

Climate Report 2023

with reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

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1 Introduction

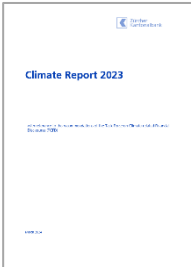
1.1 About this report

This report is based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The climate report begins with an overview of the climate-related milestones of Zürcher Kantonalbank. Section 2 “Governance” deals with the roles of the Board of Directors, the Executive Board and the various committees in managing climate-related opportunities and risks. Section 3 describes the strategic embedding and the short-, medium- and long-term climate-related risks and opportunities. Section 4 explains how our risk management classifies the impact of climate-related risks on the existing risk categories and how Zürcher Kantonalbank has structured the risk management process for this purpose. Section 5 “Key figures and targets” deals with our commitments to the Net-Zero Banking Alliance (NZBA) and Net Zero Asset Managers Initiative (NZAM) and provides an overview of the targets in the financing business, the investment business and our own operations. This section also describes our corresponding implementation measures.

1.2 Reporting with an overview of the sustainability and climate focuses

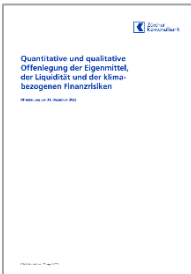
The scope of Zürcher Kantonalbank's climate reporting is based on Swiss legislation and the regulatory requirements of the Swiss Financial Market Supervisory Authority (FINMA).

Climate Report 2023



The climate report is based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). It contains qualitative and quantitative information on climate risks and opportunities and implements the first requirements of the Net-Zero Banking Alliance (NZBA), which Zürcher Kantonalbank joined in December 2022.

Disclosure of climate-related financial risks 2023



Regulatory disclosure is made in accordance with the requirements of the Swiss Financial Market Supervisory Authority FINMA, which, in turn, aligns with the TCFD's recommendations. The requirements set out in the FINMA Circular 2016/1 "Disclosure – Banks" are relevant for the disclosure.

The information on climate-related financial risks in accordance with Annex 5 of the Circular is part of the document "Quantitative and qualitative disclosure of capital, liquidity and climate-related financial risks" as at 31 December 2023, which will be available from the end of April 2024 at zkb.ch/disclosure.

Sustainability Report 2023



The sustainability report is the report on non-financial matters in accordance with Article 964a et seq. of the Swiss Code of Obligations. It was prepared in accordance with the GRI Standards.

Annual Report 2023



This annual report comprises the management report, the corporate governance report, the compensation report and the financial statements of the Zürcher Kantonalbank group and its parent company. Additionally, the management report includes the focus report for the attention of the Parliamentary Committee for the Supervision of Commercial Undertakings (AWU) of the Cantonal Parliament. The public service mandate comprises the support mandate, the service mandate and the sustainability mandate. Selected sustainability topics that are particularly relevant to the public service mandate for the financial year 2023 are also presented in the Annual Report 2023. A summary of the "Disclosure of climate-related financial risks 2023" is also included.

1.3 Our milestones

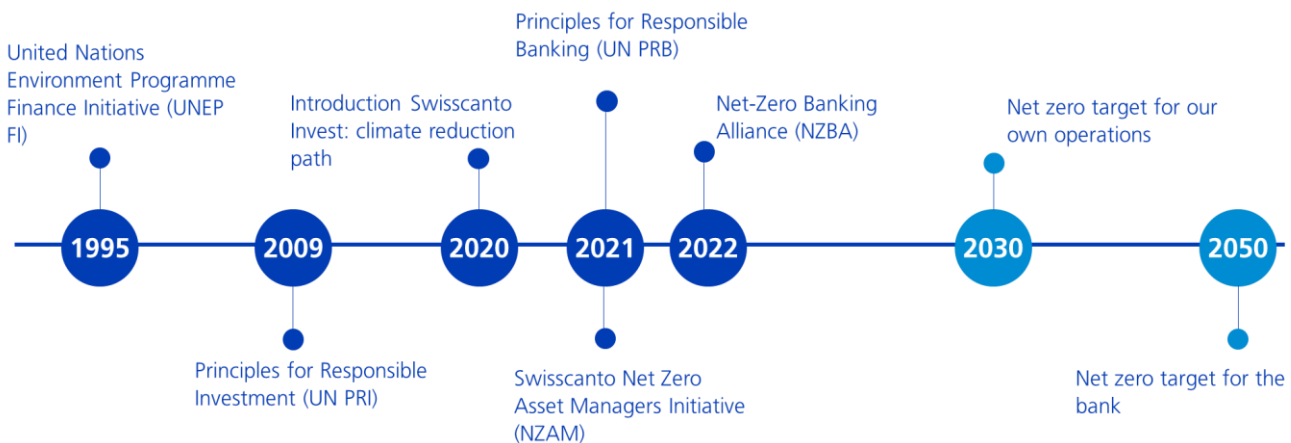
Zürcher Kantonalbank is aware of the role played by the financial sector in efforts to achieve sustainable development worldwide and greenhouse gas neutrality by 2050. We see ourselves as a service provider for society and the economy, particularly in Zurich as a place to live and do business. In our financing business and the investment business, as well as in our own operations, we are guided by the Paris Agreement and the goal of achieving greenhouse gas neutrality by 2050.

The purpose paragraph of the Zürcher Kantonalbank Act stipulates as of 1 January 2024 that Zürcher Kantonalbank should “promote the achievement of greenhouse gas neutrality”.

In 1995, Zürcher Kantonalbank became a member of the UN Environment Programme Finance Initiative. This was followed in 2009 by the signing of the United Nations’ six Principles for Responsible Investment (UN PRI). In 2021, we joined the UN Principles for Responsible Banking (PRB). In December 2022, Zürcher Kantonalbank joined the Net-Zero Banking Alliance (NZBA) convened by the UN and led by the financial sector. The bank thus aims to achieve net-zero greenhouse gas emissions by 2050. It undertakes in its business activity to pursue science-based targets aligned with the 1.5°C climate goal. As part of this commitment, Zürcher Kantonalbank has defined the first CO₂ reduction pathway for the financing business.

In our investment business, since 2009 we have been guided by the United Nations’ six Principles for Responsible Investment (UN PRI), and we report on them annually. In addition, our Asset Management division joined the Net Zero Asset Managers Initiative.

Our milestones on the way to net zero



2 Governance

Zürcher Kantonalbank's corporate governance is based on the cantonal and internal guidelines, which are explained under "Principles for governance" (section 2.1). The role of the Executive Board and the supervision of the Board of Directors in managing climate-related risks and opportunities (section 2.2) are then explained. In addition, the "Significance of the group companies with respect to climate-related financial risks" is categorised (section 2.3).

2.1 Principles for governance

Zürcher Kantonalbank's broad commitment to the various areas of sustainability, including climate protection, is based on a statutory mandate. In accordance with the purpose paragraph (§ 2) of the Cantonal Banking Act on Zürcher Kantonalbank, the obligation to support sustainable development (§ 2, section 1) and to promote the achievement of greenhouse gas neutrality (§ 2, section 2) applies as of 1 January 2024. Furthermore, it was added that Zürcher Kantonalbank should actively contribute to achieving the cantonal climate targets, in particular regarding energy-efficient building renovation (§ 7, section 4).

The Guidelines for the Fulfilment of the Public Service Mandate of Zürcher Kantonalbank issued by the Board of Directors set out the following: "When fulfilling its public service mandate, Zürcher Kantonalbank, as a universal bank, observes the principles of sustainability and the recognised rules of risk management." As a core task of Zürcher Kantonalbank's business activities, the public service mandate is reflected in the group strategy. The aforementioned guidelines define governance, in particular the broad anchoring of sustainability in all business units.

2.2 Climate as an integral part of governance

Board of Directors with the Risk Committee and Audit Committee

The Board of Directors, in its capacity as the bank's governing body, defines the group mission statement, the group strategy as well as the sustainability ambition in the group strategy. The Board of Directors and the Executive Board are informed quarterly about the risk and financial situation and on matters relating to the public service mandate and sustainability. The Board of Directors defines the strategic metrics for the public service mandate with the three sub-mandates of service, support and sustainability, including the further development of these sub-mandates.

The Risk Committee of the Board of Directors assists the Board of Directors in monitoring the bank's risk management and compliance with regulatory requirements regarding the management of risk. In particular, it carries out an annual structured assessment of the appropriateness of risk management (risk organisation, guidelines, processes) and initiates any necessary adjustments. The assessment covers all types of risk. In the third quarter of 2023, the Risk Committee of the Board of Directors also dealt with the risk categorisation of physical climate risks and transition risks for the individual business areas, based on the analysis of the Risk Committee of the Executive Board.

The Audit Committee supports the Board of Directors for the group and the parent company in monitoring the internal and external audit and the internal control system and in reviewing the annual financial statements, and it prepares its decisions in this regard. It also assists the Board of Directors in reviewing the report on non-financial matters (sustainability report) and the climate report.

Executive Board

The Executive Board ensures the fulfilment of the public service mandate within the scope of its responsibilities and powers, if necessary together with the Chairperson's Committee and the Board of Directors. The Executive Board (EB) is responsible for defining the various business policies. The sustainability policy (Sustainability Policy, see section 3.2) specifies the sustainability ambition set out in the group strategy and formulates guidelines on how sustainability is to be put into practice as an integrating business principle in all business activities in dealings with all stakeholders. The sustainability policy also explicitly addresses the topic of climate and defines exclusions for business activities, in particular for the lending business (lending policy), which are specified in internal guidelines. The internal guidelines for investment and asset management are also anchored in the sustainability policy.

The Executive Board is likewise responsible for the control and monitoring of the environmental management system. The CEO of Zürcher Kantonalbank has a special monitoring and control function as the environmental officer of the Executive Board.

The Public Service Mandate specialist unit is responsible for planning, implementing, developing, monitoring and communicating the public service mandate, which comprises the service obligation, sustainability mandate and support mandate. As a permanent member of the Public Service Mandate Steering Committee (SALA), the Head of the Public Service Mandate specialist unit is responsible for planning, controlling and coordinating the SALA meetings in close consultation with the Chairperson of the SALA.

Bodies and committees at management level

Public Service Mandate Steering Committee (SALA): The Guidelines for the Fulfilment of the Public Service Mandate of Zürcher Kantonalbank set out the details of the public service mandate of Zürcher Kantonalbank as laid down in § 2 of the Zürcher Kantonalbank Act. The public service mandate is enshrined in § 11. The SALA supports the Chairperson's Committee in the fulfilment of its task. Comprising representatives from all business units, it is coordinated by a specialist representative for the public service mandate. The SALA advises and supports the Chairperson's Committee, the Board of Directors and the Executive Board in all matters relating to the public service mandate. The CEO is the Chairperson of the SALA and the CFO is the Deputy Chairperson. The Chairperson is in close contact with the management of the Public Service Mandate specialist unit. The Public Service Mandate specialist unit plans and coordinates the meetings in consultation with the Chairperson of the SALA. The SALA manages the public service mandate, which comprises the service obligation, support mandate and sustainability mandate. It initiates and develops amendments to sustainability policy, promotes the integration of sustainability into business unit strategies and advises on the implementation of regulatory requirements relating to sustainability issues. The SALA also analyses important national and international frameworks, initiatives and alliances in the area of sustainability and prepares these agreements for signing. Additionally, it serves as a preliminary advisory body for the development of new products and services in which sustainability is a key feature or in which sustainability effects play a significant role. It is also responsible for handling cross-sector orders and initiatives in connection with the public service mandate. Furthermore, the SALA advises the Chairperson's Committee and the Board of Directors on the metrics for the public service mandate and the annual report on the public service mandate.

The Risk Committee of the Executive Board helps the Executive Board set up the bank's risk management processes, in particular to define the procedures for identifying, assessing, controlling, managing and monitoring credit, market, liquidity and operational risks as well as reputational and compliance risks. The Committee makes decisions within the scope of the responsibilities delegated by the Executive Board and carries out the comprehensive annual assessment of climate risks that is prepared by the risk organisation. The 2023 assessment is explained in section 3.3.

The Conflicts Committee helps the Executive Board handle transactions that entail particular business policy risks, conflicts of interest or particular effects on Zürcher Kantonalbank's reputation.

2.3 Significance of the group companies with respect to climate-related financial risks

Both the balance sheet and the income statement of the group are shaped by the parent company. The companies outside the parent company have very little influence on the risk assessment at group level. The following additional activities are located in the fully consolidated subsidiaries:

- Swisscanto: The Swisscanto Group includes Swisscanto Holding, the two fund management companies in Zurich and Luxembourg, as well as Swisscanto Pensions Ltd. Swisscanto is one of the leading Swiss providers of sustainable investment solutions. The assessment of the various aspects of climate risks contained in this climate report also covers the activities of the Swisscanto companies.
- Zürcher Kantonalbank Österreich AG: Zürcher Kantonalbank Österreich AG focuses on investment and asset management in Austria. Zürcher Kantonalbank Österreich AG has defined its strategy for dealing with sustainability risks and published it in accordance with local regulations. Information on the product manufacturer's sustainability risks is provided and explained to clients during the advisory consultation. Zürcher Kantonalbank Österreich AG has no material influence on the assessment of the group's climate-related financial risks.
- Zürcher Kantonalbank Finance (Guernsey) Ltd. and ZKB Securities (UK) Ltd.: The business activities of Zürcher Kantonalbank Finance (Guernsey) Ltd. are limited to the issue of structured investment products. The business activities of ZKB Securities (UK) Ltd. comprises equity brokerage and research services for professional clients. It gives our Swiss capital market clients direct access to an international investor base. The local operations in Guernsey and London do not give rise to any climate-related financial risks that significantly increase or reduce the group's risk profile. The business activities of the two companies were taken into account in the assessment of the parent company's trading business.

Accordingly, the climate report focuses heavily on the activities of the parent company and, where not insignificant, is supplemented by elements from the subsidiaries.

3 Strategy

Sustainability is an integral part of Zürcher Kantonalbank's group strategy, in accordance with the Zürcher Kantonalbank Act and the implementing Guidelines for the Fulfilment of the Public Service Mandate. The goals of "sustainable development" and "greenhouse gas neutrality" have been explicitly anchored in the paragraph of the Zürcher Kantonalbank Act on the banks purpose as of 1 January 2024 (section 3.1).

The sustainability policy of Zürcher Kantonalbank is central to implementation in the business units (section 3.2).

Section 3.3 describes the impact of climate-related risks and opportunities on the risk strategy.

3.1 Sustainability ambitions in the group strategy

Zürcher Kantonalbank understands sustainability to mean harmonising successful business activity with responsibility for the environment and society on a long-term basis. To this end, it sets itself the following ambitions and is guided by the Sustainable Development Goals (SDGs) of the United Nations.

Ambitions

We accompany our clients on the path to a more sustainable future.

We are a leading provider of sustainable offers (products and services).

Supporting the economy's transformation on the path to sustainability and net zero

Scaling innovative sustainability and climate solutions

We actively shape sustainability issues.

Social responsibility in the Zurich economic area

Memberships and partnerships

Ambitions

We accompany our clients on the path to a more sustainable future.

We are a leading provider of sustainable offers (products and services).



Supporting the economy's transformation on the path to sustainability and net zero

We accompany our clients on the path to a more sustainable future and towards net zero, focusing on areas where the potential for impact is large. As part of the Net Zero Assets Managers Initiative (NZAM) and the Net-Zero Banking Alliance (NZBA), we are guided by science-based climate scenarios and are aiming for net zero by 2050 at the latest.

Investment and pension business

In our investment business, we are guided by the United Nations' six Principles for Responsible Investment (UN PRI), and we report on them annually. We systematically consider ESG risks and opportunities in the investment process for active investment solutions and, when investing directly in investment funds, we focus on dialogue with the invested companies with a view to achieving the SDGs and greenhouse gas neutrality by 2050. Our Asset Management joined the Net Zero Asset Managers Initiative (NZAM) in July 2021.

Financing business

In our financing business, we are guided in particular by the objectives of both the federal government and the Canton of Zurich with a view to the 2030 Agenda and to achieving greenhouse gas neutrality by 2050.

Zürcher Kantonalbank joined the Net-Zero Banking Alliance in December 2022. Our bank thus aims to achieve net zero by 2050 and commits in its financing business to pursue scenario-based targets aligned with the 1.5°C climate target.



Scaling new sustainability and climate solutions

Achieving the SDGs and the net-zero target by 2050 requires technological entrepreneurial and social innovation. We are therefore committed to the development, scaling and introduction of new sustainability and climate solutions, for example as part of our start-up and private equity financing. We are one of the largest financiers of start-ups in Switzerland.

Ambition

We actively shape sustainability issues.



Social responsibility in the Zurich economic area

Our contribution to strengthening the canton's competitiveness and life quality is an important pillar of our public service mandate. We contribute to the life quality in the Canton of Zurich with our sponsoring engagements and commitments.

We aim for an adequate level of profitability and a steady distribution of profit to the Canton of Zurich and its municipalities.



Memberships and partnerships

We promote industry initiatives and join membership and partnership programmes to this end.

Memberships

- Energy Model Zurich
- Swiss Sustainable Finance (SSF)
- swisscleantech
- Sustainable Investment Forum (SIF)
- EUROSIF
- UNEP Finance Initiative (UNEP FI)
- Principles for Responsible Investment (PRI)
- UN Principles for Responsible Banking (PRB)

Given the importance of net zero 2050, we have joined the following climate-related initiatives:

- Net-Zero Banking Alliance (NZBA)
- Net Zero Asset Managers Initiative (NZAM)
- Partnership for Carbon Accounting Financials (PCAF)
- Task Force on Climate-Related Financial Disclosures (TCFD supporter)

Partnerships

- Fairtrade Max Havelaar
- Mobility Business Car Sharing
- naturemade star!
- Minergie Association

With our commitment to the Net-Zero Banking Alliance, we are specifying the sustainability ambition in the group strategy, i.e. our focus on supporting our clients. Net zero by 2050 is a challenge for society as a whole and can only be achieved if all stakeholders, i.e. politics, the real economy, the financial sector and individuals, work together. We are committed to promoting the transition to net zero by focusing on dialogue with our clients and offering suitable products and services that support the transition to net zero of our corporate and retail clients.

3.2 Sustainability policy

The group's sustainability policy implements the sustainability ambitions stipulated in its strategy and sets out the guidelines for all its business activities at group level, in the investment and pension business, in the financing business, in the deposit business, in payment transactions, in its own financial investments, in its operations, its procurement and its commitments. Specifically, requirements and exclusions are defined based on environmental, social and governance (ESG) aspects (zkb.ch/sustainability).

Zürcher Kantonalbank aims to minimise climate risks across its entire business operations and to establish transparency in this regard. It is guided by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The climate goals are based on the Paris Agreement and on achieving greenhouse gas neutrality by 2050. Zürcher Kantonalbank helps mitigate climate change by promoting energy efficiency and the substitution of fossil fuels with renewable energy sources.

In the financing business, Zürcher Kantonalbank specifically promotes sustainable developments in the areas of energy, mobility and buildings. When it comes to financing in the energy sector, Zürcher Kantonalbank demonstrates a commitment to further increasing the efficiency of the facilities and the gradual shift to renewable energy sources. Zürcher Kantonalbank advocates sustainable mobility concepts and supports innovative projects. Biofuels are only supported if they are produced from agricultural and forestry by-products and organic waste, and provided that they do not compete with food production. Zürcher Kantonalbank creates incentives for its clients to build, modernise and manage their properties and infrastructure in the most environmentally friendly and energy-efficient way possible, and we are constantly expanding our range of products and services in this area. We provide our clients with attractive solutions for energy-efficient renovations and new buildings.

We explicitly exclude the following direct forms of financing:

Fossil fuels:

- Coal mining, oil and gas extraction: As a bank which is strongly rooted in its local area, we have never financed the mining of coal and the extraction of oil or natural gas and, accordingly, are not involved in controversial oil and gas extraction processes (e.g. Ant-arctic/Arctic drilling, fracking, offshore oil projects, deep-sea drilling or projects related to the exploitation of oil-bearing tar sands).
- Fossil fuel power plants: We do not finance power plants fuelled by coal or oil.
- Commodity trading: We explicitly exclude coal used for electricity production (thermal coal) as well as crude and heavy oil. Further exclusions in commodity trade finance (CTF) are listed in section 5.2.2.

Nuclear power: New financing for the development and construction of nuclear power plants as well as their modernisation, where it is not for the purpose of maintaining safety levels, and entities whose predominant business activity is the production, trade and marketing of nuclear energy and/or the reprocessing of nuclear fuel and uranium enrichment plants are excluded. The financing of uranium mining is also excluded.

In the investment business, Zürcher Kantonalbank is guided by the United Nations' six Principles for Responsible Investment (UN PRI). ESG risks and opportunities are systematically integrated into investment solutions and, and when it comes to direct investments in our self-managed funds we focus on dialogue with the companies in which we are invested with a view to achieving the SDGs as well as greenhouse gas neutrality by 2050.

In standardised wealth management, dialogue with the companies in which we are invested, participation in investor initiatives and the exercise of voting rights take place indirectly through the choice of external asset managers.

We systematically ask our clients about their sustainability preferences in standardised wealth management and when providing investment advice. We provide our clients with comprehensive and transparent information about the ESG criteria of investment solutions.

In our active asset management investment solutions with traditional investments and direct real estate investments we take CO₂e emissions at portfolio level into account and are guided by the Paris Agreement (exceptions possible), with the result being that the CO₂e intensity of portfolios will be reduced by at least four per cent per year as standard with a quantitatively binding reduction path (base year 2019).

In the [capital market business](#), Zürcher Kantonalbank supports its clients when issuing green bonds. It also issues its own green bonds to refinance environmental loans and to refinance projects with energy-related objectives for the office buildings used by Zürcher Kantonalbank itself.

As part of its [corporate environmental programme](#), Zürcher Kantonalbank has set itself targets for reducing CO₂e emissions in its own operations. Target achievement is reviewed annually. 100 percent of remaining unavoidable CO₂e emissions have been offset since 2009, preferably nationally with projects in the Greater Zurich Area.

Zürcher Kantonalbank uses specific sponsorship commitments, to promote renewable energies, energy efficiency and sustainable mobility.

3.3 Assessment of climate risks

3.3.1 Summary

Climate-related financial risks influence the risk profile of Zürcher Kantonalbank, but are not among the top risks.

The key drivers of transition risks for the bank are climate legislation, changing client preferences, public perception and climate change itself. Areas that are potentially heavily affected by this include:

- the investment and asset management business with its offering of products with CO₂e reduction targets.
- the lending business, where future changes in legislation may impact the valuation of collateral (properties in the mortgage portfolio) and financing of companies in climate-exposed sectors.

Physical climate risks are significantly less important for the risk profile of Zürcher Kantonalbank than transition risks.

Areas that are potentially affected by physical climate risks include:

- the mortgage portfolio: the value of individual properties in the mortgage portfolio could be reduced, for example, as a result of flooding or landslides.
- banking operations: the accumulation of extreme weather events could impact bank operations in a very adverse flooding scenario.

The following chart summarises the 2023 risk assessment of climate-related financial risks, as carried out by the Risk Committee of the Executive Board following in-depth discussions. The assessment is based on the traditional risk categories, whereby compliance risks from the investment business are subsumed under business risks. The assessment is guided by a baseline scenario in which the Paris climate targets are largely complied with and the transition to a low-carbon economy occurs in an orderly fashion.

Overview of risk assessment 2023

Time frame	Physical risks		Transition risks	
	Med. – long term	Short term	Med. – long term	Short term
Operational risks: Banking operations	●○○○○	●○○○○	●○○○○	●○○○○
Credit risks: Financing business	●○○○○	●○○○○	●●○○○	●○○○○
Market risks: Trading and Treasury	●○○○○	●○○○○	●○○○○	●○○○○
Business risks: Investment and Asset Management business	●○○○○	●○○○○	●●○○○	●○○○○

○○○○ = no risk, ●●●● = high risk

Short term = time horizon up to 5 years, med. term to long term = 6 to 30 years

The risk assessment is generally low for all business areas. Strategic adjustment options need to be considered, particularly in the long term. Only the transition risks in the financing business and in investment and asset management are rated slightly higher in the medium to long term. The focus here is on reputation risks from lending (possible allegations against the bank due to financing provided to companies from climate-sensitive industries) or from greenwashing allegations, which could in particular impact income from the investment business.

The risk description and categorisation summarised above and detailed in the following sections are based on the following methodological principles: The first step was an analytical segmentation of the relevant business areas along the established risk categories. For example, the mortgage business, commercial financing and CTF (commodity trade finance) were assessed separately under the “credit risk” risk category. The risk factors and transfer mechanisms described by TCFD, among others, were then examined along these business areas to assess whether and to what extent the business area could be affected by them. The assessment of risk or materiality for the risk profile of Zürcher Kantonalbank is based on the economic significance of the respective business area for the bank on the one hand, and on a qualitative estimate of possible losses or loss of earnings on the other.

The risk assessment is implicitly based on scenario considerations and is guided by the NGFS (“Network for Greening the Financial System”) scenario framework. The focus here is on unfavourable scenarios, meaning that transition risks

are typically assessed based on a disorderly transition to a low-carbon economy (“disorderly transformation”) and physical risks based on a hot-house-world scenario. The impacts for Switzerland analysed by the Federal Office for the Environment in an extreme scenario (without climate protection measures, RCP8.5) serve as a benchmark (FOEN, Climate change in Switzerland, 2020). The risk analysis has shown that the greatest damage potential attributable to physical risks could arise as a result of a flood event in the residential sub-portfolio. The bank already carried out corresponding simulation calculations in 2021 to estimate the potential extent of damage; these revealed that even a very large event would not lead to a significant loss ratio.

The following sections explain in detail the identified risks and the qualitative assessment along the risk categories and business areas summarised above.

3.3.2 Operational risks: Banking operations

We consider the climate-related financial risks from banking operations to be low in the short to long term, both in terms of physical risks and transition risks.

With respect to physical risks, extreme weather events could impact bank operations in a very adverse scenario. The probability of the bank’s operations being adversely impacted by environmental factors, which would primarily include flooding, is considered to be very low. Most of the bank premises are located in the Canton of Zurich, while the buildings critical to operations are located in the city of Zurich. For systems that are critical to operations, there are fallback solutions that are regularly tested as part of business continuity management. Environmental and accident risks are an integral part of operational risk management.

Transition risks from banking operations are considered to be low. Compared to other sectors, the operational business of a bank (operation of buildings and other infrastructure) causes direct CO₂e emissions that are clearly lower than average. As a bank with primarily local operations, travelling also plays a subordinate role at Zürcher Kantonalbank. Zürcher Kantonalbank is continuously reducing its CO₂e emissions from banking operations as part of its environmental programme. Target achievement is reviewed annually. 100 percent of the remaining CO₂ emissions have been offset since 2009. The goal is net zero by 2030.

3.3.3 Credit risks: Financing business

We consider the climate-related financial risks to be low in terms of physical risks, while the transition risks are also low in the short term but slightly higher in the medium and long term.

Physical risks can arise, for example, from the negative impact of climate change on the value of collateral for collateralised loans. Our mortgage business is central. The properties could be damaged by extreme weather events and lose value as a result. The mortgage business is extremely important to Zürcher Kantonalbank. It is strongly focussed on the Greater Zurich area, while the mortgage portfolio is very highly diversified within the economic area. The financed properties are located in Switzerland. Here too, the most serious natural disasters are flooding, although the impact of flooding is generally limited to small areas due to geographical conditions. Additionally, in the event of damage caused by natural hazards, a mortgage loan is only at risk of default if the damage is not adequately covered by the building insurance and the uncovered damage exceeds the unencumbered portion of the value of the property. In the short term, the risk of material credit losses due to climate risks is therefore very low. It can be assumed that extreme weather events will become more frequent due to ongoing global warming. At the same time, however, it can be assumed that preventive measures to protect against damage caused by natural hazards will also improve. In the long term, physical risks in the mortgage business will therefore remain at a low level.

In the remaining lending business, physical risks are relevant for unsecured commercial financing to the extent that the borrowing companies themselves may be affected by physical climate risks. The portfolio is focussed on Switzerland and well diversified. The financed companies may have production facilities in regions that are more exposed to physical risks. The increase in extreme weather events could lead to greater price fluctuations for production resources

or temporarily have a negative impact on supply chains. In addition, climatic conditions will become even more important when choosing a location for production capacities. The significance of physical risks varies greatly depending on the sector and industry. In view of the credit portfolio's broad diversification in terms of sectors and the adaptability of the financed companies, physical risks do exist, but are low overall.

Transition risks stemming from the process of adapting to the shift to a low-carbon economy play a greater role for the financing business of Zürcher Kantonalbank than physical risks. Lending by the bank, borrowers' creditworthiness and the value of collateral can all be affected by transition risks: Firstly, as a result of changes in legislation (amended regulations for heating and cooling systems, higher taxes, etc.); secondly, as a result of technological innovations in the area of climate technology that limit the value of existing products or production processes; thirdly, as a result of client preferences shifting toward sustainable products and services; and fourthly, as a result of changes in the demands of the various stakeholders regarding how Zürcher Kantonalbank deals with the climate-related topics (reputational risks).

In the area of mortgage loans, amendments to the law can have a negative impact on property values. By virtue of the political processes in Switzerland and the fact that everyone is directly or indirectly affected by the changes, sudden legislative amendments without extended transition periods and with strong, negative impacts on the value of residential property are rather unlikely. Properties' heating and cooling systems are among the major sources of CO₂, making it obvious that legal regulations governing these systems will change. In addition to risks, however, the bank also has opportunities here in that it can provide advice on switching to more climate-friendly heating and cooling systems and finance the corresponding investments. In the area of investment properties, it is likely that investor preferences will shift towards "green" properties in the medium to long term and that pressure on the prices of properties with a poor carbon footprint will increase in the medium to long term.

In the area of corporate financing, the impact of climate-related transition risks on borrowers' creditworthiness will increase. Not only the risks arising as a result of changes in the legal framework (taxes, bans, etc.), but also risks related to technological breakthroughs must be taken into account. Innovations in the field of climate technology offer great opportunities, but they can also endanger existing business models. In the long term, some companies and sectors will have to adapt their products and services. Reputational risks are another aspect of transition risks in corporate financing. Different stakeholders have different expectations as to how climate issues should be factored into the bank's lending policy are diverse and sometimes even contradictory. Stakeholders' expectations of climate-compliant lending have changed and will also continue to change in the future. As a result, the reputational risk that arises for the bank if it fails to adequately adjust its sustainability and lending policies increases over time. The fact that contractual obligations in the lending business can extend over several years harbours the risk of long-term contracts that no longer meet current requirements. Lending in carbon-intensive sectors where transition is not possible or difficult is particularly important in terms of transition risks. For this reason, Zürcher Kantonalbank's lending policy excludes, for example, direct financing of coal mining, oil and gas extraction, fossil fuel-fired power plants or commodity trade financing with coal for electricity production (thermal coal) or with crude and heavy oil.

3.3.4 Market risks: Trading business and financial investments

We consider the climate-related financial risks from the trading business to be low in the short to long term, both in terms of physical risks and transition risks.

In the case of physical risks, there is only a very low probability of financially significant losses from extreme weather events on the trading positions. The ongoing management of the trading portfolio leads to a low risk of stranded assets in both the short and long term.

In terms of transition risks, it cannot be ruled out that legislation, client preferences or public pressure could restrict the universe of tradeable financial instruments in the medium to long term. The majority of trading transactions have short terms and hedging options are generally available. This makes it possible to adjust the exposure and therefore the risk profile quite quickly. The trading business of Zürcher Kantonalbank focuses on client trading and the trading book is

highly diversified at issuer level, which also has a risk-reducing effect. Zürcher Kantonalbank does not trade in emission certificates. Due to the dynamic nature of the trading business, there is a fairly high level of uncertainty involved when assessing risks in the long-term perspective.

The financial investments in the liquidity portfolio, a portfolio of high-quality bonds, are intended to be held until maturity. The factor of primary relevance with respect to climate-related financial risks is the selection of issuers. There are diversification requirements for the portfolio. Securities of issuers from sectors with a particularly high carbon risk exposure are excluded from the investment universe, which reduces the risk of transition risks. Stricter legal or regulatory criteria could further restrict the investment universe in the medium to long term. The probability of defaults due to physical risks is classified as low.

3.3.5 Business risks: Investment and asset management

We consider the climate-related financial risks to be low in terms of physical risks, while the transition risks are also low in the short term but slightly higher in the medium and long term.

Investment and asset management form part of Zürcher Kantonalbank's core business and is enormously important for the success of the commission business and services. On the one hand, this relates to investment advice and wealth management services and, on the other, to the bank as a producer of investment products (e.g. Swisscanto investment funds). The bank's fiduciary responsibility in investment and asset management gives rise to fiduciary risks. A fiduciary risk may arise if Zürcher Kantonalbank does not act in the client's best interests when providing advice or managing client assets. Fiduciary risks are made up of business and strategic risks, operational risks and compliance risks, all of which are also influenced by climate risks and other factors. The systematic investment process with integrated risk management in the Investment Solutions organisational unit ensures that investment decisions are made within the risk ranges defined during investor profiling. The client is informed in advance of the investment risks corresponding to the risk ranges. In Asset Management, our sustainability strategy is an integral part of the active investment process and risk management. The systematic integration of climate-related aspects makes it possible to recognise risks at an early stage. An understanding of ESG data and a robust information platform integrated into the portfolio management system are key elements of our implementation.

Physical climate risks: Defaults or sharp decreases in the value of individual issuers' securities as a result of extreme weather events cannot be ruled out. However, diversification in the investment portfolios and ongoing adjustments to asset allocation reduce the risk of major losses from individual events. We therefore consider the physical risks to be very low overall in the short term and low in the long term.

Transition risks: In the context of investment advisory and wealth management, changes in ESG preferences or ESG investment solutions that do not meet requirements can lead to a loss of income. There is also a risk of greenwashing, meaning that clients are consciously or unconsciously misled about the sustainable characteristics of financial products or services. According to the guidelines of the Swiss Bankers Association, three levels are relevant with regard to greenwashing: financial service provider, financial service and financial instrument.

Zürcher Kantonalbank reduces these risks as follows:

- a) at financial service provider level through careful, comprehensive training of the employees concerned in accordance with their specific function and a structured, digitally supported advisory process,
- b) at financial service level through the systematic consideration of ESG preferences in the advisory and investment process as well as transparent information,
- c) at financial instrument level, through both a consistent sustainability-based approach in the area of CIO investment solutions as well as through the sustainable product lines – "Responsible" and "Sustainable" – of Swisscanto investment funds and pension products, the criteria of which are transparently disclosed to investors (see also section 5.3.2 on the topic).

4 Risk management

4.1 Risk management structures and process

The management of climate risks as part of the sustainability risks forms an integral part of Zürcher Kantonalbank's risk management processes. Sustainability aspects are taken into account in the identification and assessment of the respective risk categories and, where material, in their control, management, monitoring and reporting.

Risk management process

Zürcher Kantonalbank breaks the risk management process down into the following process steps:



4.1.1 Operational risks: Banking operations

Identification & assessment	<p>When identifying and assessing climate-related financial risks from banking operations, the focus is on the OpRisk assessment of not only environmental and accident risks, but also the greenhouse gas emissions of Zürcher Kantonalbank (referred to as operational emissions). Using measurement data and its own analyses of the carbon footprint, the bank identifies the processes that account for the majority of emissions and where the greatest reduction potential exists. A specialised survey tool is used for this purpose. As a member of the "Energy Model Zurich" network, representatives of Zürcher Kantonalbank also regularly meet with experts from other large companies in the region to discuss issues and opportunities related to improved energy efficiency.</p>
Control & management	<p>Risk management for the direct physical risks of banking operations (e.g. flooding) is carried out in Business Continuity Management (BCM). BCM focuses on the prevention and management of serious crises that threaten the company's existence. The scenarios include not only the failure of important company buildings as a result of extreme weather events, but also the loss of critical suppliers and partners. Regardless of the event that could lead to their failure or absence, business continuity plans are in place for critical business processes. The emergency organisation set up specifically for this purpose is responsible for managing the situation in the event of an operational crisis.</p> <p>As a risk-controlling element in the environmental aspect of banking operations, Zürcher Kantonalbank has an environmental programme in place at the parent company that sets out the environmental targets for operational ecology. The targets set in the bank's environmental programme relate to CO₂e emissions, CO₂e offsetting (also CO₂e offsetting with negative emissions technologies in future) and energy consumption. 100 percent of unavoidable CO₂e emissions have been offset since 2009.</p> <p>The targets are set on a medium-term horizon and approved by the Executive Board. These targets focus on making ongoing reductions to CO₂e emissions and boosting environmental performance. Zürcher Kantonalbank promotes sustainability in the bank's operations as a central component of its environmental management system.</p>
Monitoring & reporting	<p>Business continuity tests are carried out on a regular basis to review the business recovery options implemented, the business continuity plans, the emergency response and operational crisis management. Among other things, emergency drills are organised to test the ability to react to specific crisis events.</p> <p>Target achievement of the environmental programme is reviewed annually. The environmental management system at Zürcher Kantonalbank has been certified to ISO 14001 since 2002 and</p>

is audited annually. The internal Public Service Mandate specialist unit prepares an annual report, which is published on the bank's website. This annual report contains information on the reduction in CO₂e emissions from banking operations already achieved. For internal purposes, the Sustainability specialist unit of the IT, Operations and Real Estate business unit prepares a separate annual report on its activities, targets and target achievement.

4.1.2 Credit risks: Financing business

Identification & assessment At line item level, risk identification and assessment in the financing business look at the applicant's creditworthiness and credit standing and also assess the collateral (mortgage, readily marketable collateral, etc.), depending on the type of credit. Whether the financing complies with the lending rules, including the sustainability requirements, is checked during the loan application process. For example, when assessing creditworthiness in the commercial financing business, the regulations require that the potential impact of changing factors, including ESG requirements, be included in the assessment.

At portfolio level, analyses of climate-related financial risks are carried out as required to identify and assess risks. Examples of this are the analyses of the mortgage portfolio or the corporate credit portfolio, as shown in section 4.1.4 Key figures and targets.

Control & management With respect to the financing business, risk management takes the form of regulations in the sustainability and lending policy that are issued by the Executive Board. These regulations are specified in the internal credit risk regulations with detailed specifications on excluded, undesirable transactions and transactions with special risks. They also explicitly relate to financing with a focus on climate and energy.

ESG aspects are taken into account in the lending process, thereby giving preference to sustainable and future-oriented business models. In its financing business, Zürcher Kantonalbank also promotes offers that help reduce greenhouse gas emissions. Examples of this from the mortgage business include advice on replacing heating systems in properties or discounts for environmentally friendly construction.

Monitoring & reporting The management of climate-related financial risks for the credit portfolio focuses both on the exclusion of certain sectors as well as on supplementary offers for clients in the bank's financing business. The controls for monitoring compliance with the lending rules also include the requirements of the lending policy.

The internal monitoring report on the credit portfolio contains information on exposures in climate-sensitive sectors, but does not yet include any elements such as the specific CO₂e emissions of companies in the credit portfolio. The availability of public, quality-assured data on greenhouse gas emissions – especially for unlisted companies – is expected to continue to improve over the next few years, enabling meaningful reports that can, support risk management in turn.

4.1.3 Market risks: Financial investments

Identification & assessment The CO₂e intensity of the financial investments for which the Treasury department is responsible, consisting of a very good quality bond portfolio, is periodically determined on the basis of publicly available information and compared with a benchmark from the investment universe available for regulatory purposes. When Treasury purchases financial assets, it also checks that the issuer does not belong to an industry that excludes the sustainability policy for financing.

Control & management	Financial assets within the remit of the Treasury department have been subject to requirements on limiting climate-related financial risks since the start of 2022: Firstly, issuers are excluded if they come from sectors that are excluded under the bank's sustainability policy in the financing business as well, and secondly, the requirements state that the average revenue-weighted CO ₂ e emissions of the portfolio must be at least 35 % lower than in the reference portfolio of the investment universe limited by the internal investment rules.
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Monitoring & reporting	Compliance with the requirements for limiting the CO ₂ e intensity of the financial investment portfolio is monitored and reported on by Treasury Controlling.
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4.1.4 Business risks: Investment and asset management

Identification & assessment	<p>Risk identification and assessment in investment advisory and wealth management focuses on the financial risks in the investment products and in the investment portfolios of clients who receive investment advice services or have commissioned the bank with wealth management. In the portfolio consulting mandates and wealth management activities of Investment Solutions, the integration of sustainability criteria into the investment process enables a view of the opportunities and risks of investment decisions that is broadened to include sustainability-related aspects. To assess sustainability, Zürcher Kantonalbank relies on data from external data providers. As part of the risk analysis, CO₂e intensities (Scope 1 and 2), key figures for identifying assets particularly affected by climate risks (also known as "stranded assets") and ESG criteria from the financial services provider MSCI are used. Additionally, one of the aims of the engagement with external managers regarding these criteria (the stewardship approach) is to improve the sustainability profile (including climate aspects).</p>
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Asset Management: Under the "Swisscanto by Zürcher Kantonalbank" brand, Zürcher Kantonalbank utilises graduated combinations of sustainability approaches for its investment fund and pension products, depending on the product line. Asset Management uses the following criteria (approaches) to assess sustainability: stewardship, avoidance of controversies, ESG integration and climate integration. The product approval process ensures that the contractually stipulated sustainability aspects of the products comply with legal requirements and compliance can be subsequently monitored by the investment controlling function. Product authorisation, risk management function and investment controlling are important elements for reducing greenwashing risks.

Control & management	<p>Portfolio management mandates are implemented in accordance with the ESG integration approach. They must have a minimum rating of 'A' at portfolio level, using ESG ratings from MSCI. In addition, further-reaching sustainability criteria for the active sustainable investment solutions – such as the systematic avoidance of controversies, the reduction of pollutants that are harmful to the climate and the pursuit of a stewardship approach – apply to the investment instruments used in the portfolios. These are assessed by the ESG Board, an internal advisory committee of the Investment Solutions organisational unit, and approved for use in the mandates. In the case of portfolio consulting mandates, the reference portfolios used must meet the same conditions as portfolio management mandates. However, as clients make the investment decisions for portfolio consulting mandates and determine the composition of the advisory portfolio as a result, this could result in deviations in the advisory portfolios.</p>
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Asset Management: The Paris Agreement is taken into account in most of Swisscanto's traditional, active investment funds. In addition, companies are encouraged through active dialogue to formulate and implement effective greenhouse gas (CO₂e) reduction targets, among other things. Capital allocation is used to reduce investments in CO₂e-intensive companies and countries that do not have a strategy for reducing their CO₂e emissions in favour of CO₂e-efficient companies and countries and those that pursue CO₂e reduction targets.

Monitoring & reporting

Investment advice and wealth management: Compliance with the requirements mentioned under "Control & management" is monitored daily as part of the risk management process. The audit results form an integral part of internal risk management reporting and the internal risk dialogue between the risk manager and risk management. Zürcher Kantonalbank transparently discloses the ESG criteria of the client portfolios in discussions with clients.

Asset Management: For transactions in the fund assets of Swisscanto funds, compliance with exclusion criteria ("Sustainable" and "Responsible" criteria) is checked before the transaction is concluded and compliance is monitored daily by the fund management company's investment controlling department, independently of the respective fund manager. The degree of CO₂e reduction target achievement is monitored by the risk management unit and the fund management company's investment controlling department. The degree of CO₂e target achievement and the Swisscanto Sustainability Rating are also components of the publicly available sustainability reporting for investors. In addition, the Risk Management unit uses sustainability stress tests in its measurement, monitoring and reporting of risks.

5 Key figures and targets

This section addresses the commitments of Zürcher Kantonalbank to the Net-Zero Banking Alliance (NZBA) and Net Zero Asset Managers Initiative (NZAM). To this end, an overview of the targets in the financing business, in the investment business and in the company's own operations is provided. In the investment business, the target only became mandatory in Asset Management as part of NZAM.

This section also discusses the measures we are taking to achieve our targets, taking into account climate-related opportunities.

5.1 Overview of climate targets of Zürcher Kantonalbank

Area	Targets	Base year	Methodology	Scenario
Financing business				
Residential mortgage business ¹	2030: 8.7 kg CO ₂ /m ² energy reference area (ERA) (44 % reduction) 2040: 0.9 kg CO ₂ /m ² ERA (94 % reduction)	2022	PACTA ² / own methodology Metrics: intensity (scope 1)	Energy Perspectives 2050+ (EP 2050+), Zero basis scenario residential property; 1.5°C compatible
Investment business				
As part of our sustainability standard for active investment solutions, ³ we pursue a CO _{2e} reduction in our investments in traditional asset classes.				
Asset Management				
20 % of AuM ⁴ of Asset Management	CO _{2e} intensity reduction of at least 4 % per year ⁵	2019	Own methodology Metrics: intensity (scope 1, 2)	IPCC "well below 2°C" scenario (67 %)
25 % of AuM of Asset Management (Net Zero Asset Management Initiative ⁶)	CO _{2e} intensity reduction of at least 7.5 % per year ⁵	2019	Own methodology Metrics: intensity (scope 1, 2)	IPCC 1.5°C scenario (50 %)
Own operations				
Own operations	2030: reduction to 1,800 tonnes of CO _{2e} ⁷ Offsetting of the remaining emissions through negative emission technologies (NET)	2022 ⁸	VfU (German Association for Environmental Management) key figures calculation tool Metrics: absolute (scope 1, 2, 3) ⁹	-

¹ Includes only residential properties (single-family homes, multi-family homes and condominiums)

² Paris Agreement Capital Transition Assessment

³ Definition of "active investment solutions": relates to portfolio management mandates and investment funds, with the exception of indexed, individualised and third-party managed investment solutions and investment funds in the area of alternative investments.

⁴ Assets under management

⁵ Plus economic growth

⁶ Interim targets according to NZAM are published in section 5.3 and at netzeroassetmanagers.org/signatories/swisscanto-invest/

⁷ We have already reduced our operational emissions by 68 percent since 2010.

⁸ The last environmental programme for 2018–2022 serves as the basis for our new 2023–2030 environmental programme.

⁹ The following categories of the GHG Protocol are relevant within scope 3: paper (category 1), fuel and energy-related emissions (not included in scope 1 or 2) (category 3), waste (category 5) and business travel (category 6). NB: We are currently evaluating how we can expand the coverage of the operational emissions of Scope 3 categories.

5.2 Key figures and targets for the financing business

Joined Net-Zero Banking Alliance (NZBA)

Our bank joined the Net-Zero Banking Alliance in December 2022 and within 18 months has committed to setting sector-specific, emissions-based climate targets that are in line with the latest findings of climate science. As part of this commitment, Zürcher Kantonalbank has defined the first CO₂ reduction pathway for the **residential mortgage business**. By joining, we are responding to the call of the Swiss Bankers Association and contributing to efforts to make Switzerland a leading financial centre.

The [Net-Zero Banking Alliance](#) convened by the UN brings together over 143 banks from more than 44 countries, which currently accounts for around 41 percent of global banking assets.

Climate target of the Canton of Zurich

In May 2022, Zurich voters decided to include the climate protection article in the cantonal constitution with 67 percent in favour. The new article defines the target of greenhouse gas neutrality, or “net zero” for short. It gives the canton and the municipalities a binding mandate to work towards limiting climate change and its effects. The target of greenhouse gas neutrality by 2040, or 2050 at the latest, is enshrined as part of the canton’s [long-term climate strategy](#). To this end, it is focusing on two strategic areas of action in the buildings sector: replacing fossil fuel heating systems with heat pumps and refurbishing buildings to make them more energy efficient. The stricter [Energy Act](#), which came into force on 1 September 2022, sets the regulatory framework. This stipulates that oil and gas heating systems must be replaced with environmentally friendly heating solutions at the end of their service life.

5.2.1 Residential mortgage business

Area	Targets	Base year	Methodology	Scenario
Residential mortgage business ¹⁰	2030: 8.7 kg CO ₂ /m ² ERA (44 % reduction)	2022	PACTA ¹¹ / own methodology	Energy Perspectives 2050+ (EP 2050+), Zero basis scenario
	2040: 0.9 kg CO ₂ /m ² ERA (94 % reduction)		Metrics: intensity (scope 1)	residential property; 1.5°C compatible

Objective

Our sector prioritisation is based on the environmental relevance of the relevant sectors and the financial exposure on our balance sheet. In Switzerland, the building sector is responsible for almost 40 percent of energy consumption and around a quarter of CO₂ emissions, with fossil fuel heating systems being the primary cause of CO₂ emissions. At the same time, our mortgage business is the largest item on the assets side of our balance sheet, totalling CHF 100.9 billion. Of this amount, around CHF 83 billion relate to mortgages for residential property. We therefore consider the decarbonisation of our mortgage business to be a key area of impact for our bank.

The reduction pathway was determined according to the modelling described below. The due dates for refurbishments and heating system replacements were extrapolated for the future according to the assumed service life of the components (see Appendix 6.1), taking into account the estimated proportions of fossil fuel heating systems being replaced by climate-friendly systems as shown in the table below.

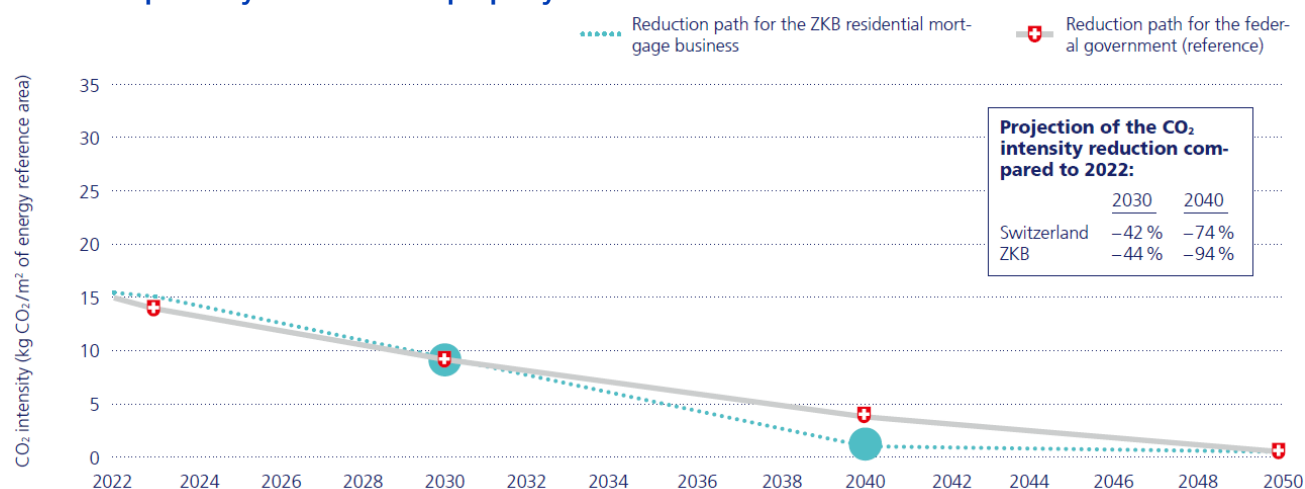
Our target is based on Switzerland’s long-term climate target of net-zero greenhouse gas emissions by 2050. This target is intended to help the global community limit the temperature increase to 1.5°C. The plan for achieving net

¹⁰ Includes only residential properties (single-family homes, multi-family homes and condominiums)

¹¹ Paris Agreement Capital Transition Assessment

zero is being worked out by the Federal Council as part of the [long-term climate strategy](#). The [Energy Perspectives 2050+ \(EP 2050+\)](#) form an important basis for this. The Swiss Federal Office of Energy has modelled the development of the energy system in the net zero scenario of EP 2050+. This can be used to calculate the development of CO₂ emissions per energy reference area for residential properties up to 2050.

Reduction pathway for residential property



As a starting point for the target, a value of 15.4 kg CO₂/m² ERA is assumed. ZKB's reduction pathway is based on the reduction pathway of the federal government, which the bank aspires to exceed from 2030 onwards.

Methodology and data

The target calculation for the ZKB residential reduction pathway included all mortgage financing for single-family homes (SFH), multi-family homes (MFH) and condominiums for which the heating data required for the calculation was sourced from the Register of Buildings and Dwellings (RBD, 93 percent of the financed properties) or from data from the Minergie association (7 percent of the financed properties). This corresponds to 96 percent of the financing volume, i.e. 96 percent of the 80,171 million are covered in the target calculation. Because it has more up-to-date information, priority was given to the heating information provided by the Minergie association. Data on the energy efficiency of the financed buildings, i.e. on the refurbishment of façades, windows, roofs and basement ceilings, is still unavailable. Excluding refurbishments (worst-case scenario), the CO₂ intensity of the residential financing portfolio is 34.3 kg CO₂ / ERA.¹² This value was calculated using the PACTA calculator as at the reporting date of 31 December 2022. Zürcher Kantonalbank participated in the Paris Agreement Capital Transition Assessment (PACTA) conducted by the federal government in 2022.

Target for residential mortgage business

NZBA sector	Financial exposure as at 31.12.2022	Coverage target	Emission scope	ZKB baseline 2022	Reduction by 2030 (%)
Residential mortgage business	80,171 million ¹³	96 %	1	15.4 kg CO ₂ /m ² ERA	44 %

As the CO₂ intensity of the building also applies equally to each individual apartment in the building, the CO₂ intensity was also calculated for condominium financing (CNDO) at building level. The CO₂ intensity of the overall portfolio was determined based on the area-weighted individual intensities of the financing, with condominiums being included in the overall intensity based on the proportion of the area of the financed apartments.

¹³ This corresponds to 83 percent of the entire mortgage business.

To arrive at an estimate of the CO₂ intensity with more practical relevance, Zürcher Kantonalbank assumes that the refurbishments were carried out after the end of the average service life of the building components (façade 40 years, windows 35 years, roof 50 years, basement ceiling 50 years). This assumption results in a value of 17.8 kg CO₂ / ERA. According to [documents provided by the federal government](#), the information on heating systems in the RBD is still subject to major uncertainties. At the time of calculation, almost 60 percent of the heating system data in the Canton of Zurich still came from the 2000 census. As an oil or gas heating system only has an average service life of around 20 years, many homeowners are likely to have already replaced their fossil fuel heating system with a climate-friendly one. Finally, the new Energy Act of the Canton of Zurich, which came into force on 1 September 2022, requires fossil fuel heating systems to be replaced with climate-friendly heating systems (see the section “Climate target of the Canton of Zurich”). Exceptions are only possible in cases of financial hardship and exceptional circumstances. This strict regulation has been in the pipeline for several years. According to the [Fachvereinigung Wärmepumpen Schweiz \(Swiss Heat Pump Association\)](#), sales of heat pumps in Switzerland increased significantly from 2017 onwards. When determining the status quo and the future reduction pathway, we therefore assume that a certain percentage of financing (see Table 3) which, according to the RBD, has a fossil fuel heating system that has been due for replacement since 2017 (based on an assumed service life of 20 years), has actually already been or will be replaced by climate-friendly heating systems. Assuming that the building components have been refurbished and that a portion of the heating systems were replaced at the end of their service life, the starting point for the reduction pathway is an intensity of 15.4 kg CO₂ / ERA.

Estimated proportion and number of fossil fuel heating systems substituted by climate-friendly ones by year in which the heating system is due to be replaced

Year	2017	2018	2019	2020	2021	2022– 2029	2030– 2034	2035– 2039	2040– 2050
Proportion of climate-friendly substitution	10 %	20 %	40 %	60 %	80 %	94 %	96 %	98 %	99 %
Number of climate-friendly substitutions	298	691	1,226	2,433	1,986	20,811	16,111	12,069	3,525

5.2.2 Commercial financing business

Zürcher Kantonalbank is guided by the internationally established UNEP-FI or TCFD recommendations on the disclosure of transition risks from credit exposure to climate-sensitive and, as a subset thereof, carbon-related industries. TCFD defines carbon-related as industries associated with the energy and utilities sectors, according to the Global Industry Classification Standard, excluding water supply and renewable power generation. Zürcher Kantonalbank more comprehensively describes as climate-sensitive those industries that are exposed to higher transition risks due to their greenhouse gas emissions. Zürcher Kantonalbank bases its delimitation on emission statistics and uses the Swiss or European industry classification. The commodity trade finance (CTF) sub-portfolio is reported separately, irrespective of the industry, and is subject to the following restrictions under the bank’s sustainability policy. The following figure shows the unsecured loans and advances in the companies client portfolio in line with this classification.

In terms of the total balance sheet exposure in this portfolio, at the end of the year, climate-sensitive sectors accounted for around 7.8 percent or CHF 2.8 billion (2022: 7.4 percent or CHF 2.5 billion). This includes the entire energy sector, which, however, consists almost exclusively of financing for sustainable energy sources. In addition to components manufacturing and repair, the automotive sector also includes, in particular, the selling and financing of vehicles. The transport sector mainly includes passenger transport in the tourist sector and local transport as well as freight transport by road. In accordance with the aforementioned exclusion criteria in the sustainability policy, Zürcher Kantonalbank does not provide direct financing in the “coking and petroleum refining” industry, which TCFD designates as carbon-related.

In the financing business, Zürcher Kantonalbank is guided in particular by the objectives of both the federal government and the Canton of Zurich with a view to Agenda 2030 and achieving greenhouse gas neutrality by 2050.

It therefore does not provide direct financing for coal mining, oil / natural gas production or fossil fuel-fired power plants. Commodities that are explicitly excluded in commodity trade finance (CTF) include: coal for electricity production (thermal coal), crude and heavy oil, bitumen/asphalt, asbestos, uranium, precious woods, live goods, diamonds, rare earth metals, perishable goods and non-certified palm oil. In the case of commodity trading clients, the bank systematically reviews sector-specific ESG risks and opportunities during onboarding as part of due diligence and on an annual basis. This review is based on reported data or data collected through the bank's own questionnaires.

Unsecured loans and advances in the corporate client portfolio (climate-sensitive and other industries)

Industry designation	31.12.2023			31.12.2022
	Balance sheet exposure in CHF million	as % of unsecured exposure	as % of balance sheet exposure	as % of balance sheet exposure
Mining/crushed rock and earth	3	0.0	0.0	0.0
Metal production/processing	6	0.1	0.0	0.0
Sewage and waste disposal and elimination of environmental pollution	59	0.9	0.2	0.2
Agriculture, hunting and related activities	93	1.5	0.3	0.3
Glass/ceramics/cement	130	2.0	0.4	0.4
Transport (incl. mountain railways, but excluding rail passenger transport and goods trains)	223	3.5	0.6	0.6
Chemical products	341	5.3	0.9	0.9
Energy supply	441	6.9	1.2	2.0
Automotive	916	14.3	2.5	1.2
CTF (commodity trade finance)	620	9.7	1.7	1.8
Total climate-sensitive sectors	2,833	44.2	7.8	7.4
Total other sectors	3,573	55.8	9.9	9.9
Total corporate client portfolio unsecured	6,405	100	17.7	17.3
Real estate financing	28,732	–	79.3	79.4
Other products	1,110	–	3.1	3.3
Total balance sheet exposure companies	36,247	–	100	33,350

5.2.3 Implementation in the financing business

In line with the sustainability ambition set out in the group strategy, Zürcher Kantonalbank is committed to supporting its mortgage clients on the path to a more sustainable future. To this end, we create incentives for our clients to build, modernise and manage their properties and infrastructure in the most environmentally friendly and energy-efficient way possible, and are constantly expanding our range of products and services in this area. We provide our clients with attractive solutions for energy-efficient renovations and new buildings. We are achieving the decarbonisation of the building sector together with our clients as well as national and cantonal policy measures. No clients are excluded because of their fossil fuel heating system.

For a list of the measures we have implemented in the financing business, please refer to our sustainability report (zkb.ch/reports).

5.3 Key figures and targets for the investment business

As part of our sustainability standard for active investment solutions,¹⁴ we pursue a quantitative climate reduction pathway for investments in traditional asset classes and reduce the CO₂e intensities by at least 4 percent per year. As part of the Net Zero Asset Managers Initiative, Asset Management is pursuing the even more ambitious 1.5°C climate target for some of its assets under management.

Net Zero Asset Managers Initiative

Swisscanto by Zürcher Kantonalbank joined the Net Zero Asset Managers Initiative in July 2021. By joining the Net Zero Asset Managers Initiative, Zürcher Kantonalbank's Asset Management division commits to the goal of reducing greenhouse gas emissions to net zero by 2050 (or earlier) in order to help limit global warming to 1.5°C. As part of this initiative, Zürcher Kantonalbank's Asset Management division disclosed its climate targets for the first time in November 2022: netzeroassetmanagers.org/signatories/swisscanto-invest/

Paris Agreement

The goal of limiting man-made global warming to "well below 2°C", if possible to below 1.5°C, was adopted at the United Nations Climate Change Conference in Paris in 2015. This goal assumes that fossil fuels such as coal, oil and gas will be almost completely replaced by around the middle of the century and that net CO₂e emissions will be reduced to zero.

5.3.1 Key figures and targets for Asset Management

Area	Targets	Base year	Methodology	Scenario
20 % of AuM of Asset Management	Reduction of at least 4 % CO ₂ e intensity per year ¹⁵	2019	Own methodology Metrics: intensity (scope 1, 2)	IPCC "well below 2°C" scenario (67 %)
25 % of AuM of Asset Management (Net Zero Asset Managers Initiative)	Reduction of at least 7.5 % CO ₂ e intensity per year ¹⁵ Interim targets ¹⁶ : 2025: 32 % reduction of CO ₂ e 2030: 54 % reduction of CO ₂ e 2040: 79 % reduction of CO ₂ e 2050: 90 % reduction of CO ₂ e	2019	Own methodology Metrics: intensity (scope 1, 2)	IPCC 1.5°C scenario (50 %)

Objective

Around 25 percent of assets in Asset Management are pursuing the 1.5°C climate target, while a further 20 percent of assets are pursuing the "well below 2°C" climate target, which corresponds to an annual reduction in CO₂e of at least 4 percent. The remaining 55 percent of our assets in Asset Management represent passively managed funds, where the asset owner has only limited, indirect influence over the choice of investment strategy. We plan to align the coverage of assets orientated towards the "well below 2°C" climate target to the 1.5°C climate target.

In 2020, Swisscanto set itself the goal of reducing the CO₂e emissions of actively managed assets from traditional asset classes, with a few exceptions, by at least 4 percent per year compared to the investment universe at the end of 2019. That will enable the reduction of at least 70 percent demanded by the scientific community to be achieved by 2050. This goal was validated by the external Sustainability Advisory Board of the investment and pension business.

¹⁴ Definition of "active investment solutions": relates to portfolio management mandates and investment funds, with the exception of indexed, individualised and third-party managed investment solutions and investment funds in the area of alternative investments.

¹⁵ Plus economic growth

¹⁶ Interim targets according to NZAM are published at <https://www.netzeroassetmanagers.org/signatories/swisscanto-invest/>

The sustainable funds (with the exception of the two thematic funds Water and Climate) are pursuing the more ambitious 1.5°C climate target: this requires a reduction in CO₂e intensity of at least 7.5 percent per year, plus economic growth. The “Sustainable” products therefore fulfil the requirements of the Net Zero Asset Managers Initiative, which was signed by Zürcher Kantonalbank’s Asset Management division in July 2021.

Methodology and data (“Responsible” / “Sustainable” active)

The private sector must make its contribution to achieving the Paris Agreement’s targets for greenhouse gas neutrality by 2050. According to the IPCC (UN Intergovernmental Panel on Climate Change), the earth’s temperature in the period 2010–2020 was around 1.1°C above pre-industrial levels (1850–1900)¹⁷. Swisscanto uses the scientific climate scenarios of the Intergovernmental Panel on Climate Change (IPCC) as the basis for setting its targets. The IPCC 1.5°C (50 %) scenario is used as the calculation basis for 1.5°C-aligned portfolios and the IPCC “well below 2°C” scenario (67 %) for 2°C-aligned portfolios. The IPCC estimates the carbon budget from 1 January 2020 at 1,090 Gt CO₂e for a 67 % chance of limiting the temperature rise to well below 2°C and a budget of 465 Gt CO₂e for the more ambitious 1.5°C target. In order to achieve the climate target, an annual reduction in greenhouse gas emissions of 4 percent per year is required for the “well below 2°C” target and 7.5 percent per year for the 1.5°C target.

Greenhouse gases with a global warming effect are included in the portfolio construction in accordance with the international Greenhouse Gas Protocol (GHG Protocol) standard (measured in CO₂e).

The CO₂e intensities are defined for companies as CO₂e emissions in relation to revenue (tonnes of CO₂e per million US dollars of revenue) and for government securities as CO₂e emissions in relation to economic value added (tonnes of CO₂e per million US dollars of gross domestic product). Data from independent third parties is used to determine the CO₂e intensities. The benchmark for the average CO₂e intensity of the sub-fund’s assets is calculated by discounting the CO₂e intensity of the investment universe at the end of 2019 annually by the target value (4 % or 7.5 %) and by global economic growth. Because the reduction is realised with economic CO₂e intensities (Scope 1 and 2 emissions per revenue), additional compensation for economic growth is required.

Special case of direct property investments

The target for direct property investments is part of the 20 percent of AuM by Asset Management that is aligned with the “well below 2°C” target.

Area	Targets	Base year	Methodology	Scenario
Direct property investments	2030: 8.0 kg CO ₂ /m ² ERA (48 % reduction)	2020	REIDA ¹⁸ Metrics: intensity (scope 1, 2)	IPCC “well below 2°C” scenario (67 %)
	2040: 3.9 kg CO ₂ /m ² ERA (75 % reduction)			
	2050: 1.0 kg CO ₂ /m ² ERA (94 % reduction)			

Objective

Our CO₂e reduction target is based on target values that are compatible with the Paris Agreement (IPCC “well below 2°C” scenario (67 %)). To achieve these targets, CO₂e reduction pathways are created for the property portfolios, which are periodically adjusted to current circumstances (e.g. due to refurbishments, new acquisitions or disposals).

With the “Swisscanto (CH) Real Estate Fund Responsible Switzerland indirect”, the “Swisscanto (CH) IPF II Real Estate Fund Responsible International indirect” and the “Swisscanto (CH) Real Estate Fund Responsible Switzerland indirect (I)”, ZKB Asset Management focuses its investment activities on the reduction of CO₂e emissions with the aim of making a significant contribution to climate protection.

¹⁷ IPCC AR6 WGI Summary for Policymakers: [ipcc.ch/report/ar6/wg1/downloads/outreach/IPCC_AR6_WGI_SummaryForAll.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/outreach/IPCC_AR6_WGI_SummaryForAll.pdf)

¹⁸ Real Estate Investment Data Association

Methodology

In order to reduce the CO₂e intensity of the investments, the energy consumption and greenhouse gas emissions of the existing properties are measured on an ongoing basis. All greenhouse gases with a global warming effect are included in accordance with the international standard of the GHG Protocol (measured in CO₂e). Greenhouse gas emissions are calculated in accordance with the methodology of the Real Estate Investment Data Association (REIDA) recommended as best practice by the Asset Management Association Switzerland (AMAS) as CO₂e based on the energy consumption values.

Implementation for direct property investments

The specific measures for achieving the reduction pathway follow a three-pronged strategic approach consisting of OPEX, CAPEX¹⁹ and new builds. OPEX measures include, for example, systematic operational optimisation in the properties and CAPEX measures include the replacement of fossil fuels with renewable resources. Furthermore, CO₂e-intensive properties are also managed through targeted transaction activity. The remaining greenhouse gas emissions can be offset by purchasing emission reduction certificates (ERCs).

5.3.2 Implementation in the investment business

Below we describe the measures that are being taken with regard to the individual products and services and which processes they will follow in order to achieve the defined climate targets:

- Zürcher Kantonalbank systematically integrates ESG criteria in the management of actively managed asset management mandates from the Asset Management division of Zürcher Kantonalbank and standardised wealth management from the Investment Solutions division of Zürcher Kantonalbank as well as in the collective capital investments of the “Responsible” or “Sustainable” product lines of Swissscanto (product brand for collective capital investments of the Zürcher Kantonalbank group).
- The voting behaviour of our Asset Management is published at [swissscanto-fondsleitungen.com/en/investment-stewardship.html](https://www.swissscanto-fondsleitungen.com/en/investment-stewardship.html). In addition, our Asset Management division conducts a direct dialogue with companies in which our funds are invested and is involved via the UN PRI collaboration platform and investor initiatives. With respect to the standardised wealth management services provided by the Investment Solutions division, dialogue with companies in which our clients are invested, participation in investor initiatives and the exercise of voting rights take place indirectly via the selection of external asset managers.
- When it comes to the investment activities of the actively managed “Responsible” asset management mandates of Asset Management at Zürcher Kantonalbank and the actively managed collective capital investments of Swissscanto in the traditional asset classes with a “Responsible” approach and the standardised wealth management with the “Basic” designation, we are guided by the Paris Agreement and generally aim to reduce the CO₂e intensity by at least 4 percent per year.

The sustainable collective investment schemes of Swissscanto’s “Sustainable” product line and the standardised wealth management of the “Sustainable (ESG)” designation go one step further. These aim to achieve a CO₂e reduction of at least 7.5 percent per year and are based on the 1.5°C climate target set out in the Paris Agreement. The thematic Swissscanto funds in Asset Management (Water & Climate) are an exception to this. Because the greenhouse gas emissions benchmark defined in the prospectus is not representative of the investment universe for these products, only a <2°C reduction path can be implemented.

For a list of the measures we have implemented in the investment business, please refer to our sustainability report (zkb.ch/reports).

¹⁹ OPEX = Operational Expenditures (operating expenses, i.e. costs for raw materials and supplies, personnel costs, energy costs and costs for sales and administration), CAPEX = Capital Expenditures (investment expenditure for longer-term assets)

5.4 Key figures and targets for own operations

The following figures and information relate to the commercial properties of Zürcher Kantonalbank in Switzerland. These comprise the parent company and Swisscanto Holding AG. CO₂ emissions of Zürcher Kantonalbank Österreich AG, Zürcher Kantonalbank Finance (Guernsey) Ltd., ZKB Securities (UK) Ltd. and the representative offices are not available at group level.

The corporate environmental programme defines the climate targets related to our operations. The aim of the environmental programme is to continuously reduce CO₂e emissions. As part of this programme, since 2010 we have been able to reduce the carbon footprint by 68 percent, from 7,040 CO₂e tonnes to 2,263 CO₂e tonnes for 2023, and we want to reduce this to 1,800 CO₂e tonnes by 2030.

Area	Targets	Base year	Methodology	Scenario
Own operations	2030: Reduction to 1,800 tonnes of CO ₂ e ²⁰ Neutralizing of the remaining emissions through NET	2022	VfU (German Association for Environmental Management) key figures calculation tool Metrics: absolute (scope 1, 2, 3) ²¹	-

Objective

The goal of our new 2023–2030 environmental programme is to reach net zero by 2030. To this end, we want to reduce our operational carbon footprint to 1,800 CO₂e tonnes by 2030. We have already achieved a significant reduction since 2017. All emissions that we are unable to reduce completely will be offset with qualitative negative emission technologies (NET) by 2030 at the latest in order to achieve the net-zero target in operations.

Operational targets by 2030: VfU indicators (in tonnes of CO ₂ e)	Actual value 2023	Reference year ²² 2017	% change in actual value compared to the reference year	Target 2030 ²³
Total emissions (t CO₂e)	2,263	3,987	(↓ 43)	1,800
Building electricity consumption (t CO ₂ e)	63	180	(↓ 65)	
Building heat consumption (t CO ₂ e)	811	1,602	(↓ 49)	
Water consumption (t CO ₂ e)	31	56	(↓ 45)	
Cooling and extinguishing agents (t CO ₂ e)	214	184	(↑ 16)	
Waste (t CO ₂ e)	104	124	(↓ 16)	
Business travel (t CO ₂ e)	629	881	(↓ 29)	
Paper (t CO ₂ e)	410	960	(↓ 57)	

Methodology and data

We use the [VfU key figures calculation tool](#) to calculate operational greenhouse gas emissions and key figures. The “VfU key figures” and the associated calculation tool are recognised as the globally accepted standard for accounting for environmental indicators at financial institutions. The key figures and the calculation tool are revised at regular intervals to take account of international initiatives such as GRI or the GHG Protocol.

²⁰ We have already reduced our operational emissions by 68 % since 2010

²¹ The following categories of the GHG Protocol are relevant within scope 3: paper (category 1), fuel and energy-related emissions (not included in scope 1 or 2) (category 3), waste (category 5) and business travel (category 6). NB: We are currently evaluating how we can expand the coverage of the operational emissions of Scope 3 categories.

²² 2015–2017 environmental programme

²³ 2023–2030 environmental programme

Further key figures

Environmental indicators according to GRI	GRI	Actual value 2023	Reference year 2017	% change in actual value compared to the reference year	2022	2021
Total greenhouse gas emissions (t CO ₂ e)	305	2,263	3,987	(↓ 43)	2,253	2,853
Scope 1 and 2 emissions (t CO ₂ e) (Scope 2 market-based: effective supplier mix)	305	969	1,149	(↓ 16)	1,002	1,041
Indirect Scope 3 CO ₂ e emissions (t CO ₂ e)	305	1,294	2,837	(↓ 54)	1,251	1,812
Total building energy consumption (MWh)	302	25,759	38,313	(↓ 33)	26,919	29,043
Share of green electricity from naturemadestar ²⁴ or equivalent quality		100	100	(0)	100	100
Paper consumption (kg per FTE)	301	99	178	(↓ 44)	127	144
Proportion of recycled paper (%)	301	93	91	(↑ 2)	93	81
Waste in kg per FTE	306	76	124	(↓ 61)	80	89
Waste to landfill (%)	306	0	0	(0)	0	0
Waste for recycling (%)	306	50	60	(↓ 17)	53	54
Water consumption (10 ³ m ³)	303	51	80	(↓ 36)	46	47

Environmental figures

Category		GRI	2023	2022	2021
Building energy	Total building energy consumption (MWh)	302	25,759	26,919	29,043
	Electricity consumption (MWh)		17,709	17,978	18,092
	Heat consumption (MWh)		8,051	8,941	10,951
	Consumption of fossil fuels (MWh)		957	1,260	1,252
	Consumption of district heating (MWh)		4,337	4,602	5,905
	Renewable building energy consumption (MWh)		2,176	3,080	3,794
Business travel	Total business travel (10 ³ km)	302	5,034	3,284	1,814
	Air travel (km)		3,515	1,896	512
Paper	Total paper consumption (t)	301	525	641	709
	Recycled paper (t)		486	597	573
	Fresh fibre paper (ECF and TCF) (t)		39	44	136
Water	Water consumption (10 ³ m ³)	303	51	46	47
Waste	Total waste produced (t)	306	402	403	440
	Waste for recycling (t)		202	214	237
	Waste for incineration (t)		200	189	203
Cooling & extinguishing agents	Coolant & extinguishing agent losses (kg)		231	111	40
Greenhouse gas emissions	Direct and indirect emissions (t CO ₂ e)	305	2,263	2,253	2,853
	Direct emissions Scope 1		512	487	420
	Indirect emissions Scope 2 (market-based)		457	515	621
	Indirect emissions Scope 3		1,294	1,251	1,812

²⁴ naturemade.ch/de/quetesiegel.html

Implementation in the bank's own operations

Environmental management system

Our environmental management system focuses on banking operations, our properties, procurement from suppliers and the downstream impact of products and services. The environmental management system has been certified to ISO 14001 since 2002. In this way we aim to achieve a continuous improvement in our use of resources and ensure environmental sustainability in our banking operations.

Reports on the results and any measures arising from the audits are submitted to the Executive Board.

Removal strategy

In addition to taking further measures to reduce emissions, we are building a removal portfolio with natural and technical Negative Emission Technology (NET) certificates for the unavoidable emissions recorded, to achieve net zero by 2030 in our own operations.

For a list of the measures we have implemented in our own operations, please refer to our sustainability report (zkb.ch/reports).

6 Appendix

6.1 Residential mortgage business

Assumptions regarding missing data (imputations)

Energy reference area of the building (ERA):

For 81,251 (81 %) financing agreements, the missing ERA of the building was imputed from the living space (factor 1.3, according to the PACTA method). For 8,024 (8 %) financing agreements, the ERA was added based on Minergie data (1st priority), with 11,268 (11 %) taken from RBD data (2nd priority).

Living space of the building (SFH/MFH) or the flat (CNDO):

The ERA can only be imputed if information about the building's the living space has been provided.

For 198 (0.2 %) financing agreements, the living space of the building had to be imputed based on RBD statistics.

Living space of condominiums:

Residential living space is required for the aggregation of individual intensities at portfolio level.

In the case of 4,446 condominium financing agreements (11 % of condominium financing agreements), the living space missing from the company's own data was imputed based on RBD statistics.

Number of floors in the building:

The number of floors is required in the PACTA real estate model in order to model the heating requirement in accordance with SIA standard 360/1 (2016).

For 97 (0.1 %) financing agreements, the number of floors of the building had to be imputed based on RBD statistics.

Assumed service life of the components in years

Component	Service life in years
Façade	40
Windows	35
Roof	50
Basement ceiling	50
Heating system	20

Legal information

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