing the emissions status quo at the end of 2022, our targets, and the approaches to decarbonizing both portfolios.

Private mortgage portfolio

Across the EU, buildings account for some 40% of energy usage and 36% of greenhouse gas emissions. With 119 million residential buildings across the EU, 19 million of which are located in Germany, residential real estate plays a key role in the pathway to net zero in the EU—for society as well as for Deutsche Bank. Around 13 million properties, or 67% of total properties in Germany, were built prior to 1979 with no energy efficiency requirements; as a result, around 58% of all properties have low energy efficiency. Renovating these is the key step to improving sustainability and, in particular, emission footprints. We see this topic as a key issue for real estate owners and tenants at present. Partly because of the recent energy crisis and rising CO₂ costs, energy efficiency is becoming increasingly relevant for our clients, including from a financial point of view. Additionally, protection of property market values has become much more

important as our evidence indicates higher discounts in buildings with poorer energy efficiency levels.

Deutsche Bank's residential real estate portfolio amounted to €175 billion at year-end 2022, approximately 36% of total loan exposure. Over 90% of this consists of residential mortgages for private clients in Germany, representing around 1.5 million residences financed by secured loans alongside new business of around 150,000 mortgage transactions per year for German clients.

These figures illustrate the potential for helping clients reduce CO₂ emissions with energy-efficient renovation of residential properties and point to the responsibility of a financial institution like Deutsche Bank to provide its clients with the best possible support in the transition to more climate-friendly residential properties.

In its sustainability strategy, Deutsche Bank acknowledges there is dependency on policymakers' impact on private clients in terms of sustainability. Hence, Deutsche Bank includes considerations of policymakers' decisions in its pathways for residential real estate as described by the International Energy Agency (IEA): Stated Policies (STEPS);

Announced Policies (APS), and the IEA's Net Zero Emissions by 2050 (NZE).

Supporting the energy modernization of German private real estate

Private client

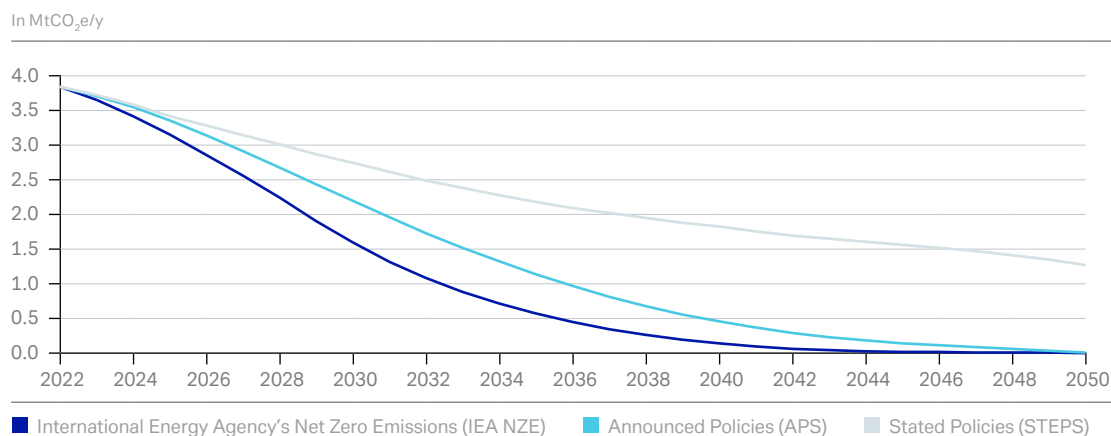
Deutsche Bank financed the energetic modernization of a single-family home from 1950 in Bielefeld. By modernizing the building's insulation and installing new windows and a heat pump, the property's annual energy consumption was reduced by 95%. The associated reduction in annual CO₂ emissions by approximately 18.4 tonnes corresponds to almost twice the average per capita consumption in Germany. In addition to providing financing, Deutsche Bank also advised on possible subsidies for energy modernization, for example through the Kreditanstalt für Wiederaufbau (KfW).

The bank's transition strategy for the private mortgage portfolio is based on three central pillars:

- Leveraging our presence in the German market, with more than 1,000 branches and agencies and over seven thousand client advisors, to provide private individuals and households with a comprehensive package of expert advice, access to government support, and logistical and financial assistance to improve energy efficiency in their residences;
- Working closely on decarbonization pathways with corporate clients in 'upstream' industries that provide energy and materials to the residential real estate sector, such as cement, steel, and domestic utilities. Reductions in carbon emissions in these industries will in general positively impact energy efficiency in residential real estate by reducing embodied or Scope 3 emissions. In some of these sectors, Deutsche Bank already has quantitative targets and net-zero pathways in place, as set out in [section Corporate loan portfolio](#) below;
- Engaging with policymakers, governments, financial industry peers, and other public and private bodies to determine methodologies and priorities supporting the reduction of emissions from residential real estate.

As of year-end 2022, Deutsche Bank's financed Scope 1 and 2 emissions in residential real estate were 3.9 MtCO₂e/y, based on Partnership for Carbon Accounting Financials (PCAF) and collateral information. From 2022, Deutsche Bank's net-zero pathway under the three scenarios outlined above is as follows:

Deutsche Bank's pathway to net zero projected by IEA scenario (financed)



Progress to date has included several steps which form the platform for Deutsche Bank's future transition strategy in this sector. This progress includes:

Financed emissions reporting: Deutsche Bank has calculated financial emissions in the residential real estate sector by country, using PCAF methodologies and collateral information obtained from clients, which will be used as the basis for reporting and monitoring of progress against the bank's Transition Plan. Financed emissions per sub-portfolio are as follows:

Loan exposure, financed emissions and PCAF data quality scores in the real estate portfolio

As of year-end 2022	Loan exposure (€ bn)	Financed emissions (Scope 1 and 2; in MtCO ₂ e/y)	PCAF data quality score
Total loans secured by real estate	251.8		
Of which secured by non-residential real estate	69.5		
Of which secured by residential real estate	182.3		
Of which European Union (EU)	175.0	3.9	4.2
Germany	158.8	3.4	4.2
Italy	5.9	0.1	3.9
Spain	6.8	0.2	3.3
Remainder	3.4	0.2	5.0
Of which non-EU	7.3		

Approach to decarbonization

Decarbonization of residential real estate plays a key role in achieving Europe's—and, in particular, Germany's—commitment to net zero. With a nationwide network of around 1,000 branches and agencies as well as over 7,000 advisors, Deutsche Bank is well positioned to support private homeowners as they make the transition to reducing the carbon footprint of their properties. Deutsche Bank is continuously expanding its range of products and services and placing the topic of energy modernization firmly in the bank's dialogue with clients. The bank plans to further amplify its offering by the end of 2024.

Deutsche Bank's strategy for private mortgages is based on an in-depth analysis of the challenges faced by private clients on the path to more energy-efficient residential real estate. It takes due consideration of private clients' financial ability to retrofit their homes. Therefore, the bank provides both information and financial assistance, including advice on current publicly available support schemes.

Our approach goes well beyond financing. The bank's focus is on supporting clients to navigate all aspects of the modernization and energy-efficient refurbishment of their property, through five steps:

1. **Real estate valuation:** Expert appraisal of the client property by Postbank Real Estate (Postbank Immobilien GmbH), a subsidiary of Deutsche Bank. In addition, clients will have the opportunity to determine the effects of energy modernization on the property valuation and thus assess its profitability.
2. **Energy consulting:** Access to a nationwide network of DENA²²—certified energy consultants who create individually-tailored refurbishment plans that benefit from federal subsidies.
3. **Residential refurbishment specialists:** Preferential access to energy-efficient refurbishment specialists for heating technology. The cooperation partners for our Heizungstausch leicht gemacht [Heating Replacement Made Easy]

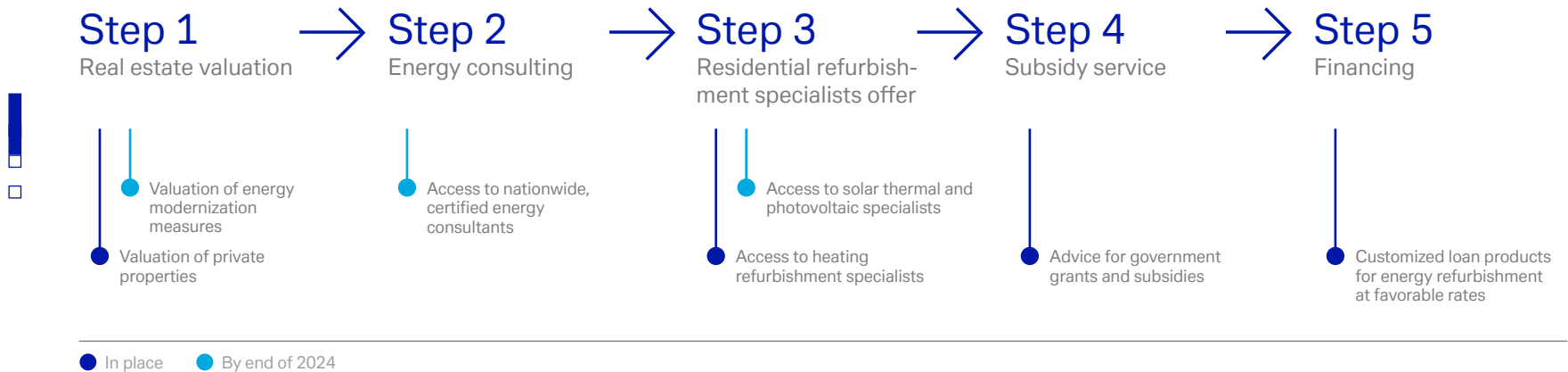
service are Bosch/Buderus and Vaillant. We aim to expand cooperations with a focus on solar thermal and photovoltaic technologies.

4. **Subsidy service:** Advice and assistance in gaining access to around 6,000 available government grants and other subsidies.
5. **Financing:** Customized loan products for energy-efficiency refurbishments at favorable rates, including through our BHW subsidiary (BHW KlimaDarlehen [Climate Loan]), in addition to classic lending products and Kreditanstalt für Wiederaufbau (KfW) funding.

²² Deutsche Energie-Agentur GmbH is a federally owned German company which, under its Articles of Association, is intended to provide national and international services in order to design and implement the energy and climate policy goals of the Federal Government for the energy transition and climate protection

This five-step approach and its timeframe can be summarized as follows:

Products and services for energy modernization



Additionally, the bank envisages making all services available to existing clients and interested new clients by the end of 2024, also as digital self-directed routes.

The bank aims to do all of this in line with the expectations of environmental experts. To this end, it launched its partnership with the WWF Germany in early 2023. Financing more sustainable housing

using approaches such as energy-efficient building renovation is a priority of this cooperation; another is advising on sustainable investments. The bank also plans to further develop its suite of products and services in response to clients' sustainability needs. The same goes for structures, processes, and the bank's dialogue with its clients. This will boost sustainability across the board.

Deutsche Bank also plans to cooperate with the WWF Germany to evaluate the concept of its designated green branches and to lay the foundations for developing processes and products further. The WWF will contribute its expertise and existing network to the cooperation. The joint projects will pay into the transformation toward a greener, more sustainable economy and society in Germany and beyond.

Another important step on this path is the positioning of BHW Bausparkasse AG as a sustainable building society and platform provider by the end of 2025, to foster the decarbonization of our mortgage portfolio and expand our offering even further to include compensation and impact solutions. BHW Bausparkasse's sustainability management has once again received a 'Very Good' rating from the independent imug Rating GmbH. That assessment highlighted the variety of sustainable products and services, such as the BHW KlimaDarlehen, and the proportion of new business.

BHW's product and service range forms an essential part of Deutsche Bank's advisory portfolio. We currently offer clients a range of products and services, including the BHW KlimaDarlehen, the Förder-Service [Subsidy Service], and our Heizungs-

tausch leicht gemacht service. Going forward, we will provide increased support to our clients and their individual queries about transformation.

Challenges

Deutsche Bank foresees several challenges on the pathway to net zero in residential real estate through 2050, some of which will require additional investments. These include:

- **Macroeconomic uncertainties:** Recessionary headwinds and rising interest rates present a twin challenge to homeowners in Europe seeking to pay for energy-efficient refurbishments. These factors will likely impact real estate valuations, household disposable incomes, and thus the affordability of refurbishments necessary for increasing the energy efficiency of existing housing stock. Deutsche Bank has calculated that the typical total renovation costs required to upgrade a private residence from energy performance class (EPC) G to A would exceed €100,000.
- **The current condition of existing stock:** In Germany, for example, 67% of residences were built before 1979, and thus before any energy efficiency standards became a requirement. Thus,

the energy efficiency of most of the existing housing stock falls below today's standards for new-build residences. In Deutsche Bank's own private client mortgage portfolio, 56% of new business has an EPC class of E or below.

- **Upcoming regulation:** The upcoming amendment of the Energy Performance of Building Directive (EPBD) is expected to require new residential buildings to be net-zero from 2028 onward, and minimum energy performance standards for existing residences to fall into EPC class E by 2028 and D by 2033. Given that the EPC class of most residences in Germany is currently below D, the refurbishment requirement to comply with upcoming EPBD requirements is likely to be considerable over the next decade. In the German residential real estate sector, Deutsche Bank has calculated an overall potential demand for energy-efficient modernization of around €600 billion by the end of 2045.
- **Data issues:** The quality, availability, and consistency of data are all likely to remain challenging due to several factors: standardized definitions of data are lacking; EPC data is not easy to collect, and not all homeowners are legally required to hold an EPC rating; furthermore, EPC ratings

are not harmonized across EU countries. These challenges lead to continued reliance on estimates based on proxy data. Additionally, neither the scenarios nor the modeling techniques are standardized.

- Dependencies on upstream sectors, including construction industries such as cement and steel and utilities providing electricity and heating to homeowners, impact the embodied (Scope 3) emissions of residential real estate.

Addressing the challenges

The potential demand for residential real estate modernization in Deutsche Bank's mortgage portfolio, in part to comply with upcoming regulation, has been estimated at around €80 billion. This business opportunity fully justifies further investments in the business's capability to support clients on the path to more energy-efficient residential real estate. Deutsche Bank's Transition Plan aims to address the upcoming challenges through a series of initiatives, which include:

- [Continuing to roll out and develop the bank's offering](#) across its private client distribution network, partly through staff training and partly by expanding the Private Bank's network of energy

consultants, valuation services, and refurbishment specialists offering and refining its range of financing options for energy improvements for homeowners;

- [Addressing data quality issues](#) by (i) intensifying and standardizing EPC and other data collected from clients, including through training of relationship managers and other staff members dealing with private clients; (ii) working to improve data quality from third-party providers, and (iii) working with peers and industry bodies to improve the quality and standardization of data, scenarios, models used for future projections, and harmonized methodologies in the banking sector;
- [Working with clients in upstream sectors](#), including corporate clients in the power, cement, and steel industries, to facilitate their transition to greater energy efficiency and the transition to renewable sources, thereby reducing embodied (Scope 3) emissions in the residential real estate sector. Further details of Deutsche Bank's work in the transition of 'upstream' industries are set out in [section Corporate loan portfolio](#) below.

Given the significant financing requirement of the transition to more energy-efficient housing and the financial challenge facing private homeowners, it is vital to avoid unintended consequences when establishing targets. A net-zero target comparable to those Deutsche Bank has established for carbon-intensive industries risks restricting the flow of financing into energy-efficient housing and penalizing private citizens at a time of inflationary pressures and rising interest rates. Accordingly, Deutsche Bank looks forward to publishing its net-zero pathway for the European residential real estate sector once better-quality data becomes available and a clearer assessment emerges of evolving trends impacting this area. Further details of Deutsche Bank's strategy in the transition to greater energy efficiency in residential real estate can be found in the bank's white paper, [Residential Real Estate – Leading to Net Zero](#), published in May 2023.

Corporate loan portfolio

At year-end 2022, the bank's corporate loan portfolio comprised €107 billion of loans on an amortized cost basis (22% of the Group total), and €261 billion of total loan commitments²³ (35% of Group total). While smaller than the bank's residential mortgage book, the corporate portfolio accounts for a much higher proportion of the bank's financed emissions. Of these, the majority are concentrated in a relatively small number of carbon-intensive industries with a narrow group of clients. Accordingly, the bank's decarbonization strategy has so far been focused on operationalizing net-zero pathways in these industries.

The bank estimates and monitors financed emissions using the PCAF standard, in line with the recommendations of the Task Force on Climate-related Financial Disclosures. The analysis is based on disclosed Scope 1 and 2 emissions of Deutsche Bank's clients, which relies on third-party providers, and on sectoral average proxy emission factors where

client data is not available. The extent to which such proxies are used to calculate financed emissions is reflected in a bank's PCAF Data Quality score.

Financed emissions in the corporate loan exposures were 30.5 MtCO₂e/y as of year-end 2022, or 63.8²⁴ MtCO₂e/y as measured on the basis of total loan commitments.

The table on the following page outlines in two parts: (i) the bank's Scope 1 and 2 financed emissions, loan exposures, and PCAF data quality scores broken out by the top ten industries as of year-end 2022; and (ii) the bank's loan exposure, Scope 1 and 2 financed emissions, and PCAF data quality in scope of net zero target framework. This data is also published annually in the Climate risk chapter of the Non-Financial Report.

²³ Loan at amortized cost plus revocable and irrevocable lending commitments

²⁴ As of year-end 2022; financed emissions related to bank's corporate loan portfolio (Scope 3.15) restated due to revised product classification resulting in additional corporate loan exposure of €2.7 billion generating 7.2 MtCO₂e/y of Scope 1 and 2 financed emissions

Loan exposure, financed emissions and PCAF Data Quality scores in the corporate loan portfolio

	Loan exposure				Financed emissions (Scope 1 and 2; in MtCO ₂ e/y)		PCAF Data Quality Score (5 = lowest)	
	Outstanding		Total commitments		Outstanding	Total commitments ²⁵	Outstanding	Total commitments
	€ bn	%	€ bn	%				
Total corporate loan exposure	106.6	100	260.9	100	30.5	63.8	4.3	3.7
Of which utilities	4.2	4.0	15.8	6.0	5.1	19.3	4.0	3.0
Of which oil and gas	6.5	6.1	15.2	5.8	10.4	14.7	4.5	3.8
Of which steels, metals and mining	4.3	4.0	7.8	3.0	3.3	4.9	3.7	3.5
Of which consumer goods	13.3	12.5	27.6	10.6	1.8	3.5	4.1	3.6
Of which chemicals	3.1	2.9	10.9	4.2	0.8	3.4	4.2	3.3
Of which manufacturing and engineering	11.9	11.2	29.0	11.1	1.0	3.0	4.4	3.9
Of which construction	3.6	3.3	8.9	3.4	0.9	2.8	4.6	4.4
Of which conglomerates	3.8	3.6	5.0	1.9	1.5	1.9	4.6	4.6
Of which transportation – shipping	1.1	1.0	1.4	0.5	1.3	1.7	4.9	4.9
Of which healthcare	6.5	6.1	25.8	9.9	0.5	1.4	4.2	3.1
Of which others	48.3	45.3	113.5	43.5	3.8	7.3	4.4	3.8
In the scope of net-zero targets								
Oil and Gas (Upstream)			9.3			10.9		3.3
Power Generation			13.1			17.9		2.8
Automotives (Light Duty Vehicle)			7.7			0.4		2.2
Steel			1.9			2.9		3.3

²⁵ As of year-end 2022; financed emissions related to the bank's corporate loan portfolio (Scope 3.15) restated due to revised product classification resulting in additional Power Generation loan exposure of €2.7 billion generating 7.2 MtCO₂e/y of Scope 1 and 2 financed emissions

Financed emissions: concentrated in a small number of clients within carbon-intensive industries

Within the corporate loan portfolio, our top 150 group clients generated around 70% of the total financed emissions (Scope 3, Category 15), while high-emission industry sectors accounted for only 15% of total loan commitments and another 14% linked to medium-intensity sectors²⁶ as of year-end 2022. These portfolio concentration characteristics allow Deutsche Bank to focus on operationalizing sector specific decarbonization targets (where data and methodologies allow) and adopt a targeted approach toward the most carbon-intensive clients.

Phase one net-zero target setting

In October 2022, Deutsche Bank set net-zero targets for four key carbon-intensive sectors by prioritizing sectors with the most impact, consistent with the NZBA's Guideline for Climate Target Setting for Banks. In setting these targets the bank followed industry standards and practices, used allowed sector-specific metrics which best reflect the decarbonization pathway, and adopted a credible net-zero aligned scenario.

Progress in reducing emissions in these sectors was disclosed in Deutsche Bank's 2022 Non-Financial Report, published in March 2023. As part of this process, the bank set out net-zero pathways for 2030 and 2050:

Phase one target sectors

	Scope	Metric	Baseline (2021)	Target (2030)	Target (2050)
Oil & Gas (Upstream)	Scope 3	Absolute financed emissions (MtCO ₂ /y)	23.4	-23%	-90%
Power Generation ²⁷	Scope 1	Physical emission intensity (kgCO ₂ e/MWh)	396	-69%	-100%
Automotive (Light Duty Vehicle)	Scope 3	Tailpipe (tank-to-wheel) emission intensity (gCO ₂ /vehicle km)	190	-59%	-100%
Steel	Scope 1 and 2	Physical emission intensity (kgCO ₂ e/t steel)	1,519	-34%	-92%

²⁶ Where 'medium' and 'high' intensity sectors are defined as having the following Scope 1 and 2 sectoral financed economic activity intensities defined as >200 and >600 tCO₂e/ € million total loan committed respectively

²⁷ The Power Generation sector's year-end 2021 and 2022 physical emission intensity was restated due to revised product classification resulting in additional loan exposure of €2.7 billion

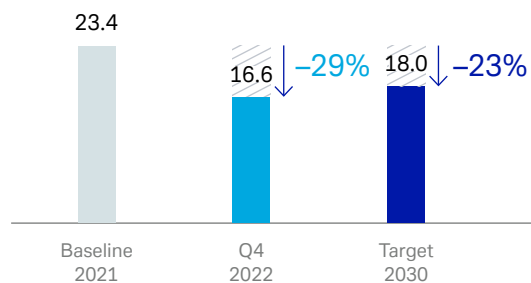
Progress to date:

In 2022, Deutsche Bank made progress in all four of the phase one sectors set out above. This progress was as follows:

Progress for phase one target sectors²⁸

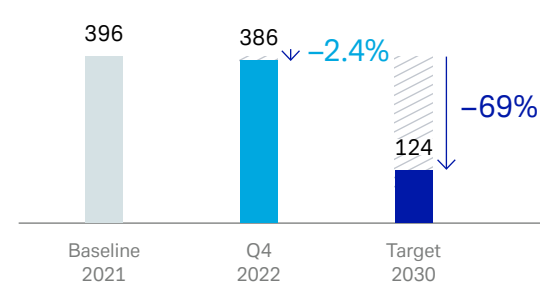
Oil & Gas – Upstream

In MtCO₂/y



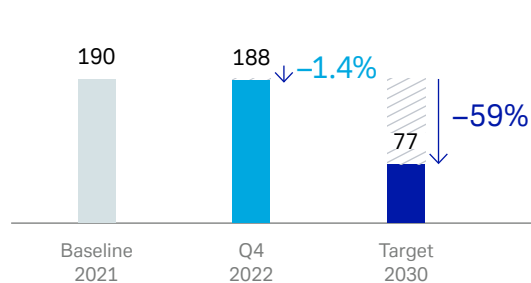
Power Generation²⁹

In kgCO₂e/MWh



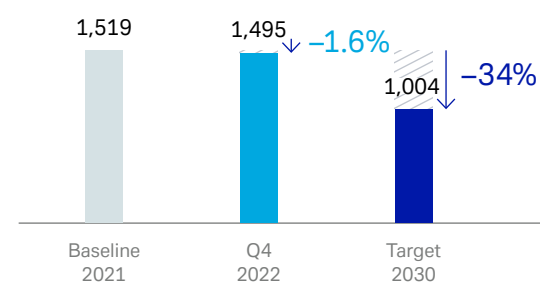
Automotive – Light Duty Vehicle

In gCO₂/vehicle km



Steel

In kgCO₂e/t steel



▨ Difference to 2021 baseline

²⁸ Note: Figures might not add up due to rounding

²⁹ The Power Generation sector's year-end 2021 and 2022 physical emission intensity restated due to a revised product classification resulting in additional loan exposure of €2.7 billion

Progress in the phase one sectors

Oil & Gas (Upstream): Scope 3 financed emissions stood at 16.6 MtCO₂/y as of year-end 2022, representing a reduction of 29% year-on-year. This significant decline is predominantly explained by three main drivers: (i) total loan commitments decreased from €10.7 billion to €9.3 billion due to the exit of Russian clients following the war in Ukraine and selected larger reductions in exposures to key clients, which led to a reduction in financed emissions of 5 MtCO₂/y; (ii) client emission factors (tCO₂/€m) fell due to enterprise value including cash (EVIC) or total assets rising substantially from 2020 to 2021, which led to a reduction in financed emissions of 2.8 MtCO₂/y; and (iii) loan exposure FX translation effects from 2020 to 2021, predominantly driven by the U.S. dollar appreciating versus the euro, which led to an increase in financed emissions of 1.0 MtCO₂/y. The bank expects the Scope 3 financed emissions metric to remain volatile due to factors outside of its control, such as the evolution of clients' EVIC or total assets, which are key inputs into the calculation of clients' Scope 3 emission factors.

Power Generation: The Scope 1 physical emission intensity of Deutsche Bank's Power Generation portfolio was 386 kgCO₂e/MWh as of year-end 2022, a 2.4% fall year-on-year. The reduction came despite year-on-year growth in loan commitments from €12.4 billion to €13.1 billion as client liquidity needs increased due to the European energy crisis. It reflects a general improvement in the average physical emission intensity of the portfolio.

Automotive (Light Duty Vehicle): The Scope 3 physical emission intensity of Deutsche Bank's Automotive portfolio was 188 gCO₂/vehicle km as of year-end 2022, a 1.4% fall year-on-year. Loan commitments increased slightly from €7.5 billion to €7.7 billion.

Steel: The Scope 1 and 2 physical emission intensity of Deutsche Bank's Steel portfolio was 1,495 kg-CO₂e/t steel as of year-end 2022, falling 1.6% year-on-year. The decline in emissions intensity was less pronounced than the 7.4% drop in loan commitments, due to the loan exposure weighted average approach followed by the Paris Agreement Capital Transaction Assessment (PACTA) methodology in order to calculate the portfolio level physical emission intensity.

Phase two net-zero target setting

The second phase of target setting extends coverage to the Coal Mining, Cement, and Shipping sectors. The bank has now published reduction targets for 2030 and 2050 and will report on progress against targets for both the phase one and phase two sectors in the 2023 Non-Financial Report, due for publication in March 2024.

The targets, metrics, and current loan commitments in the phase two sectors are as follows:

Phase two target sectors

	Scope	Metric	Baseline (2022)	Target (2030)	Target (2050)
Coal Mining	Scope 3	Absolute financed emissions (MtCO ₂ /y)	7.9	-49%	-97%
Cement	Scope 1 and 2	Physical emission intensity (kgCO ₂ e/t cement)	731	-29%	-98%
Shipping	Scope 1	Poseidon Principles Portfolio Level Alignment Score (in %)	1.05 ³⁰	0%	0%

³⁰ The climate alignment score for shipping is as of year-end 2021 (please note that the Poseidon Principles have their own baseline year of 2008)

Methodologies

In the phase two sectors, the bank's tracking and monitoring methodologies are as follows:

For the Coal Mining sector, the methodology follows a similar approach to the Oil & Gas (Upstream) sector in that it is tracked via a Scope 3 end-use financed emissions metric outlined by the PCAF. The metric covers both thermal and metallurgical coal and is assessed against a net-zero by 2050 pathway calculated using the International Energy Agency (IEA) Net Zero Emissions (NZE) Roadmap.

Thermal and metallurgical coal's net-zero decarbonization rates differ considerably in this roadmap. This is because the degree of near-to medium-term coal substitutability varies significantly between the power generation and primary steel production sectors. Deutsche Bank's net-zero coal mining targets take due account of this factor: the net-zero pathway is calibrated to reflect the relative composition of financed emissions, as between thermal versus metallurgical coal, within the portfolio. As a result, any significant future shift from thermal toward metallurgical coal sources, or vice versa,

would lead to changes in the 2030 and 2050 net-zero reduction targets at portfolio level. Going forward, the bank will review the coal mining targets annually to take account of the thermal versus metallurgical mix within the overall composition of the portfolio.

Clients within the scope of this target must meet a set of clearly defined criteria. These include meeting the 5% coal mining revenue rule³¹ and the possibility of tracking the client's activities alternatively by demand-led sectors, such as Power Generation or Steel Production, which are already covered in our net-zero target framework. This approach incentivizes the reduction of demand for coal mining, and thus aims to avoid supply constrictions that could lead to market imbalances.

For the Cement sector, Deutsche Bank's methodology follows the PACTA approach where its physical emission intensity metric, in the form of Scope 1 and 2 kgCO₂e/t cement produced, is also tracked against a net-zero pathway calculated by using the IEA NZE.

For the Shipping sector, the bank follows the Poseidon Principles methodology³² where our net-zero metric is expressed in the form of a climate alignment score in percentages; here, for example, a positive percentage score means a vessel is above the decarbonization trajectory, while a zero or negative percentage score means a vessel is aligned (on or below the decarbonization pathway). We expect the methodology to evolve over the near term as it incorporates the 2023 International Maritime Organization GHG Strategy adopted by the 80th Marine Environmental Protection Committee (MEPC-80), as well as creating an additional trajectory in line with a 1.5°C outcome³³. As such, our future reporting of the shipping portfolio net-zero alignment will reflect these anticipated methodological changes to come.

³¹ [Guidelines for Climate Target Setting for Banks – United Nations Environment – Finance Initiative \(unepfi.org\)](#); our 5% revenue rule covers both thermal and metallurgical coal mining

³² Poseidon Principles technical guidance version 4.1

³³ [Leading shipping banks and marine insurers pave the way for 1.5-aligned emissions benchmarking — Poseidon Principles for Financial Institutions](#)

Additional sector at advanced stage of development

Deutsche Bank is well advanced in the data and methodology development for a net-zero target for **Aviation**. The bank will follow a physical emission intensity approach in the form of a well-to-wake gCO₂e/revenue tonne kilometer metric for commercial aviation. The net-zero decarbonization pathway calculated using the IEA NZE, with amendments to ensure consistency with the physical emission intensity definition, implies a 32% reduction by 2030 and a 91% reduction by 2050 compared to a 2022 baseline.

Aviation is considered one of the hardest-to-abate sectors, especially given that near-term emissions intensity reduction is dependent on the adoption of sustainable aviation fuel (SAF) to an extent which may not be practical in the short to medium term.

In light of these challenges, an alternative net-zero-aligned decarbonization pathway will be published by the Rocky Mountain Institute in January 2024. Deutsche Bank will review the conclusions of that paper before disclosing 2030 and 2050 decarbonization targets for the sector.

Approach to decarbonization

Deutsche Bank's objective is to build on the progress described above by following a clear path toward the decarbonization of its €107 billion corporate loan portfolio. Having defined net-zero pathways at sector level for seven industries as described above, implementation of the bank's transition plan focuses on working at the level of individual clients, the level of individual transactions, and the level of assets.

This involves systematically reducing the financing of carbon-intensive activities and growing the financing of activities which support transition to net zero, such as the development of renewable energy technologies.

To achieve this goal, Deutsche Bank has adopted a three-pronged approach:

1. Finance the development and scalability of clean energy infrastructure needed for transition away from fossil fuels in the economy;
2. Engage with high-emitting clients to support and finance their decarbonization and transition in the real economy;
3. Review engagement with clients which are not willing or able to transition away from carbon-intensive activities and as a last resort, responsibly phase out high-emitting assets.

Transition implementation at client level: prioritization

The bank is working on making transition planning and assessment an integral part of the dialogue with high-emitting clients. This focused approach applies across the most carbon-intensive sectors as described above, and enables the bank's businesses to tailor and, where necessary, intensify its approach to 'high emission, low disclosure' clients, as follows:

Approach to engage with high-emitting clients

1 Footprint analysis

Identification of high-emitting clients

- Oil & Gas (Upstream)
- Power Generation
- Automotive (Light Duty Vehicle)
- Steel
- Coal Mining
- Cement
- Shipping

2 Assessment of transition strategies

Categorization of clients' transition strategies

- No disclosure → First phase of engagement
- Minimal disclosure → First phase of engagement
- Advanced disclosure → Later phase of engagement
- Best practice disclosure → Later phase of engagement

3 Transition dialogue

- Address data gaps
- Identify support opportunities
- Agree follow-ups

4 Further action

Unwilling or unable to engage/commit

- Case-by-case decisions (e.g., phase out/reduce exposure, limit maturities, agree corrective action plan)

Willing to engage/commit

- Monitor and regularly review progress

Transition implementation at client level: data-driven assessment of transition strategies

The starting-point for client engagement is the data-driven assessment of our clients' transition strategies based on a comprehensive assessment framework which recognizes established market standards³⁴. The framework comprises quantitative (emission metrics and portfolio pathway alignment) and qualitative (transition plan) criteria. It takes sector-neutral as well as industry-specific features into account. As standards, data availability, and technology evolve, so does Deutsche Bank's framework for evaluating its clients' transition strategies.

Addressing the challenge of data quality and availability: Transition plans for individual high-emitting clients are assessed based on publicly disclosed information and are categorized according to four different levels of disclosure quality: (i) no disclosure (no publicly available disclosure of transition strategy); (ii) minimal disclosure; (iii) advanced disclosure; and (iv) best practice disclosure.

Leveraging expertise across functions: To facilitate client dialogue and support clients in developing credible transition strategies in line with the bank's sectoral decarbonization targets, we have established a cross-divisional agile team of transition experts in our Corporate Bank and Investment Bank. The key aspects of engaging with our clients are (i) to gain transparency concerning clients' decarbonization efforts, and (ii) to identify opportunities to best support their transition efforts and, if necessary, discuss potential corrective actions.

Transparency as the basis for execution: Our assessment of clients' transition strategies takes account of a comprehensive range of factors that determine the client's success on the path toward net zero, including relevant metrics and targets, credible implementation plans, effective governance, and foundational elements such as reporting.

Transparency across these key factors enables Deutsche Bank's businesses to support and finance clients in implementing their plans, the elements of which are set out below:

Transition strategy assessment framework: considerations

Category	Inputs and considerations
Foundations	– Quality of reporting (e.g., frequency, TCFD alignment)
Metrics and targets	– Ambition and scope of net-zero targets (interim/long-term) – Credibility of targets (e.g., third-party verification by SBTi)
Implementation strategy	– Time-bound decarbonization measures (e.g., reference to CAPEX) – Stakeholder engagement strategy – Alignment between ESG policies and transition strategy
Governance	– Board-level accountability for transition strategy – Incentive mechanism linked to net-zero targets
Modules	– Compliance with Deutsche Bank sectoral policies

³⁴ Taskforce for Climate-Related Disclosures (TCFD), the Glasgow Financial Alliance for Net Zero (GFANZ), the UK Transition Plan Taskforce (UK TPT), 10-indicator framework provided by Climate Action 100+ Net Zero Company Benchmark and the UN Expert Group on Net Zero Commitments

Coverage of 'high emission, low disclosure' clients:

Our plan is to engage with high-emitting clients with material gaps in their net-zero disclosure in the near future, to better understand how these clients are approaching the decarbonization of their business models and resolve data quality/availability issues.

To underpin our commitment as a bank decisively supporting the transition of our clients, we aim that at least 90% of the high-emitting clients in the most carbon intensive sectors who seek to engage in new corporate lending transactions shall have a net-zero commitment in place from 2026 onward.

Transition implementation at the client/transaction level: the Net Zero Forum

To start with, the Net Zero Forum was established in November 2022 to discuss and opine on any incremental and renewed transactions (for in-scope sectors) above the threshold of €25 million (gross, cash limits) and which would lead to an increase of more than 1% in either the sectoral financed emissions metric and/or the net-zero target metric for phase one target sectors. In addition, the members of the Forum, consisting of divisional ESG Heads and Coverage Heads across Corporate Bank and Investment Bank, Chief Risk Office, and Chief

Sustainability Office, consider the qualitative assessment of clients' transition strategies in their recommendations.

Setting parameters for new business acceptance:

41 transactions were presented to the Net Zero Forum for review in its first year of operation. Almost 25% were recommended for execution, subject to conditions and further actions to be taken up as part of the transition dialogue with our clients. Approximately 90% of the transactions reviewed were within the Oil & Gas and Power Generation sectors. In addition to specific measures and follow-ups, the Forum has the authority to further escalate a transaction to senior management and/or the Group Reputational Risk Committee if deemed necessary.

Assessing transactions in the Net Zero Forum follows a four-step approach:

1. Front office staff identifies relevant high-impact transactions for potential discussion in the Net Zero Forum (in line with triggers for discussion on transactions as set out above)
2. Assessment of the client's transition strategies along the bank's qualitative and quantitative

assessment framework, and client engagement and preparation of relevant documents for discussion in the Net Zero Forum

3. Forum members discuss the transaction and provide joint recommendation with regard to the transaction's execution, including subsequent monitoring where necessary
4. Where required, deal teams define client-specific engagement plans in close alignment with divisional transition subject-matter experts, and ensure monitoring is carried out

Building out the product offering: Key to our client engagement over net zero is the bank's product and service offering, ranging from asset origination, lending, and distribution to M&A advisory, risk management solutions, structured export finance, trade flow, supply chain finance, securitization, and project finance. Deutsche Bank continues to strengthen its offering to best serve its clients' needs. Planned measures to year-end 2025 comprise:

- Develop a carbon measurement and management proposition to facilitate related investments/financing

- Build out financing capabilities in the Asset as a Service field in driving areas such as energy efficiency transformation
- Strengthen our support of low-carbon energy solutions and infrastructure funding needs, using products including project financing, warehouse to securitization, and corporate lending
- Foster further collaboration with governmental credit institutions such as development finance institutions and export credit agencies, to drive the energy transition through lending, arranging, and blended finance opportunities
- Expand our offering into the regulated European carbon market and transition metals
- Expand our offering of ESG investment products to include social bonds and ESG thematic indices

Further implementation: the path to 2050

Supporting our clients on their net-zero journey not only requires a comprehensive product and service offering, but also strategic hiring of sectoral expertise and continuous upskilling of our client-facing staff. Across our Corporate Bank and Investment Bank, the focus lies on further expanding our sectoral expertise, conducting training in transition plan assessment and our evolving sustainable finance controls framework as well as upcoming regulatory requirements. We have established ESG champion networks across coverage, regions,

and products to multiply ESG knowledge and act as ESG experts within their teams in addition to their primary roles. The ESG champions act as sounding-boards, support our sustainability initiatives and targets, share best practices, and drive the implementation of our sustainability strategies within their respective teams. We will also provide ongoing training to staff to ensure they are well equipped to manage client interactions and support clients during their transition period. In addition, we are working on further KPIs to create additional granularity with regard to our decarbonization targets.

“Steadily phasing out business with not-to-abate industries such as thermal coal, and with clients not willing to align to the bank’s transition pathway”

Supporting the real economy's net-zero transition

AirTrunk

Deutsche Bank acted as mandated lead arranger, underwriter, bookrunner, and sustainability structuring agent on the A\$4.6-billion sustainability-linked loan (SLL) for AirTrunk, a hyperscale data center specialist. The loan is a refinancing of AirTrunk's first sustainability-linked loan in 2021, on which Deutsche Bank also played a leading role highlighting its ability to help transition businesses toward net zero. This SLL for AirTrunk is the first for a data center to combine carbon, power, and water usage effectiveness as part of the loan's KPIs. The financing incentivizes AirTrunk to meet its sustainability targets and sets a benchmark for the highest level of environmental transparency and accountability in addressing core ESG issues in the data center industry. The SLL also represents the first publicly known financing by a data center company to incorporate a gender pay equity target, reflecting AirTrunk's commitment to diversity, equity, and inclusion.

Hapag-Lloyd

Deutsche Bank has been mandated as joint global coordinator for the first sustainability-linked bond (SLB) of Hamburg-based shipping and container liner company Hapag-Lloyd, which was issued in March 2021 with a volume of €300 million. The SLB is linked to the achievement of carbon reduction targets on an annual trajectory up to 2030 and supports the company's ambition to reduce the carbon intensity of its fleet. Since large container ships cannot be electrified like cars, a major lever for decarbonization lies in the availability of alternative fuels that produce little to no greenhouse gas emissions when burned. Until these new fuels become available in larger quantities, the industry has to double down on fleet efficiency upgrade programs and improved ship operations as well as bridge technologies like fossil liquefied natural gas (LNG) to fulfill decarbonization targets. In this regard, Hapag-Lloyd has invested into twelve new Megamax vessels with LNG propulsion in order to significantly reduce the fleet's carbon intensity already today and contribute to becoming CO₂-neutral by 2045. The twelve ships emit up to 25% lower CO₂ emissions and thereby already substantially contribute to the overall decarbonization of the Group. The vessels can also be used with CO₂-neutral fuels such as bio- or e-fuels.

Eesti Energia

In the first quarter of 2023, Deutsche Bank acted as initial mandated lead arranger and sustainability coordinator on a €600-million amortizing term loan contract for Eesti Energia. The loan is sustainability linked with two ESG KPI's: carbon intensity of Scope 1, 2, and 3 emissions and yearly addition of renewable energy capacity. Proceeds are used for refinancing purposes and to continue investments so that clients can better manage their energy consumption and more micro and small producers of renewable electricity can be connected to the electricity grid. Thus, the loan supports Eesti Energia's goal to achieve carbon neutrality in electricity production by 2035 and in the entire group's production by 2045.

Volkswagen

Deutsche Bank acted as joint underwriter for Volkswagen International Finance N.V.'s €1.75-billion dual-tranche green bond offering in March 2023 with the intended use of proceeds relating to the manufacturing of Battery Electric Vehicles (BEV) and a €2-billion triple-tranche inaugural green bond offering for Volkswagen Leasing GmbH in September 2023 with the intended use of proceeds relating to leasing contracts for individual BEV, where Deutsche Bank also acted as joint ESG coordinator, thereby supporting Volkswagen in financing its transition in low carbon transportation from production facilities to the provision of sustainable mobility to its end customers.

New Zealand

Deutsche Bank acted as joint bookrunner for the NZ\$3-billion inaugural green bond offering for the New Zealand Debt Management in November 2022, where Deutsche Bank also coordinated the structuring workstream to establish the Sovereign Green Bond Framework, with the use of proceeds intended for allocation toward budgetary expenditures relating to climate change mitigation and adaptation, as well as protection and restoration of the environment and indigenous biodiversity.

Nokia

Deutsche Bank acted as joint active bookrunner and joint sustainability coordinator for Nokia's inaugural €500-million sustainability-linked bond offering in February 2023. The transaction documents Nokia's ambitions toward its Science Based Target initiative (SBTI)-validated reduction target for greenhouse gas emissions across its value chain by 50% between 2019 and 2030.

IHO Verwaltungs GmbH

Being the controlling shareholder for Schaeffler AG, IHO has documented its ambitions for Schaeffler to become climate neutral in its own operations by 2030 and for its supply chain by 2040 by establishing a Sustainability-linked Financing Framework and in issuing an inaugural €800-million sustainability-linked transaction in March 2023, featuring an interim greenhouse gas Scope 1 and 2 emissions reduction target by 2025, for which Deutsche Bank acted as bookrunner and ESG coordinator. Schaeffler AG itself also demonstrated such ambitions in a €2-billion revolving credit facility and a €500-million term loan for which Deutsche Bank could also act as ESG coordinator.

European Investment Bank

In September 2023, Deutsche Bank and the European Investment Bank (EIB) entered into a new cooperation to support medium-sized companies in their sustainability transformation. Firms with between 250 and 3,000 employees can apply for long-term loans through Deutsche Bank to finance their transition to more sustainable business models. The EIB will provide guarantees for up to 50 percent of the loan amount. The cooperation will make a total of €400 million available to support Germany's real economy in its sustainability transformation, with at least half of the loans earmarked for financing renewable energy production projects. These guarantees are part of an EU-wide linked risk-sharing program that reduces some of the barriers to accessing finance caused by current economic uncertainties, such as supply chain bottlenecks, inflation, rising interest rates, and energy insecurity.



3 – Enablers

Governance ∨

Transition risk management ∨

Sustainable finance frameworks ∨

Financial planning, steering,
and reporting ∨

Data and technology ∨

External engagement ∨

3 – Enablers

Delivery on Deutsche Bank's Transition Plan depends on a comprehensive set of enablers. Deutsche Bank has created, and continues to develop, the structures, processes, and capabilities to enable the execution of its Transition Plan in a number of key areas:

- **Governance:** Transition to net zero will involve significant and far-reaching changes across Deutsche Bank. Accordingly, the bank has created a structure of decision-making bodies and management processes which lead, support, monitor, and enforce the implementation of the bank's sustainability strategy.
- **Transition risk management:** Sound management of rapidly evolving climate and transition risks is imperative for Deutsche Bank. These factors are being incorporated across the bank's risk management framework, including risk governance, metrics and performance indicators, client and transaction approval processes, portfolio monitoring, risk appetite, systems, and reporting.
- **Sustainable finance frameworks:** The financing for our clients' transition strategies relies significantly on robust frameworks which support internal accountability and the appropriate

oversight. The bank has established frameworks which follow internationally recognized standards and norms, as well as clear policies for emission-intensive sectors.

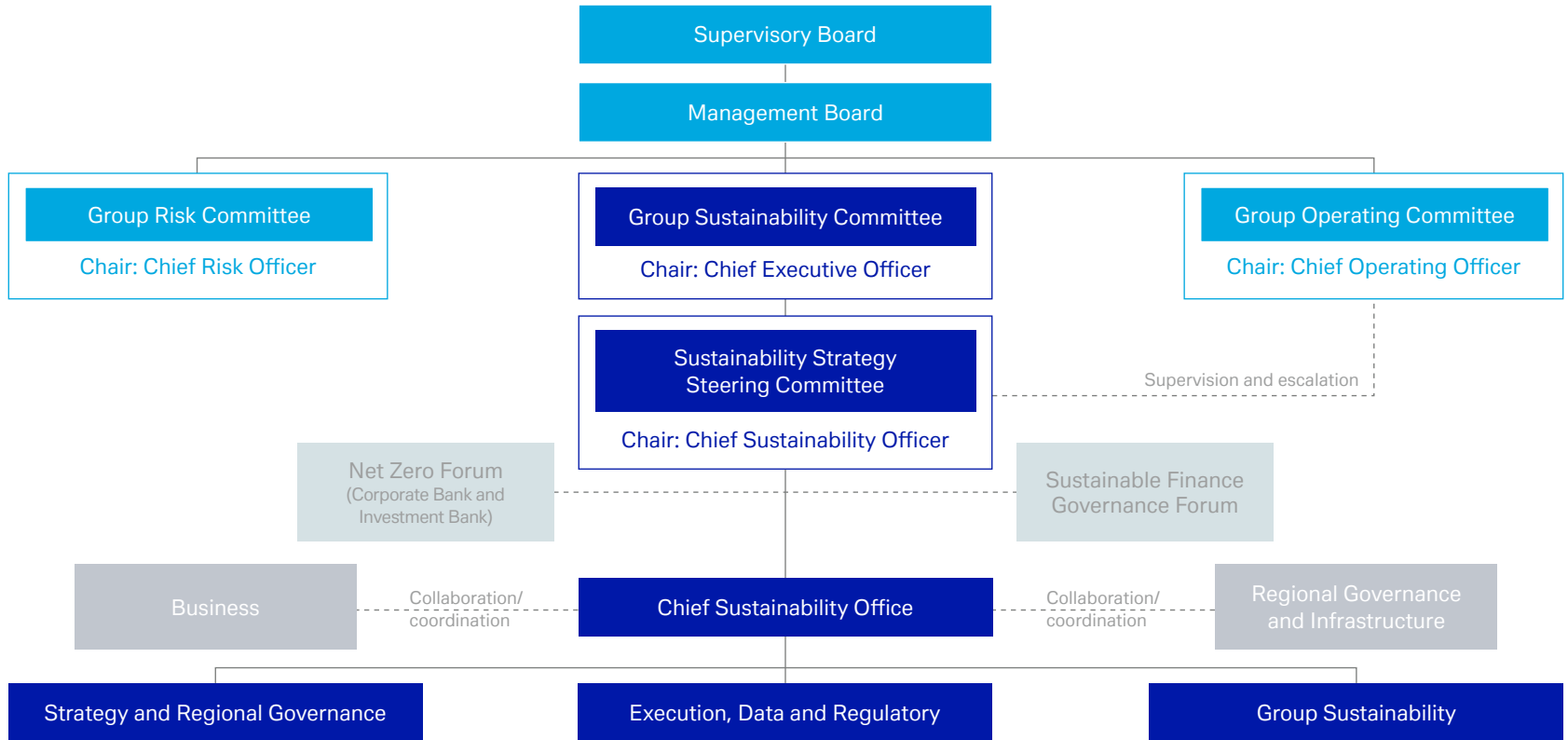
- **Financial planning, steering and reporting:** Delivery of the bank's Transition Plan depends on setting clear targets, monitoring progress toward them, and setting clear accountabilities for delivery. Deutsche Bank has established a reporting framework which is transparent, granular, frequent, and validated against recognized external reference points such as the United Nations Sustainable Development Goals (SDGs).
- **Data and technology:** In the financial sector and wider economy, substantial further work is essential to raise the quality, availability, and standardization of data, including the use of third-party data, proxies, models, and estimates. Deutsche Bank has developed a systematic approach to the capture, validation, and aggregation of data and is exploring technology initiatives that are underway to support data integration into reporting, analysis, planning, and monitoring systems. The bank also engages with peers and industry bodies to develop standardized approaches to transition-related data.

- **External engagement:** The fight against climate change and transition to a more sustainable economy is a collective effort across many stakeholder groups. To contribute fully to this effort, Deutsche Bank engages with a wide range of external stakeholders including peers and industry bodies, policymakers and legislators, non-governmental organizations, regulators, standard setters, and scientific experts.

Governance

Deutsche Bank has continuously developed its sustainability governance, in particular its climate-related governance at organizational and transactional/client level. We have integrated the oversight of sustainability-related issues into governance structures on multiple levels across the bank, ranging from the Supervisory Board and the Group Sustainability Committee to senior business leadership, key infrastructure and control functions, and dedicated specialist teams. In outline, the governance structure is as follows.

Sustainability governance structure



Sustainability strategy change program (key deliverable workstreams):

- Net Zero Strategy (Corporate Bank and Investment Bank)
- Net Zero Strategy (Private Bank)
- Nature

- Materiality Analysis & Reporting
- Risk, Controls & Governance
- Empowerment & Training

- ESG Financing
- Supply Chain Due Diligence Act
- Sustainability Data & Technology

Representation at the highest executive level

At the highest level, the **Group Sustainability Committee** acts as the main governance and decision-making body for sustainability- and transition-related matters across Deutsche Bank (excluding DWS). The Management Board has delegated sustainability-related decisions to this committee, which is chaired by the Chief Executive Officer (CEO) with the Chief Sustainability Officer as Vice Chair. This committee is made up of Management Board members, the heads of the bank's business divisions, and senior representatives of the relevant infrastructure functions. Its 'run the bank' mandate has oversight of sustainability strategy implementation across divisions and ensures alignment of the sustainability strategy with the bank's corporate strategy.

Dedicated resources under the Chief Sustainability Officer

The bank further strengthened its sustainability and transition efforts by appointing Jörg Eigendorf as Chief Sustainability Officer in 2022, reporting to the CEO Christian Sewing. The Chief Sustainability Office consists of three dedicated teams:

- **The Group Sustainability team**, responsible for advancing the bank's sustainability framework, overseeing adherence to group-wide sustainability policies and commitments, and providing transparency to the bank's stakeholders;
- **The Strategy & Regional Governance team**, responsible for developing the corporate sustainability strategy and regional governance structure;
- **The Execution, Data & Regulatory team**, which drives the strategic transformation program and assesses emerging regulations.

The Chief Sustainability Officer regularly reports on progress to the Strategy and Sustainability Committee of the Supervisory Board.

Integration into existing risk management bodies:

To ensure that sustainability risks and, in particular, climate risks are considered in sustainability-related decision-making, target setting, and the development of tangible action plans, the Chief Sustainability Office and the Chief Risk Office follow an integrated governance approach. Relevant committees such as the Group Risk Committee, Enterprise Risk Committee, Non-Financial Risk Committee, and the Group Reputational Risk Committee are informed about current sustainability issues and developments on a regular basis and consulted if required.

Expert teams within the businesses and infrastructure functions: The bank's business divisions and infrastructure functions have established ESG expert teams to drive two major themes. First, they foster implementation of the sustainability strategy on divisional level, and second, they allow for a swift response to emerging business opportunities and potential risks.

Regional governance: In addition to the central CSO and the expert teams within the businesses, the bank has established ESG heads in the two large-scale regions of Americas and APAC. Their mandate is to coordinate the regional ESG business strategy on site and to provide ESG advisory and transaction support to our clients. Additionally, the bank has sustainability coordinators in all relevant locations to align sustainability initiatives and requirements globally.

Implementation monitoring: The heads of the divisional ESG teams and ESG expert teams form the **Sustainability Strategy Steering Committee (SSSC)**, which is responsible for overseeing the implementation of Deutsche Bank's sustainability strategy as one of the bank's key deliverables ('change the bank' priorities). The SSSC is chaired by the Chief Sustainability Officer and the Chief Financial Officer Investment Bank, Corporate Bank & ESG as Vice-Chair. Escalations are reported to the Group Operating Committee, which is responsible for supporting the delivery of the bank's overall strategy and change initiatives most effectively, and to the Group Sustainability Committee.

“We have integrated the oversight of sustainability-related issues into governance structures on multiple levels across the bank.”

Sustainability governance bodies³⁵

	Governance body	Chairs	Members	Mandate
Organization level	Group Sustainability Committee	<ul style="list-style-type: none"> Chair: Chief Executive Officer Vice Chair: Chief Sustainability Officer 	<ul style="list-style-type: none"> Heads of business divisions Senior representatives of infrastructure functions 	<ul style="list-style-type: none"> Acts as senior decision-making body for sustainability-related matters on Group level Responsible for overseeing the implementation of the sustainability strategy across divisions and its alignment with the bank's corporate strategy
	Sustainability Strategy Steering Committee	<ul style="list-style-type: none"> Chair: Chief Sustainability Officer Vice Chair: Chief Financial Officer Investment Bank, Corporate Bank & ESG 	<ul style="list-style-type: none"> Senior sustainability specialists of business divisions and infrastructure functions 	<ul style="list-style-type: none"> Responsible for overseeing the implementation of the sustainability strategy as one of the bank's key deliverables on a day-by-day basis
	Group Risk Committee (Management Board level)	<ul style="list-style-type: none"> Chair: Chief Risk Officer Vice Chair: Chief Financial Officer 	<ul style="list-style-type: none"> Senior finance and risk specialists from various risk disciplines 	<ul style="list-style-type: none"> Approves new or changed material risk & capital models and reviews the inventory of risks, high-level risk portfolios, risk exposure developments, and Group-wide stress testing results Approves internal climate transition risk appetite Reviews and recommends items for Management Board approval, e.g., key risk management principles, the Group risk appetite statement, overarching risk appetite parameters Supports the Management Board during Group-wide risk and capital planning processes
	Enterprise Risk Committee	<ul style="list-style-type: none"> Chair: Head of Enterprise Risk Management Vice Chair: Head of Market Risk Management, Americas 	<ul style="list-style-type: none"> Senior risk specialists from various risk disciplines 	<ul style="list-style-type: none"> Focuses on enterprise-wide risk trends, events, and cross-risk portfolios Approves the group risk inventory, certain country- and industry-specific threshold increases, and scenario design outlines for more severe group-wide stress tests as well as reverse stress tests Reviews Group-wide stress test results in accordance with risk appetite, reviews the risk outlook, reviews emerging risks and topics with enterprise-wide risk implications Oversees the bank's climate and environmental risk framework
	Non-Financial Risk Committee	<ul style="list-style-type: none"> Chair: Chief Risk Officer Vice Chair: Head of Non-Financial Risk Management 	<ul style="list-style-type: none"> Representatives of key risk functions and specialists from business divisions and infrastructure functions 	<ul style="list-style-type: none"> Oversees, governs and coordinates the management of non-financial risks groupwide Establishes a cross-risk and holistic perspective of the bank's key non-financial risks, including risks to own infrastructure, employees and key processes, including those arising from climate risks
Transaction/ client level	Group Reputational Risk Committee	<ul style="list-style-type: none"> Co-Chair: Chief Risk Officer Co-Chair: Head of Corporate Bank 	<ul style="list-style-type: none"> Senior representatives of key infrastructure functions 	<ul style="list-style-type: none"> Responsible for the oversight, governance, and coordination of reputational risk management, including potential reputational risks arising from transactions linked to climate (and broader environmental and social) issues
	Net Zero Forum (Corporate Bank and Investment Bank)	<ul style="list-style-type: none"> Chair/Vice Chair: joint responsibility between business divisions, Risk and Chief Sustainability Office 	<ul style="list-style-type: none"> Senior sustainability specialists of business divisions, Risk, and Chief Sustainability Office 	<ul style="list-style-type: none"> Responsible for the assessment of new transactions with a significant impact on the bank's net-zero targets and financed emissions as well as the assessment of client transition plans
	Sustainable Finance Governance Forum	<ul style="list-style-type: none"> Chair: Chief Sustainability Officer Vice Chair: Head of Group Sustainability 	<ul style="list-style-type: none"> Senior sustainability specialists of business divisions and infrastructure functions 	<ul style="list-style-type: none"> Reviews and discusses open questions on sustainable finance definition and product governance

³⁵ Sustainability-related governance bodies labelled as "forum" do not have formal decision-making rights, yet inform decision-making via the provision of recommendations

Accelerating progress: a dedicated change program

The Sustainability Strategy key deliverable was launched as a cross-divisional/functional change program in the summer of 2019 with the launch of the new Compete to Win strategy. It has been implemented across multiple workstreams (currently nine). All the workstreams have clearly documented targets and implementation plans, which are centrally tracked and monitored by the SSSC. The execution of Deutsche Bank's Transition Plan also falls under the Sustainability Strategy key deliverable and thus under the responsibility of the SSSC, and has been included in the book of work of the key deliverable.

Sustainability strategy key deliverable workstreams

Net Zero Strategy – Corporate Bank and Investment Bank	Operationalize net-zero commitment, focusing on decarbonization targets, ranging from client transition dialogue to portfolio steering
Net Zero Strategy – Private Bank	Operationalize net-zero commitment, focusing on clients' transition to sustainable investments and financing (e.g. energy modernization) as well as expansion of partnerships and sales enablement
Nature	Incorporate nature elements into frameworks from Risk and Group Sustainability, create foundation for nature-related products, potentially determine nature footprint and report on it
Materiality Analysis & Reporting	Define strategic materiality and impact assessment approach, facilitate delivery of Corporate Sustainability Reporting Directive (CSRD) (incl. transfer into line organization), and advance integration of ESG KPIs into the bank's performance management
Risk, Controls & Governance	Design and implement ESG risk management framework as well as Group-wide sustainability governance in line with best practices and regulatory expectations
Empowerment & Training	Develop and implement target operating models for sustainability-related training and global cross-divisional communication (incl. engagement approach)
ESG Financing	Conceptualize and implement asset and liability management in the ESG space and potential framework expansion (e.g., Sustainable Instruments Framework)
German Supply Chain Due Diligence Act (SCDDA)	Ensure compliance with SCDDA by establishing risk management and due diligence processes to prevent and remediate human rights adverse impacts in our operations and upstream supply chain
Sustainability Data & Technology	Build integrated and automated sustainability data and technology foundation to facilitate business opportunities and regulatory reporting

Transition risk management

Managing transition risks to the bank's balance sheet and operations (alongside broader ESG risks) is a key enabler of Deutsche Bank's Transition Plan and a highly important component of the Group's

wider sustainability strategy. The bank's Climate Risk Management Framework is incorporated into its core risk management processes. This framework has four key elements which seek to identify,

monitor, and manage downside risks, preserve capital, and support portfolio rebalancing in order to fund the bank's net-zero transition.

Climate Risk Management Framework



Risk identification and materiality assessment

- Materiality assessment
- Group risk identification process
- Portfolio/client classification (incl. transition risk taxonomy)
- Physical and other environmental risk assessment

Integration into risk type frameworks and processes

- Integration into frameworks and processes for the management of:
 - Credit risk
 - Market risk
 - Liquidity risk
 - Non-financial risk

Scenario analysis and stress testing

- Climate stress test methodology for transition and physical risk scenarios
- Integration of climate risk into internal stress testing framework
- Regulatory stress test (credit and market risk)
- Liquidity stress test
- Scenario analysis across transition, physical, and other environmental risk

Risk metrics, targets, and integration into appetite

- Financed emissions and exposure to carbon-related assets
- Net-zero targets
- Range of additional KPIs to support the transition

The key elements of this framework are as follows:

1. **Risk identification and materiality assessment:** Risk Management supports the bank's businesses by conducting a comprehensive materiality assessment of transition risks, combining quantitative estimation approaches and tools with qualitative views of subject matter experts. These assessments are subsequently incorporated into the risk identification process, which functions as the basis for the Group risk inventory and is reviewed against internal control frameworks. Deutsche Bank updates its materiality assessment on an annual basis, with the next iteration incorporating more granular impact assessments at sectoral/regional level and utilizing a broader range of scenarios to assess impacts.
2. **Integration into risk type frameworks and processes:** Risk Management supports the businesses by independently reviewing clients' vulnerability to climate risk transmission channels, their transition strategies, and their ability to execute on these strategies. The toolkit for assessing client vulnerability includes quantitative KPIs and transition risk scorecards that assess emissions developments and the scope

and governance of climate commitments versus their peers. Risk Management incorporates transition risk considerations into all relevant stages of the credit risk management cycle: the transaction approval/credit evaluation process (which is distinct from, but complementary to the Net Zero Forum described above); risk classification and credit rating; portfolio analysis and monitoring; integration into watchlist early warning triggers; and review of collateral composition/location.

- **Credit Risk Management:** Deutsche Bank factors climate and environmental (C&E) risks into the credit approval process for its corporate clients via enhanced due diligence requirements, integrates risks into internal ratings (via qualitative reviews, long-term industry risk ratings, and client scorecards), and includes climate transition triggers in its watchlist classification criteria. Risks are regularly monitored and managed through sectoral, geographic, and single-name concentration risk analysis.
- **Operational Risk Management:** A dedicated team in Non-Financial Risk Management has been established to integrate C&E factors

into the control environment and carry out a risk review and litigation scenario analysis to identify liabilities and reputational risks. The bank has updated its risk appetite statement to include environmental, social, and reputational risk factors, and updated its non-financial risk taxonomy to identify risk types with C&E drivers. It has also introduced a new procedure to incorporate ESG into its risk and control assessment and vendor suitability assessments for contracts over €500,000.

- **Market Risk Management:** The bank is monitoring, on an ongoing basis, the effect of C&E factors on current market risk positions and future investments and developing stress tests that incorporate C&E risks.
3. **Scenario analysis and stress testing:** Risk Management supports the businesses by running transition risk-type scenario analysis and stress testing to assess capital adequacy, risk appetite setting, and strategic planning. The models and outputs developed for the European Central Bank's (ECB) 2022 Climate Stress Test are utilized to develop quantitative transition and physical risk assessments for materiality

assessment covering a broader scope of exposures. These assessments have been integrated into economic capital assessment as part of the bank's International Capital Adequacy Assessment Process (ICAAP), a supervisory requirement which tests capital adequacy in the banking sector. The bank has also partnered with a third-party provider to assess physical risks across a range of different scenarios, and has extended the scope of the transition and other environmental risk scenarios that it assesses on a regular basis. The bank is in the course of implementing a roadmap to further enhance model development and integrate it into its internal 'business as usual' stress test framework.

4. **Risk metrics, targets, and integration in appetite:** Risk Management supports the businesses by identifying and developing the required tools, datasets, methodologies, and climate risk metrics for assessing climate risks and integrating them into risk appetite frameworks, policies, processes, and its net-zero target framework. These methodologies are aligned with NZBA target setting guidelines and industry best practices. Their goal is to incentivize tangible impact on the real economy and support the bank's

strategic goals, while simultaneously providing the flexibility to finance the transition to net zero and protecting the bank's balance sheet from increased risks in these sectors over time. The bank's net-zero targets described above, including 2030 and 2050 targets for decarbonizing the loan book and Scope 1 and 2 emissions from own operations, are fully embedded into frameworks and governance structures via internal quantitative risk appetite thresholds.

Supporting governance and reporting: The Risk Management function helps the businesses understand the development and concentration of their climate risk metrics from a spot and forward perspective, and supports other key enablers described in this document. The Group Risk Committee, the Enterprise Risk Committee, and the Group Sustainability Committee receive regular and quarterly reports which cover the development and concentration of the Group's climate risk metrics and alignment with portfolio decarbonization targets, other climate risk-related topics, including physical and other environmental risk concentrations, and key industry and regulatory developments. The Management Board is made aware of the development of climate risk metrics via updates in the Risk and Capital Profile (RCP) report.

Future developments

Deutsche Bank is committed to integrating C&E risk considerations across all relevant processes and disciplines of the bank's risk management landscape. This includes further strengthening of risk management frameworks, tools, and analytics to support its Transition Plan. While we have made significant progress in recent years, the bank recognizes that more development is needed and has defined plans to build on this progress in line with regulatory guidelines. They include:

- Extending the scope of transition risk-relevant risk appetite and KPIs and integrating these into governance and monitoring
- Reviewing its other environmental risk management frameworks in order to support closer integration into financial risk impact assessment via scorecards and scenario analysis
- Conducting additional risk reviews in relation to existing control frameworks and requirements for new or updated controls
- Designing and enhancing systematic data collection processes

Addressing challenges in integrating transition risk management and reporting

Balancing of climate-related risk with other factors:

The integration of C&E risks into the bank's risk management landscape will require balancing between different factors. This includes rating mismatch, where counterparties are rated as having a strong credit risk profile but are high-emitting; and tenor mismatch, where risks are short-term in nature versus the longer-term horizons over which certain C&E risks are expected to materialize. Deutsche Bank therefore assesses new transactions across multiple dimensions and metrics to ensure that climate-related risks are appropriately considered and reflected in the context of our wider sustainability strategy.

Data challenges: Climate-related data is not comprehensively available today and is not subject to globally consistent and rigorous standards³⁶. Banks are therefore heavily reliant on assumptions and proxy calculations for public disclosures, strategy, internal monitoring, and risk management purposes. Deutsche Bank's approach to addressing data and technology challenges is outlined in the relevant [section Data and technology](#) below.

Modeling and methodology: The quality, availability, and consistency of data is an important driver of risk and scenario modeling, with the result that forward projections in C&E risk carries an elevated degree of uncertainty. For example, key long-term modeling which informs our net-zero decarbonization pathway (and targets) can change as the climate science evolves and current policy, social, and economic conditions develop.

Accordingly, qualitative expert judgment plays an important role in transition risk management, and the bank's commitment to training and skills building reflects the need to develop the expertise needed for qualitative inputs.

Technical factors: Certain factors remain outside of the bank's control, such as changes to a company's valuation via a significant fall in share price, or fluctuations in exchange rates can lead to higher financed emissions due to an increase in PCAF allocation factors. This can impact progress toward the bank's net-zero targets in its corporate loan book. Deutsche Bank is committed to providing transparency in its reporting on the impact of technical factors on progress toward the bank's decarbonization targets.

“Climate-related data is not comprehensively available today and is not subject to globally consistent and rigorous standards. Banks are therefore heavily reliant on assumptions.”

³⁶ For example, this lack of availability is reflected in the high PCAF data quality scores for financed emissions calculations.

Sustainable finance frameworks

Robust frameworks are essential in supporting our financing of clients' transition strategies. To ensure internal accountability as well as appropriate oversight, the bank has established a control landscape based on existing risk frameworks and international standards covering its products and services, including at transaction level.

Three layers of control: To ensure appropriate sustainable financing standards are met, the bank applies its control framework at three levels:

— Businesses maintain ESG expert-led teams to address business-related risks and opportunities in line with current market practices and integrate sustainability into existing processes

- As the bank-wide central standard setting function, Group Sustainability within the Chief Sustainability Office conducts transactional and client reviews and ensures adherence to and enhancement of its controls and policy frameworks in cooperation with business and risk functions
- The Finance function validates progress against sustainable finance targets, and aggregates and reports on this progress on business and sub-business level on a quarterly and annual basis

Three core frameworks

The bank's sustainability-related framework landscape in our dealings with clients consists of three main frameworks that follow generally accepted international standards and principles, including the International Capital Market Association Green and Social Bond Principles, UN Global Compact, and EU Taxonomy. These frameworks provide a frame of reference for engaging with clients, with the aim of preventing harmful business activities and identifying sustainable finance opportunities. The frameworks are as follows:

Deutsche Bank's sustainability-related framework landscape

1

Sustainable Finance Framework

Methodology for classifying transactions and financial offering as sustainable

2

Environmental and Social Policy Framework

Approach to managing environmental and social risks in line with Global Reputational Risk Framework

3

Green Financing Framework

Methodology for issuance of use-of-proceeds-based green financing instruments

Core frameworks: The Sustainable Finance Framework

The [Sustainable Finance Framework](#), introduced in 2020, defines the methodology and procedures for classifying transactions and financial products and services as sustainable. The framework applies to Deutsche Bank globally across the Corporate Bank, the Investment Bank, and the Private Bank's commercial lending activities. The Sustainable Finance Framework is binding in all locations and irrespective of Deutsche Bank's legal form in certain locations (unless stated otherwise). DWS is out of scope and follows its own standards as a publicly listed asset manager. The framework covers all types of sustainable financing (without investments), including products with ESG characteristics manufactured by Deutsche Bank, and received a Second Party Opinion from ISS ESG.

Assessment parameters: Deutsche Bank assesses and classifies client profiles or transactions as sustainable finance according to the following three parameters:

- **Use of proceeds:** financing where the use of proceeds satisfies either the green or social eligibility criteria;

- **Sustainable client profile:** where at least 90% of revenue derives from Deutsche Bank's eligibility criteria and the company is not involved in any excluded activities;
- **Sustainability-linked financing:** in which the pre-determined sustainability performance targets meet Deutsche Bank's minimum criteria for sustainability-linked financing.

Multi-stage validation: Validation against the framework is conducted on a deal-by-deal basis and according to the 6-eye principle. The key steps are:

1. Front-office teams screen client's sustainability profile and map transactions in scope against the framework. Initial due diligence is conducted in cooperation with product teams and ESG product champions in business divisions;

2. Divisional ESG experts review the classification rationale, proof points, and conduct plausibility checks;
3. Group Sustainability reviews the classification rationale, proof points, and any additional information required;
4. After successful completion of these steps, a deal may be classified as complying with the Sustainable Finance Framework.

The Sustainable Finance Governance Forum was established in 2021. It serves as a platform for reviewing and discussing open issues related to the classification of sustainable finance transactions. The sustainable finance validation process is outlined on the following page.

“Our sustainable finance frameworks provide a frame of reference for engaging with clients to prevent harmful business activities and support financing of clients' transition strategies.”

Sustainable finance validation process

Business Divisions

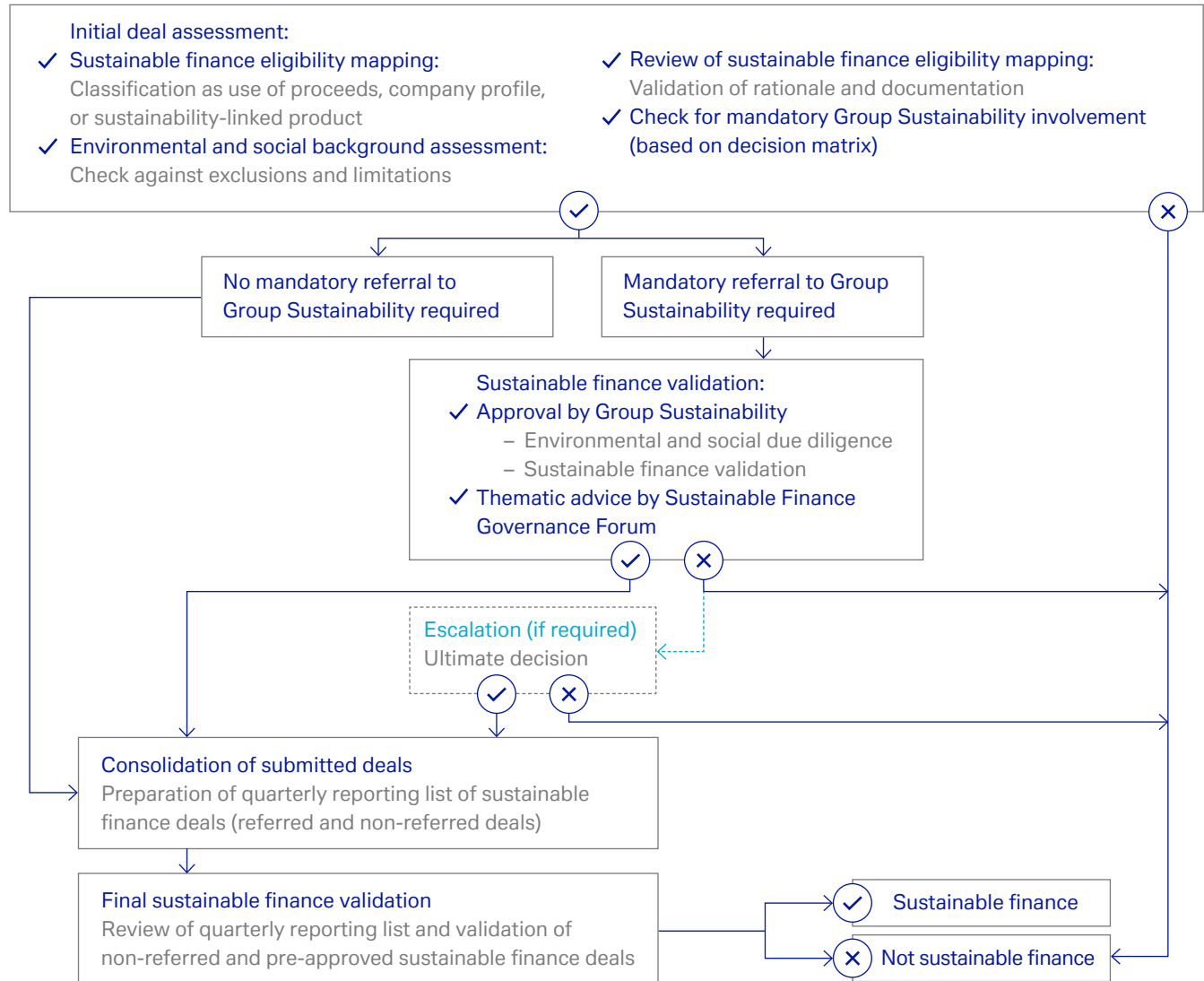
Front Office & ESG Experts
(6-eye principle)

Group Sustainability

Group Reputational Risk Committee & Group Sustainability Committee

Finance

Group Sustainability



Recent results: The approval, decline, and referral numbers for transactions assessed under the Sustainable Finance Framework for the past two years are as follows:

Transactions assessed under the Sustainable Finance Framework

	Dec. 31, 2021	Dec. 31, 2022
Number of transactions on which final decisions have been made	1,036	885
Of which approved	979	719
Parameter 1 – Use of proceeds	605	471
Parameter 2 – Company profile	73	69
Parameter 3 – Sustainability linked products	301	179
Of which declined	48	159
Of which referred to the respective committees	9	7
Approved	4	3
Declined	5	4

New product suitability assessment: To support clients in their transition to more sustainable business models, Deutsche Bank is continuously expanding its range of sustainable products and services. Prior to launching a new offering with sustainability characteristics, Group Sustainability assesses their suitability and eligibility for sustainable finance volume reporting by taking sectoral and cross-sectoral minimum requirements and exclusions into account.

By the end of 2023, we plan to update our existing Sustainable Finance Framework to reflect market insights we have gathered since the framework was first published in 2020 and to refine eligibility criteria based on evolving regulations such as the EU Taxonomy and on industry standards, e.g., International Capital Markets Association (ICMA) principles and Loan Market Association (LMA) principles. In addition, the complementary classification framework for all investment solutions in the Private Bank will be publicly disclosed in the first half of 2024.

Core frameworks: the Environmental and Social Policy Framework

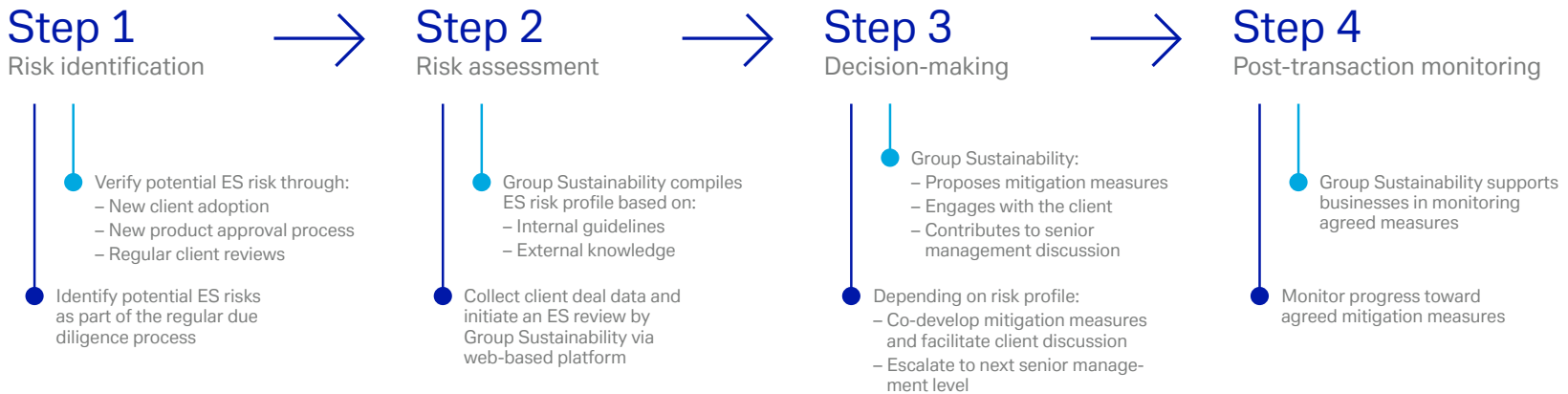
Initially introduced in 2011, the [Environmental and Social \(ES\) Policy Framework](#) covers general requirements for ES due diligence (part of the Reputational Risk Procedures) and sector-specific ES provisions, articulated in our sectoral guidelines. It defines rules and responsibilities for risk identification, assessment, and decision-making, and specifies the requirements for environmental and social

due diligence. It also covers provisions for deal-independent screening and monitoring of companies from an ES perspective.

The ES due diligence process includes a discussion of critical issues with clients and remediation actions. The final ES risk profile includes an evaluation of the materiality of the identified ES risks and associated reputational risks. If the risks are deemed to pose a material reputational risk or meet

one of the mandatory referral criteria, the transaction will be referred to one of the four Regional Reputational Risk Committees following assessment and support at business level. If issues are not resolved at the level of a Regional Reputational Risk Committee, escalation is required to the Group Reputational Risk Committee. Ultimate accountability for the management of reputational risk lies with the Management Board. The four steps of the ES Policy Framework are as follows:

Environmental and social due diligence process



● Business divisions ● Control functions

A tailored approach to high-risk sectors:

Deutsche Bank has defined sectors that are most exposed to environmental and social risks and has developed sectoral policies which involve due diligence requirements and exclusions. Group Sustainability assesses transactions in these sectors on a case-by-case basis, evaluating clients' management of ES risks and their sustainability profile. Based on the outcome of such assessment, Group Sustainability may make recommendations or impose conditions which safeguard the bank's ES performance and reduce associated risks. This may include declining transactions. Given Deutsche Bank's net-zero commitment and decarbonization targets, imposing requirements and limitations upon Oil & Gas and Thermal Coal Power & Mining supports delivery of the bank's net-zero target.

Oil & Gas: Deutsche Bank applies an environmental and social due diligence process for transactions in the Oil & Gas sector. Its ES due diligence requirements for oil and gas cover upstream, midstream, and downstream operations limited to the refinery

business and liquified natural gas (LNG). Accordingly, the bank will not knowingly provide financing, either through direct lending or the capital markets, for activities where the majority of the proceeds relate to the following projects:

- Oil and gas projects via hydraulic fracturing in countries with extremely high water stress³⁷
- New oil and gas projects in the Arctic region³⁸
- New projects involving exploration, production, and/or transport/processing of oil sands³⁹

We have been benchmarking our requirements against market standards and stakeholder expectations and are working on an update of our Oil & Gas Policy.

Thermal Coal: Since 2016, the bank has had a Thermal Coal Policy in place covering coal power and coal mining. In respect of coal power, the policy prohibits financing the development of new coal-

fired power plants and the expansion of existing coal-fired power plants, irrespective of their location. In respect of thermal coal mining, the existing Thermal Coal Policy prohibits the financing of new thermal coal mines or material expansion of existing thermal coal mines.

The Thermal Coal Policy was further enhanced in March 2018 by clarifying that the bank will not finance new greenfield thermal coal-related infrastructure regardless of whether the infrastructure is related to a new or existing plant or to a new or existing coal mine. In 2020, we further reviewed the existing coal policy specifying that with regard to existing clients with thermal coal revenue dependency of more than 50%, the financing will be terminated for such thermal coal companies if there are no credible plans to reduce this dependency to below 50% by 2025 in countries that are members of the Organization for Economic Cooperation and Development (OECD), or below 30% by 2030 in non-OECD countries.

³⁷ Rated >4 (Very High) by the World Resources Institute (<https://www.wri.org/applications/aqueduct/country-rankings/>), which at the time of writing includes Qatar, Israel, Lebanon, Iran, Jordan, Libya, Kuwait, Saudi Arabia, Eritrea, United Arab Emirates, San Marino, Bahrain, India, Pakistan, Turkmenistan, Oman, and Botswana

³⁸ Defined as the onshore and offshore area within the 10°C July isotherm boundary, meaning the area does not experience temperatures above 10°C (National Snow & Ice Data Center US)

³⁹ Oil/tar sands are a type of unconventional deposit generally produced by strip mining and/or extraction techniques such as horizontal drilling, water flooding, and gas injection; very large oil/tar sand deposits are found in Canada, Kazakhstan, Russia, and Venezuela

In March 2023, the requirements of the Thermal Coal Policy were upgraded and the criteria used to determine the scope of the policy were tightened. Effective May 2023, the following criteria apply in defining whether companies fall within the scope of the Thermal Coal Policy in power and mining:

Thermal Coal Policy overview

Scope

- Revenue threshold: corporate clients with a 30% revenue dependency on thermal coal
- Production threshold: corporate clients with a production of 10+ megatons of thermal coal or a thermal coal power capacity of 10+ gigawatts per year

Requirements

- Access to financing (lending and capital markets) depends on:
 - Existing clients: credible transition plans required from 2025 on
 - New clients: credible transition plans as prerequisite as of today
- Companies in OECD countries are expected to phase out from thermal coal by 2030, and companies in non-OECD countries by 2040
- State-owned enterprises in Just Energy Transition Partnership (JETP) countries are allowed to have trajectories for phase-out aligned with the country's JETP commitments

Commitment

- No financing of new greenfield thermal coal-related infrastructure for plants or mines
- End financing for companies with a thermal coal revenue dependency of more than 50% which have no credible plans to reduce this dependency to below 50% by 2025 in OECD countries, or below 30% by 2030 in non-OECD countries
- No financing and advisory services (incl. M&A) for mining companies that use the mountaintop removal (MTR) extraction method and make a material contribution to the total annual MTR coal production in the USA

Change log

- First publication: 2016
- Update: 2018, 2020, 2023



Recent results: Group Sustainability regularly reports the number and outcome of the transactional and client reviews pursuant to the bank's Environmental and Social and Sustainable Finance standards. For the last three years, the approval, decline and referral number for transactions and clients assessed using the ES Policy Framework were as follows:

Transactions and clients reviewed under the Environmental and Social Policy Framework⁴⁰

	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2022
Number of reviews initiated per sector	284	317	461
Of which metals and mining	94	93	176
Of which oil and gas	71	69	79
Of which industrials and infrastructure ⁴¹	47	53	59
Of which industrial agriculture and forestry	30	27	59
Of which utilities	27	52	72
Of which chemicals	5	16	8
Of which other activities ⁴²	10	7	8
Number of transactions and clients on which final decisions have been made	222	248	403
Of which approved	206	232	384
Of which declined	8	5	12
Of which referred to the respective committees	8	11	7
Approved	8	9	6
Declined	0	2	1

⁴⁰ Please note that this table also includes the figures of the table "Transactions assessed under the Equator Principles", see the section "Equator Principles" of the Non-Financial Report 2022

⁴¹ Includes engineering firms, equipment manufacturers, and other companies linked to sensitive sectors

⁴² Includes sectors with high carbon intensity and/or potential human rights violations. Examples include companies in the consumer goods, transportation, infrastructure, technology, commodity trading, and healthcare sectors whose supply chain exposes them to sensitive sectors

Core frameworks: the Green Financing Framework

The [Green Financing Framework](#) (GFF) covers the issuance of use of proceeds-based green financing instruments including (covered) bonds, commercial papers (CPs), repurchase agreements (repos), and deposits. The GFF was endorsed by a Second Party Opinion from ISS ESG. It is also aligned with the ICMA Green Bond Principles (GBP)⁴³, a set of voluntary guidelines that recommend transparency and disclosure and promote integrity in green financing. The framework reflects the United Nations Sustainable Development Goals (SDGs), the proposed regulation that provides a standard for the designation of instruments such as European Green Bond Standards (EU GBS) and the Delegated Acts of the European taxonomy for sustainable activities (EU Taxonomy) on climate change mitigation.

In order to qualify for inclusion in the Green Asset Pool, the loan or investment must fall into at least one of the following eligible sectors:

Eligible sectors for Green Asset Pool



Renewable energy

Renewable energy projects, such as wind, solar, geothermal energy, hydropower and biomass



Green building (commercial/residential)

Construction, acquisition, operation, and renovation of new and existing buildings (with a minimum energy-efficiency upgrade)



Information and communication technology

Acquisition and capital expenditure relating to energy-efficient data centers and equipment for data processing, hosting, and related activities



Energy efficiency

Development and implementation of products or technology that reduce the use of energy, such as energy storage



Clean transportation

Development, manufacture, acquisition, financing, leasing, renting, and operation of means of clean transportation, such as for rail and road transport



United Nations Sustainable Development Goals

⁴³ International Capital Market Association (ICMA), Green Bond Principles (June 2021)

A three-step process: To identify eligible green assets that are in line with the eligible sectors and related criteria, Deutsche Bank follows a three-step process: green asset screening and preselection, internal validation, and external verification.

Green asset screening and preselection: For each of the eligible sectors, Deutsche Bank applies category-specific selection criteria that are used by the respective originating business areas to identify eligible items in their portfolio.

Internal validation: Group Sustainability and Treasury bear the responsibility for performing the internal validation of preselected assets provided by the business units. The internal validation process ensures compliance of preselected assets with the framework, and an environmental and social due diligence will be conducted by Group Sustainability to confirm that eligible assets do not have material negative environmental and/or social impact.

External verification: A reputable verifier is mandated to conduct annual evaluation of compliance of the Green Asset Pool with the requirements set by the GFF.

Expansion to include social criteria: Deutsche Bank intends to expand the Green Financing Framework to include social criteria. The revised Sustainable Instruments Framework will follow similar governance and processes to the GFF. The initial social issuance under the Sustainable Instruments Framework is targeted for 2024. This reflects the bank's commitment to a socially just transition, as set out in more detail in [section Just transition](#) below.

Funds transfer pricing: In addition to managing the Green Financing Framework, including Asset and Liability Management (ALM), Treasury is also responsible for related funds transfer pricing (FTP).

The bank has implemented an ESG FTP framework to support Deutsche Bank's sustainability agenda by incentivizing businesses to originate incremental GFF-relevant assets, subject to agreed eligibility criteria. If assets originated under the GFF are funded by liabilities which carry a funding benefit, this benefit is recognised as part of the financial attractiveness of the asset. This creates an additional incentive for the business to grow eligible assets within the GFF as part of this incentive mechanism. Treasury continues to assess opportunities to support the firm's sustainability agenda. In the future, consideration may be given to supporting transition finance via a targeted FTP framework.

“The initial social issuance under the Sustainable Instruments Framework is targeted for 2024. This reflects the bank's commitment to a socially just transition.”

Regular review: To keep track of its own sustainability ambition and targets and evolving sustainability topics as well as developing external regulatory and legislative imperatives, Deutsche Bank reviews and reassesses its sustainability-related control landscape on a regular basis. The scope (sectors covered) as well as the environmental and social due diligence requirements of the ES Policy Framework are reviewed annually or as events occur. In general, the development and maintenance of the bank's control landscape is based upon the following process:

Continuous enhancement of framework landscape



Identification

Ongoing monitoring of developments (e.g., ESG ratings, peer benchmarking, regulatory feedback) and continuous dialogue with NGOs and other stakeholders to identify changes impacting the bank's business and operating model



Prioritization

Prioritization of identified topics and trends according to their relevance and materiality (e.g., business impact, self-commitments), reflecting Deutsche Bank's risk appetite



Development

Development of new provisions and policies for environmental and social due diligence, or amendments to existing ones in close alignment with impacted divisions and functions



Implementation

Alignment with impacted divisions and functions, sign-off by Group Sustainability Committee, and implementation across all control processes and systems

Financial planning, steering, and reporting

Since 2020, Deutsche Bank has embedded its sustainable financing and investment targets into the bank's mainstream strategic planning process, helping to embed sustainability also into the dialogue with our clients. Our volume targets are granular, near-term, transparent, and measurable, and are explicitly linked to internationally recognized external benchmarks. Financing and investment volumes are broken down by business and sub-business over a multi-year planning horizon. This ensures accountability for delivery at the business, sub-business, and individual level, and combines long-term planning with near-term urgency. In our annual planning process, we consider the latest net-zero scenarios and economy-wide pathways to identify investment needs and their influence on our sustainable financing and investment plan with regard to the environmental business.

Three-dimensional reporting: In alignment with the bank's quarterly reporting cycle, progress against the sustainable finance targets is published and shared internally with the relevant stakeholders on a quarterly and annual basis. Reporting is based on three dimensions:

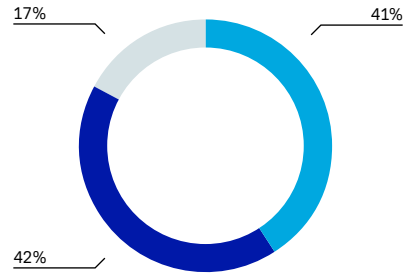
- First, its granularity extends to business and sub-business level. This enables the bank to hold every business, sub-business, and individual manager accountable for results. Deutsche Bank focuses its sustainability reporting on a set of financing and capital market issuance activities which is clearly defined in our Sustainable Finance Framework as well as assets under management, excluding DWS, given its status as a separate entity with separate reporting.
- Second, Deutsche Bank reports by area of impact. The bank distinguishes clearly between transactions which have exclusively or predominantly environmental impact, social impact, or both.
- Third, Deutsche Bank also reports on the client dimension (corporates, sovereigns, supranational organizations and agencies (SSA), private and institutional clients). This enables businesses to monitor progress within specific client segments.

Deutsche Bank's three-dimensional reporting of sustainable financing and investment volumes is illustrated on the following page.

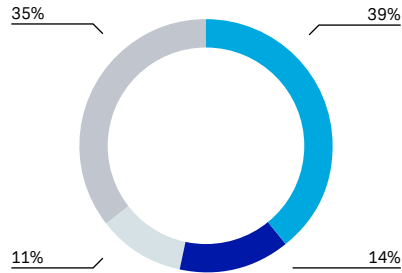
“Our volume targets are granular, near-term, transparent, and measurable, and are explicitly linked to internationally recognized external benchmarks.”

Sustainable financing and investment volumes per reporting dimension, €215 bn cumulated volumes (2020–22)⁴⁴

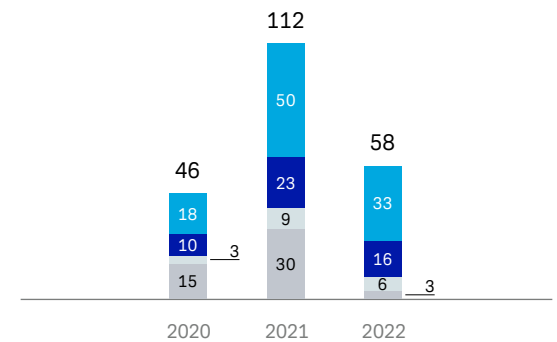
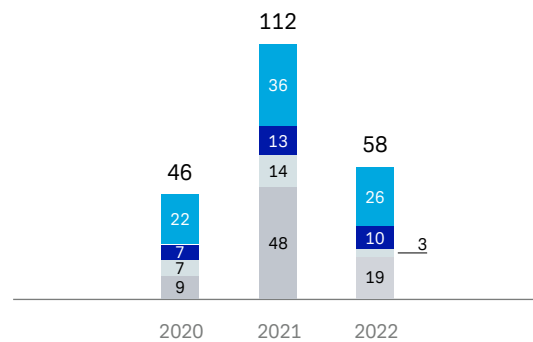
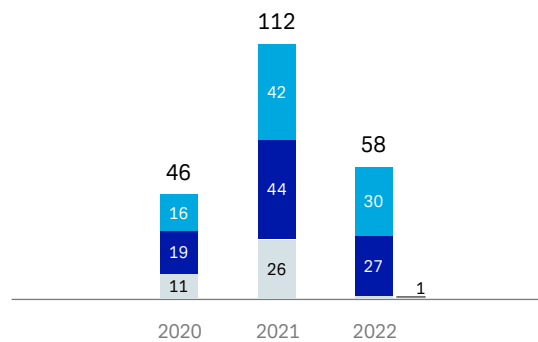
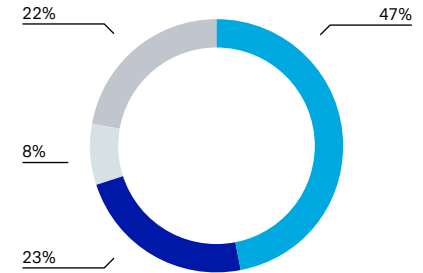
Product-driven



Impact-driven



Client-driven



■ Financing
■ Issuance
■ Assets under Management

■ Environmental
■ Social
■ Environmental and social
■ Sustainability-linked

■ Corporates
■ Supranationals, sovereigns and agencies
■ Institutional
■ Private

⁴⁴ Sustainable financing and investment activities as defined in Deutsche Bank's Sustainable Finance Framework and related documents, which are published on our website; numbers may not add up due to rounding

Our sustainability reporting has proven to be a critical driver in our efforts to create a more sustainable Deutsche Bank. Thus, we are aiming to continuously upgrade our reporting capabilities. We intend to use automation and cloud functionalities to simplify our reporting processes. We also intend to work on adapting our core IT systems to link sustainable finance volumes with sustainable finance revenues.

A transparent link to compensation: Deutsche Bank also established a link between sustainability targets, incentive structures, and compensation for its Management Board and workforce.

For Management Board members, variable compensation is linked to ESG targets with the aim of closely aligning compensation with the bank's sustainability strategy and performance. The sustainability targets for the short-term award are contained in individual and divisional balanced scorecards and represented by measurable Key Performance Indicators (KPIs), such as sustainable financing and investment volumes or ESG ratings index, to ensure an objective assessment of performance. In 2022, scorecards including ESG KPIs accounted for 10% of total variable compensation for Management Board members. We are currently working to embed further greenhouse gas emission

related KPIs in the balanced scorecards, in particular with regard to financed emissions. In addition, sustainability targets are integrated into Management Board members' individual objectives as agreed at the beginning of each year.

The objectives for the long-term award are bundled in the ESG component and include factors such as the volumes of sustainable financing and investments, the reduction of electricity consumption in the bank's buildings, and concretely defined targets from the area of climate risk. In 2022, the ESG component corresponded to a further 20% of the total variable compensation. In 2023, the KPIs of the ESG component have been revised and adjusted with a greater focus on the reduction of greenhouse gas emissions regarding our own operations on the one hand while further guiding our clients on their path to net zero.

In general, for Deutsche Bank employees, total compensation also includes a variable compensation component, and sustainable finance volumes were one of the KPIs factored in determining Group performance and related variable compensation levels in 2022. Sustainability KPIs are also embedded in the aforementioned balanced scorecards, and influence both divisional and individual

employee objective setting at the beginning of the year and their performance assessment at year-end, with impacts on variable compensation at divisional and individual level respectively.

Reporting linked to external reference points: Deutsche Bank has tied its sustainable reporting framework to recognized and verifiable external reference points, notably the United Nations' Sustainable Development Goals (SDGs). The bank assesses how its financing and issuance activities contribute to the SDGs by mapping every transaction included in the bank's sustainability reporting to at least one of the United Nations' SDGs.

Sustainable finance volumes per United Nations' Sustainable Development Goals (2020–22)⁴⁵



⁴⁵ Based on cumulated financing and issuance volumes in 2020-22. One transaction can be mapped to several SDGs; sustainable financing and investment activities as defined in Deutsche Bank's Sustainable Finance Framework and related documents, which are published on our website; numbers may not add up due to rounding

Data and technology

Deutsche Bank's data and technology strategy is another central enabler of the Transition Plan. Only through data and technology can the core elements of the bank's Transition Plan be integrated into banking processes at scale and regulatory reporting obligations be met. All aspects of this plan are directly impacted by the availability and quality of source data including strategy formulation, target setting and reporting, planning and performance monitoring, new client adoption, and the management of climate and other environmental risk. Technology plays a vital role in the capture of relevant data; the transformation of data into management information which supports all these processes; and the integration of this data into the bank's core systems. Data quality and availability is also a critical factor in the smooth functioning of the bank's governance and control processes including the Net Zero Forum, the evaluation of client-specific transition strategies for corporate clients, and the control frameworks set out above.

Addressing the data challenge

As described in [section Transition risk management](#) above, climate related data is not comprehensively available today and is not subject to globally con-

sistent and rigorous standards⁴⁶. Banks are therefore heavily reliant on assumptions and proxy calculations for public disclosures, strategy, internal monitoring, and risk management purposes. Furthermore, data which is essential for enabling Deutsche Bank's Transition Plan is highly heterogeneous, including client and counterparty carbon emissions, physical risk and energy efficiency data, and energy performance data on private residences.

Deutsche Bank's approach to foundational data quality, availability and consistency includes priorities on several dimensions:

- **Maximizing data capture:** collection of data from clients e.g., EPC classification data on residential real estate from private clients; in-house data and data from vendors which impacts the bank's own operations as well as Scope 3 emissions;
- **Rigorous and consistent use** of third-party data, proxies, and estimates in cases where data is partially or wholly unavailable;

- **Validation of analysis,** model-based estimates, and scenario preparation which relies on client, vendor, third-party or in-house data;
- **Harmonization of approaches:** Deutsche Bank engages with regulators, supervisors, standard setters, third party providers, and industry bodies to promote harmonization of policies and approaches regarding data usage and quality standards for transition planning.

The role of enabling technology

Drawing insights from foundational data is critical to supporting decisions and action. Given the multiple challenges of availability, quality, completeness, and consistency, technology plays a key role. Deutsche Bank's ongoing approach to enabling technology includes the following elements:

- Continuing to invest in visualization and reporting capabilities, including those that support control frameworks through which sustainability policies and commitments are governed.

⁴⁶ For example, this lack of availability is reflected in the high PCAF data quality scores for financed emissions calculations

- Integrating climate risk and emissions-related data into the bank’s mainstream business and infrastructure systems.
- Combining and aggregating data from clients, vendors, and other external sources with the bank’s own data, modeling and performing calculations, and feeding systems in a coordinated manner. This is key for climate risk analysis, regulatory reporting, and many other uses.
- Building deal classification solutions to categorize deals considering their emissions characteristics, and making this information available for numerous purposes including risk management and balance-sheet-aligned reporting.
- Building a new suite of applications designed to integrate ESG factors into business processes and systems, and support the classification of deals;
- Digitizing the outreach to clients to capture client-level data as part of ongoing industry initiatives, notably in the case of carbon emissions per client, to support client-level transition strategies, risk assessment, and reduction in the bank’s financed emissions in the corporate loan book;
- Developing enhanced tools using client-specific environmental data, thus reducing reliance on proxies and model-based estimates and further supporting net-zero target setting, tracking, and forecasting;
- Assessing climate related risk through the integration of physical risk data relating to collateral and energy-efficiency data for commercial and residential real estate, and integrating both into Risk systems;
- Digitizing the tracking of sustainable finance business volumes, tracking their SDG contribution, and identifying green assets aligned to the Green Financing Framework (described in [section Sustainable finance frameworks ↘](#) above);
- From 2024, developing a Green IT Framework designed to guide the reduction of emissions related to IT operations. This will build on established initiatives and add new topics that are being explored this year, e.g., green coding and hosting of applications;
- Digitization of the existing processes that aggregate and publish our own emissions data is also anticipated to commence in 2024.

Progress planned and underway

Deutsche Bank has a program of initiatives either planned or already underway to further improve the capture, transformation, and integration of transition-related data. These measures cover both client/transaction data and data relating to the bank’s own operations and supply chain, and include:

External engagement

Engagement with external stakeholders is an important enabling element of Deutsche Bank's Transition Plan, because only through continuous dialogue can we ensure best practices in our own processes as well as the consideration of our experiences in external decision-making processes. The bank aims to make its contribution to the collective effort to reach net zero through collaboration and dialogue with all major stakeholder groups⁴⁷.

External engagement to date has covered a range of topics and stakeholders, including:

- **Regulation:** Deutsche Bank takes a structured approach to managing the risk of regulatory change and raising its profile in political and regulatory debates. This supports strategic decision-making and provides oversight and control over how key regulatory initiatives are implemented. Given the increasing regulatory activity worldwide, advocacy has become much more important for the bank.
- **Government and policy:** Deutsche Bank convenes and participates in seminars and public

panels, engages with policymakers on climate change and the role of sustainable finance, and is represented on external committees. Gerald Podobnik, CFO of the Investment Bank, Corporate Bank & ESG was nominated for a second successive term as a member of the Sustainable Finance Advisory Committee of the German Government in 2022.

Throughout 2023, the regulatory developments around transition plans and transition finance have been an important topic in the bank's external engagement. Given the increasing focus of regulators and policymakers on sustainable finance, the bank plans to broaden this engagement further.

Positions on Sustainable Finance Policy and climate change-related aspects are developed by the bank's Political Affairs team and aligned with the Chief Sustainability Office, ESG business heads, and colleagues responsible for ESG in Finance, Risk, and Legal. This aims to ensure that engagement activities are consistent with the bank's overall net-zero strategy. Deutsche

Bank discloses its advocacy approach and program and its respective internal policies and provides transparency on related spend in its Non-Financial Report and through the EU Transparency Register and German Lobbying Register.

- **Global climate forums:** Deutsche Bank sent a delegation of sustainable finance subject-matter experts and management board members to the UN Climate Change Conference (COP) in Glasgow in 2021 (COP26) and in 2022 to COP27 in Sharm El Sheikh, Egypt, to be an advocate as well as thought leader by engaging on sustainability issues across industries. At COP26, Deutsche Bank conducted a four-day program with the Potsdam Institute for Climate Impact Research, ESMT, Werte-Stiftung, and other German CEOs from e.g. Schaeffler, Daimler, ThyssenKrupp, and BASF to demonstrate the dedication of German CEOs to driving sustainability. For COP28 in Dubai, Deutsche Bank is reinforcing its commitment with a delegation led by CEO Christian Sewing and an event series with industrial partners on decarbonizing industry—a German perspective.

⁴⁷ Among others including governments, policymakers, regulators, industry bodies, supranational agencies such as the United Nations, standard-setting bodies, clients, non-governmental organisations and the academic community

- **Non-governmental organizations (NGOs):** Regular exchange with NGOs is of vital importance for integrating societal concerns into our strategy and collaborating on specific projects. In February 2023, for example, the Private Bank Germany signed an agreement with WWF Germany to develop the bank's sustainable finance product and service offering and advisory processes over the next two years. Both WWF Germany and Deutsche Bank are convinced that collaboration and acceleration of structural changes are needed to channel financing more efficiently toward sustainability transformation and decarbonization in the economy.
- **Industry and other bodies:** Deutsche Bank is also engaged in various working groups and is a member of associations within and outside the financial service industry. Chief Executive Officer Christian Sewing became a member of the Principals Group of the Glasgow Financial Alliance for Net Zero (GFANZ) in July 2023. Lavinia Bauerochse, Global Head of ESG Corporate Bank, has been co-lead of the GFANZ workstream on Energy and Real Economy Transition since September 2023. Claire Coustar, Global Head of ESG and Sustainable Finance, Investment Bank Fixed Income and Currencies, co-

leads the NZBA sector WorkTrack with Barclays and is a member of the GFANZ workstreams on Mobilizing Capital to Emerging Markets and Developing Economies and Passive investment: Index Investing. Jörg Eigendorf, Chief Sustainability Officer, is a member of the European Banking Federation (EBF) C-level ESG Risk Roundtable and serves on the Sustainability Committee of the Association of German Banks (BdB.).

Deutsche Bank also supports other associations including the Partnership for Carbon Accounting Financials (PCAF) and other bodies seeking to develop consistent industry-wide approaches in areas such as reporting, target setting, data, and standards. A selection of the bank's memberships and commitments linked to net zero can be found on the following page (please refer to the [Non-Financial Report](#) for a more detailed overview).

“Given the increasing regulatory activity worldwide, advocacy has become much more important for the bank.”

Excerpt of net-zero-related memberships and commitments

Category	Details
Memberships and commitments	Banking Environmental Initiative (BEI) by Cambridge Institute for Sustainable Leadership
	Carbon Disclosure Project
	CEO Climate Leaders Alliance (World Economic Forum)
	Climate Markets and Investments Association (CMIA)
	Collective Climate Commitment of the German Financial Sector
	Equator Principles (EP)
	Forest Investor Club
	German Ocean Decade Committee
	Green Climate Fund (GCF)
	Glasgow Financial Alliance for Net Zero (GFANZ) Principals Group and Workstreams: – Mobilising Capital to Emerging Markets and Developing Economies – Energy and Real Economy Transition – Passive Investment: Index Investing
	Green and Sustainable Finance Cluster Germany
	International Capital Market Association (ICMA) Green Bonds Principles
	Just Energy Transition Partnership – Vietnam and Indonesia
	Net Zero Banking Alliance (NZBA)
	Ocean Risk and Resilience Action Alliance (ORRAA)
	Paris Pledge for Action
	Partnership for Carbon Accounting Financials (PCAF)
	RE 100 and EP 100 by the Climate Group
	Science Based Targets Initiative (SBTI) Advisory Group
	Sustainable Finance Committee of the Federal Government
	Taskforce on Climate-related Financial Disclosures (TCFD)
	Taskforce on Nature-related Financial Disclosures (TNFD)
	The Nature Conservancy
	United Nations Global Compact
	United Nations Environment Programme Finance Initiative (UNEP FI) Principles for Responsible Banking
	World Green Building Council's Net Zero Carbon Buildings



4 – Broadening our ambitions

Broadening the scope of decarbonization ↘

Financed and facilitated emissions ↘

Assets under management ↘

Beyond carbon ↘

Nature and biodiversity ↘

Just transition ↘

Transition planning and reporting ↘

4 – Broadening our ambitions

The pages above describe Deutsche Bank's plans for decarbonization across all aspects of its activities, from the bank's own operations and supply chain to our business with both retail and corporate clients, together with the structures, processes, and activities which enable the transition toward net zero. As industry standards, data availability, reporting, technology, and client behavior evolve, Deutsche Bank aims to broaden the scope of its ambitions for its own transition to net zero as well as the bank's contribution to society's progress toward that goal.

Deutsche Bank aims to broaden the scope of its transition by focusing on three dimensions:

1. **Broadening the scope of decarbonization.** The bank seeks to widen the scope of its carbon reduction in its client activities in three areas: (i) progressing from financed emissions to financed and facilitated emissions, i. e. including capital market transactions; (ii) expanding the scope of disclosures of the net-zero target framework and financed emissions calculations; and (iii) capturing opportunities in its private clients' assets under management;
2. **Beyond carbon: nature and biodiversity.** The fight against catastrophic climate change involves not only the reduction of carbon emissions, but also protection of nature and biodiversity. Nature and climate-driven considerations are closely interlinked, and nature-based solutions will require significant investment in the years to come. Deutsche Bank envisages a series of measures to expand its business activities, and support enablers, across both areas;
3. **Beyond carbon: just transition.** The economy's transition toward net zero will have substantial social implications with regard to mitigation as well as adaptation. Some of these will most directly impact developing economies, and Deutsche Bank, as a global institution, seeks to factor these considerations into its transition planning.

“Deutsche Bank seeks to widen the scope of its carbon reduction in its client activities in three areas: carbon footprint of capital market transactions; net-zero targets for additional portfolios; and opportunities to reduce emissions from private clients' assets under management.”

Broadening the scope of decarbonization

Financed and facilitated emissions

Capital markets – an important source of emissions: Deutsche Bank plays an active role in supporting clients in accessing global capital markets across a wide variety of products. Capital markets present a significant source of financing and investment, and hence of carbon emissions.

The facilitated emissions differ from emissions linked to lending or investment activities ('financed') in two respects: first, they are predominantly off balance sheet, and second, they can take the form of 'flow' activity (temporary association with transactions) rather than 'stock' activity (held on the book). As of today, Deutsche Bank has not yet publicly reported on emissions linked to its capital markets activities, although this business contributes a significant share of the bank's sustainable finance volumes.

Reporting challenges: More work is necessary before detailed reporting, including pathways, becomes possible for facilitated emissions. Capital markets transactions and volume numbers vary significantly between reporting periods and are often driven by factors outside the bank's control. This was powerfully illustrated by market and macro-economic

volatility driven by COVID-19 and economic/interest rate headwinds triggered by the war in Ukraine. This inherent fluctuation presents a challenge for net-zero target setting. Considerable work and development of industry-wide standards and guidance is required to set meaningful targets for facilitated emissions.

A focus on high-emitting industries: Facilitated emissions are an important standalone metric that has a significant impact on directing capital to economic activities that enable the transition to net zero. In an initial phase, Deutsche Bank currently measures and reports internally emissions linked to capital market activities in key carbon-intensive sectors which are already in scope for the bank's financed emissions reporting: Oil & Gas (Upstream), Power Generation, Automotive (Light Duty Vehicle), Steel, Coal Mining, Cement, and Shipping. This seeks to create transparency around off-balance-sheet Scope 1 and 2 emissions. The bank also monitors 3-year rolling average trends for each sector to account for volatility in deal numbers and volumes, with the future aim of countering the year-on-year fluctuations in these metrics.

The path toward external reporting: Deutsche Bank's approach to estimating facilitated emissions is aligned with emerging industry standards, and the bank aims to publicly disclose the numbers once data and methodologies become sufficiently robust. Due to the different nature of the two metrics linked to the carbon footprint of the bank's corporate and investment banking business, financed and facilitated emissions will be reported separately.

Deutsche Bank aims to further broaden its net-zero target framework to include other sectors recommended by the NZBA, beyond the seven carbon-intensive industries for which targets have already been set (as set out in [section Corporate loan portfolio](#) above) and expand the coverage of financed emissions calculations beyond the corporate sector and residential real estate portfolios when data and methodologies allow us to do so.

NZBA requirements for member banks include net-zero pathways for twelve sectors in total; accordingly, Deutsche Bank aims to further broaden the scope of its net-zero target framework in line with this requirement. Furthermore, Deutsche Bank will continue to work to address the data quality and availability issues described in more detail above.

Assets under management

Strategy and status quo

Widening the offering to private clients: The Private Bank (PB) aims to be an agent of positive change and to support the sustainability efforts of its clients by providing them with thought leadership, advice, and solutions which help them contribute to a more sustainable world. PB follows a holistic ESG investment approach that assesses investment solutions against a set of environmental, social, and governance criteria. Some of the criteria are linked to reducing emissions, including but not limited to caps on exposure to coal and unconventional oil and gas. We continue to increase the number of qualifying ESG solutions in our offering and direct more capital flows into these products.

Incorporating ESG products and services into the offering: Supporting clients in their ESG transition requires thought leadership, solid advisory processes, and continued expansion of the Private Bank's ESG product and service offering. While fulfilling our duties of investing in line with clients' requirements, we aim to raise clients' awareness of

sustainable investing, capture their preferences, and provide them with solutions to allow them to invest in line with these preferences. By end of 2022, around 11% of the total assets under management (AuM) in the Private Bank and 15% of discretionary portfolio management (DPM) AuM were invested in ESG products.

Developing reporting and disclosure: We focus on increasing the transparency of the ESG credentials of investment solutions, thus enabling clients to invest according to their specific preferences. Greenhouse gas emissions and carbon footprint, among other ESG factors, have been measured and disclosed for our Discretionary Portfolio Management mandates since June 2023 in line with required disclosures outlined in the Sustainable Finance Disclosure Regulation (SFDR) Article 4⁴⁸.

Expanding the offering: Over the past years, we have expanded our product offering so that ESG products are now available in every investment product category. We currently have fulfillment solutions across all main product categories including discretionary solutions, funds, Exchange Traded

Funds (ETFs), structured products, green bonds, and private markets.

ESG thought leadership: We provide our clients with publications and insights that are key to helping them gain a deeper understanding of the subject matter and supporting them in their individual sustainability transitions.

⁴⁸ Please refer to the following links for details by Legal Entity: [Deutsche Bank AG \(DB AG\)](#) [Deutsche Oppenheim Family Office AG \(DOAG\)](#) [Deutsche Bank S.A.E.U. \(DB SAEU\)](#) [Deutsche Wealth Management S.G.I.I.C. S.A. \(DWM SGIIIC\)](#) [Deutsche Bank SpA \(DB SpA\)](#) [Deutsche Bank Trust Company Americas \(DBTCA\)](#) [Deutsche Bank Luxembourg S.A. \(DB Lux\)](#)

Building on progress to date

The Private Bank aims to advance its reporting capabilities and to accelerate learning and people capabilities through measures on several fronts:

1. Launching new ESG products across the full product offering throughout all product categories and asset classes to enable client servicing across different segments and client profiles. Among others, and taking our fiduciary duties into account, we aim to have >25% of DPM net new assets in ESG portfolios in 2023 onward
2. Increasing transparency through expanding our ESG reporting capabilities for portfolio managers, advisors, and clients, with the aim of delivering comprehensive ESG portfolio analytics capabilities to complement the traditional product/portfolio client reporting. This includes additional quantifications of emissions to enable clients to reduce their portfolios' carbon footprint, facilitating action-oriented advisory conversations
3. Investing in internal engagement, upskilling, and training to build out in-depth ESG advisory capabilities while we continue to raise clients' awareness through Chief Investment Officer thought leadership publications and events
4. Enhancing platform and data capabilities to underpin client ESG advisory journeys

“Supporting clients in their ESG transition requires thought leadership, solid advisory processes, and continued expansion of the bank’s ESG product and service offering.”

Beyond carbon

Nature and biodiversity

Climate change and loss of natural habitats and biodiversity are two of the most fundamental threats to the planet. While the intricate relationship between climate and nature is recognised, the real-world impact of synergies, trade-offs, and unintended consequences is still underappreciated. The ability of land and oceans to absorb vast amounts of carbon, if managed and protected appropriately, is an example of these synergies.

By contrast, negative trade-offs can arise if well-intended initiatives, such as planting monocultures or mining minerals for transition technologies in support of climate mitigation, lead to the loss of biodiversity or destruction of ecosystems. Nature also plays a highly important role in climate adaptation through nature-based solutions such as constructed wetlands.

Nature's importance in the global economy: Given these interlinkages and immense benefits that nature and biodiversity inherently bring, taking action to tackle the loss is paramount. Although

the international community has been focused on climate to date, nature is increasingly taking center stage, as also reflected on the agenda of the United Nation's Conferences of Parties (COP27 on climate and COP15 on biodiversity). This is of the utmost importance since nature provides services on which economic activity depends that are worth around \$125 trillion⁴⁹ per year; it thus has an immense impact on global gross domestic product.

Financing and investment opportunities: Nature entails both opportunities and risks for Deutsche Bank. It represents a market with very significant growth potential; the State of Finance for Nature has estimated the cumulative investment needed for nature-based solutions from 2021 to 2050 at around \$11 trillion⁵⁰. Deutsche Bank sees huge growth opportunities for meeting financing requirements, including nature-based solutions, that can be achieved through existing measures such as sustainability-linked loans, bonds tied to ESG KPIs, green loans, and bonds tied to specific environmental use of proceeds. We also see the potential for new products offered across all divisions, such as carbon and biodiversity credits as well as debt-for-

nature swaps for sovereigns or alternative investments with focus on natural capital.

Risk management challenges: On the other hand, destruction of nature has implications for several risk types, and credit risk in particular. For this reason, nature risk is currently being embedded into existing risk frameworks alongside climate risks. Deutsche Bank is committed to developing standards and adequate measurements for nature-related risks that also consider different magnitudes in industry sectors.

Integrating nature considerations into Deutsche Bank's enablers

The bank's efforts to contribute to nature-based solutions, like its decarbonization agenda, is supported by enabling activities, frameworks, and processes. These include:

- **Active external engagement:** Deutsche Bank actively engages with the industry on nature topics through initiatives such as the Taskforce on Nature-related Financial Disclosures (TNFD). In particular, the bank is a member of the TNFD

⁴⁹ Living Planet Report (2018), WWF, (p. 5)

⁵⁰ State of Finance for Nature – United Nations Environment Program (2022, p. 28)

Forum (the consultative body of the Taskforce), participated in a pilot of United Nations Environment Program (UNEP) for testing the TNFD framework, and is engaged in working groups with the UNEP and Principles for Responsible Banking (PRB) on scenario analysis and nature-related target setting. Additionally, Deutsche Bank is the leading banking partner of the Ocean Risk and Resilience Action Alliance (ORRAA).

- **Expansion of governance, policy, and control frameworks:** Since 2011, Deutsche Bank has been enhancing its Environmental and Social Policy Framework with nature-related provisions, including protection of high-sensitivity ecosystems and primary tropical forests and sector-specific requirements. In 2023, Deutsche Bank set up a workstream in its sustainability strategy change program to integrate nature into its policies, control processes, governance, and product and service offering in a holistic way. As a first step, Deutsche Bank leverages a widely accepted definition of nature as ‘all non-human living entities and their interaction with other living or non-living physical entities and processes’ (in line with IPBES Global Assessment, 2019) along the four realms of

land, freshwater, ocean, and atmosphere, as also proposed by the TNFD.

- **Portfolio and risk analysis:** Starting with this foundational definition, Deutsche Bank has begun mapping impacts and dependencies of its financing portfolio toward nature indicators. Through a nature materiality assessment based on tools developed by ENCORE (Exploring Natural Capital Opportunities, Risks and Exposures) and the Science Based Targets Network (SBTN), Deutsche Bank has identified the impact drivers and ecosystem services which are linked to types of critical natural capital loss.

This process will support Deutsche Bank in designing an overarching approach to nature which is founded in science and reflects the realities of Deutsche Bank’s portfolio. Deutsche Bank’s intention is to develop a holistic picture of how clients interact with nature by taking a systemic approach: understanding how different activities across sectors influence whole ecosystems, biomes, and realms. The nature challenge is multi-dimensional, and therefore requires a problem-solving approach that unlocks system-wide solutions.

Deutsche Bank is currently working on the developments of methods and approaches to measure, assess, and manage nature-related risks and opportunities, with the objective of incorporating nature into existing policies and risk frameworks.

Skills and expertise development: To make sure that Deutsche Bank’s nature-related activities are in line with the latest scientific developments, in October 2023 Deutsche Bank set up an advisory panel with independent external thought leaders specializing in nature, with the aim of creating nature-based solutions, conducting environmental risk assessments, and other activities.

The panel’s mandate is to opine on nature-related criteria and methodologies which will be integrated into Deutsche Bank’s processes, review nature-related adjustments of policies and frameworks, and suggest further recommendations to enhance

Deutsche Bank’s activities in relation to nature and biodiversity. It is our ambition to shape the nature-oriented sustainable finance industry and support our clients’ increasing needs for nature-based solutions.

Advisory panel members

Member	Institution
Gavin Edwards	WWF International
Dorothee Herr	Nature Markets
Dr. Beatriz Merino	The Nature Conservancy
Karen Sack	Ocean Risk and Resilience Action Alliance (ORRAA)
Dr. Karina von Schuckmann	Mercator Ocean International
Jessica Smith	United Nations Environment Programme Finance Initiative (UNEP FI)
Prof. Dr. Klement Tockner	Senckenberg Society for Nature Research
Dr. Anthony Waldron	University of Cambridge

Just transition

Addressing the transition challenge for developing economies: Reaching net zero for the world economy will require unprecedented economic, industrial, and technological changes, affecting all countries and levels of society in ways that are yet to be fully understood. Those nations least able to fund the transformation to a more sustainable economy will most likely be impacted the hardest by climate change. For example, developing countries are already suffering the most from climate change and, at the same time, face the greatest institutional and financial risks. Besides the potential adverse effects of climate change for countries of the global south, focusing on socially just transition is important, given that these countries not only are most impacted by climate change, but are also key emission contributors due to their emerging economies. Holistic approaches that bring together all countries in their various phases of development are therefore essential.

The need for differentiation: Deutsche Bank recognizes the concept of a socially just transition to net zero and the need to provide advisory services and financing for transition activities in a just and equitable manner. Financial institutions, governments,

investors, businesses, and civil society have to work together so that the transition promotes environmental, social, and economic justice. The concept of a just transition is evolving rapidly but still requires more context-specific guidance, as the requirements for a socially just transition differ by country and sector. Accordingly, Deutsche Bank is now in the early stages of incorporating socially just transition principles into its business activities and governance frameworks and processes.

The business perspective: activities to date: With its presence in 58 countries across the world, Deutsche Bank is well placed to contribute to the goal of socially just transition. Some examples of Deutsche Bank's support for socially just transition efforts include:

- Between 2020 and 2022, Deutsche Bank facilitated a cumulative total of €30 billion in sustainable financing and investments related to social activities, such as affordable housing and basic infrastructure. Financing has been allocated to promote more inclusive and sustainable economic growth. At the heart of a just transition is the principle that those affected need to be involved in shaping the transformation.

Supporting a socially just transition

Investitionsbank Berlin

Deutsche Bank acted as joint bookrunner on Investitionsbank Berlin's (IBB) inaugural €500-million social bond in September 2022. Based on IBB's social bond framework, the social bonds provided for the allocation of proceeds to financings relating to projects in the State of Berlin in the field of affordable housing, affordable basic infrastructure, SME financing and employment generation, and access to public goods and services.

European Union

Deutsche Bank acted as joint bookrunner on the inaugural €17-billion social dual bond offering in October 2020 under the EU's Support to mitigate Unemployment Risks in an Emergency (SURE) program, and most recently for its €6.548-billion social bond offering in December 2022.

— Deutsche Bank is working closely with the Indonesian Government and other international partners to mobilize at least \$10 billion in private financing to transition this emerging nation away from coal as its main energy source (Just Energy Transition Partnership/JETP). This global coalition aims to create a blueprint for how private finance can collaborate with governments, public finance, and others to implement ambitious climate objectives in emerging markets. In addition to the Indonesian JETP, Deutsche Bank is leveraging its strong local presence, financing capacity, and advisory capabilities for further JETPs.

Integration of social considerations into Deutsche Bank's enablers

For some years, Deutsche Bank has been factoring social considerations into its governance frameworks and processes. Some initiatives include:

— In 2012, Deutsche Bank joined the Thun Group of Banks to develop best practices in applying the United Nations (UN) Guiding Principles on Business and Human Rights (UNGPs) within the context of banking.

— Deutsche Bank has committed to the ten principles of the UN Global Compact and the UN Principles for Responsible Banking. Since 2012, social criteria have been incorporated into the bank's environmental and social (ES) due diligence process.

— In 2020, Deutsche Bank officially adopted the Equator Principles, an internationally recognized risk management framework for determining, assessing, and managing ES risks in project finance. Formally adopting and implementing these principles underscored our commitment to managing ES risks in development projects.

— The bank's Sustainable Finance Framework, established in 2020, outlines the applicable ES requirements for sustainable transactions.

Areas for future progress: In the years ahead, Deutsche Bank will assess the social implications of our Transition Plan in more detail, focusing on high priority sectors such as coal, oil, and gas. In addition, we will review how the bank's commitment to a socially just transition can be translated into key performance indicators and further embedded into existing and new product and service offerings, governance frameworks, and other enablers.

Transition planning and reporting

We are committed to continually advancing this initial Transition Plan as the tools, methodologies, and data available to determine the climate impact of our own operations and supply chain and our clients' activities all continue to evolve. In addition, we have started quantifying the investment needs associated with our path to net zero. For topics lacking a standardized approach within the industry, such as the calculation of facilitated emissions in our capital markets portfolio, or still requiring further refinement by Deutsche Bank, we have chosen to provide an outlook on our approach. This will provide the necessary transparency as to where further work is planned.

Disclaimer

The transition to a sustainable economy is a long-term undertaking. In its current stage, we are confronted with the limited availability of climate-related data. Use of estimates and models is inevitable until improved data becomes available. Our expectations for increasing data quality are based on reporting obligations as currently developed. New regulations on reporting will likely become effective in the coming years. Harmonized standards and calculation methods are expected to be developed and will also improve data quality.

This document includes metrics that are subject to measurement uncertainties resulting from limitations inherent in the underlying data and methods used for determining such metrics. The selection of different, but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary. The information set forth herein is expressed as of end of December 2022, and we reserve the right to update its measurement techniques and methodologies in the future.

We have measured the carbon footprint of our corporate loan portfolio in accordance with the standards we discuss in our report on corporate loan portfolio financed emissions and net-zero-aligned pathways for focus sectors ([Towards Net Zero Emissions](#)). Furthermore, we have measured the carbon footprint of our European Real Estate loan portfolio in accordance with

the standards we discuss in our report on [Residential Real Estate – Leading to Net Zero](#). In doing so, we partly used information from third-party sources that we believe to be reliable but which has not been independently verified by us, and we do not represent that the information is accurate or complete. The inclusion of information contained in this document should not be construed as a characterization regarding the materiality or financial impact of that information.

If emissions have not been publicly disclosed, these emissions may be estimated according to the Partnership for Carbon Accounting Financials (PCAF) standards. For borrowers whose emissions have not been publicly disclosed, we estimate their emissions according to the PCAF emission factor database. Since there is no unified source of carbon emission factors (including sustainability-related database companies, consulting companies, international organizations, and local government agencies), the results of estimations may be inconsistent and uncertain.

Past performance and simulations of past performance are not a reliable indicator and therefore do not predict future results.

This document contains forward-looking statements. Forward-looking statements are statements that are not historical facts; they include statements about our beliefs and expectations and the assumptions under-

lying them. These statements are based on plans, estimates, and projections as they are currently available to the management of Deutsche Bank Aktiengesellschaft. Forward-looking statements therefore speak only as of the date they are made, and we undertake no obligation to publicly update any of them in consideration of new information or future events. By their very nature, forward-looking statements involve risks and uncertainties. Several important factors could therefore cause actual results to differ materially from those contained in any forward-looking statement. Such factors include the conditions on the financial markets in Germany, in Europe, in the United States, and elsewhere, from which we derive a substantial portion of our revenues and in which we hold a substantial portion of our assets; the development of asset prices and market volatility; potential defaults of borrowers or trading counterparties; the implementation of our strategic initiatives; the reliability of our risk management policies, procedures, and methods; and other risks referenced in our filings with the U.S. Securities and Exchange Commission. Such factors are described in detail in our most recent SEC Form 20-F under the heading “Risk Factors.” Copies of this document are readily available upon request or can be downloaded from our [website](#).

Imprint

Deutsche Bank Aktiengesellschaft
Taunusanlage 12
60325 Frankfurt am Main (for letters: 60262)
Germany
Telephone: +49 69 910-00
deutsche.bank@db.com ↗

Contact

Feedback improves further development of the initial Transition Plan and can be a source of new impetus. The bank looks forward to hearing your opinions.

Please contact us at: mailbox.sustainability@db.com ↗

Online

Further details on the bank's sustainability strategy can be found on our [website](#) ↗.

Design

hw.design gmbh, Munich

© 2023 Deutsche Bank Aktiengesellschaft

Reproduction in full or in part only with the publisher's prior written approval; photos and copy to be credited to Deutsche Bank Aktiengesellschaft.