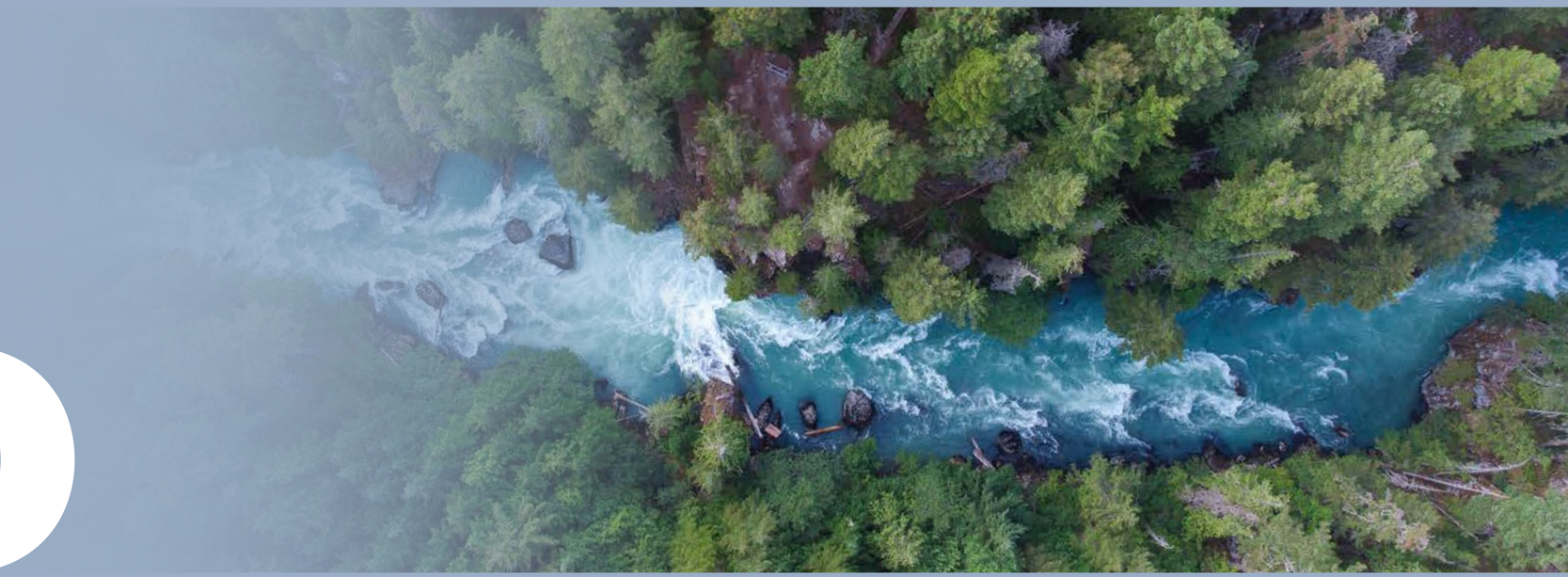
Spuerkeess'

Net Zero



Climate Target Report 2022

SPUERKEESS

SPUERKEESS.LU/**sustainability**

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MESSAGE FROM OUR CEO

1 MESSAGE FROM OUR CEO

At Spuerkeess, we believe that our profitability is closely linked to sustainability. Being profitable in the long term goes hand in hand with the gradual improvement of our environmental and social performance. We consider our carbon footprint as a material issue that demands both a long term strategic view and the collaboration of all our stakeholders.

We were Luxembourg's first bank to commit to the Net-Zero Banking Alliance (NZBA[1]) and created the Scientific Advisory Board (SAB[2]), thus enabling the access to scientific knowledge and, therefore, further accelerating the transition towards a sustainable economy.

Spuerkeess supports the Paris Agreement Goals and our ambition is to become net zero by 2050 by:

- aligning all our portfolios with the Paris Agreement goals,
- supporting our customers in the green transition,
- reducing our ecological and environmental impact,
- integrating climate risks in our risk management framework.

As climate constitutes a core pillar in our business strategy, the challenge consists now in helping our clients and stakeholders in their transition towards a more sustainable economy.

Our focus is currently on climate change, meaning calculating our carbon footprint and setting scientific-based targets to align Spuerkeess' portfolios to the Paris Agreement.

This is our first report on setting climate targets, therefore an important step in our journey towards sustainability and it is one of several we will take over the coming months and years.

Françoise Thoma
CEO of Spuerkeess

1 NZBA is the flagship climate initiative under the Principles for Responsible Banking to accelerate science-based climate target setting and develop common practice (Net-Zero Banking Alliance – United Nations Environment – Finance Initiative (unepfi.org)).

2 The role of the SAB, created by Spuerkeess in 2021, is to advise the Bank on its sustainability journey by integrating scientific and environmental knowledge in our strategy while taking regulatory requirements into account (Spuerkeess: Meet our experts. Here comes our Sustainability Advisory Board).

2

ABOUT THIS REPORT

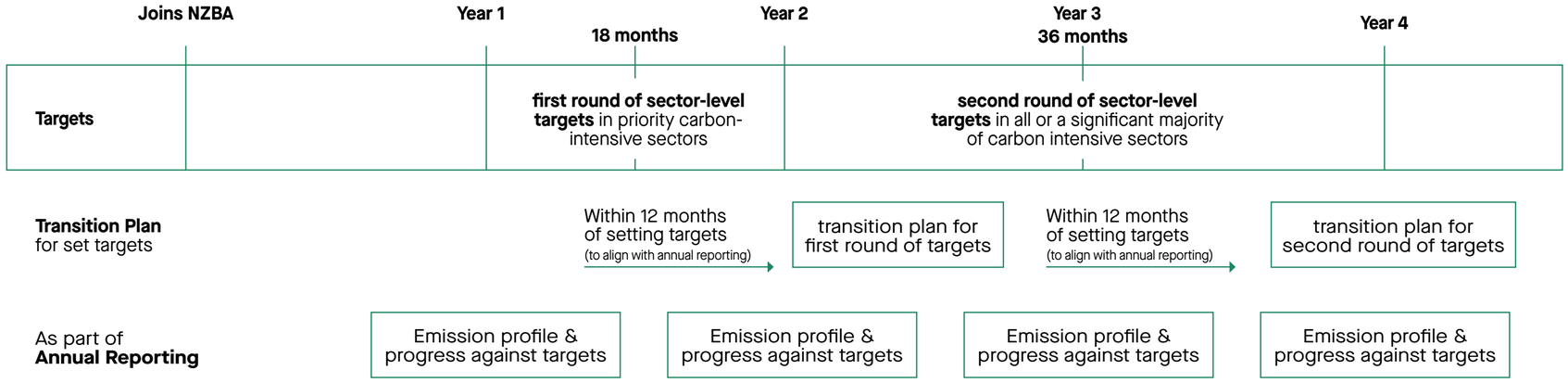
2 ABOUT THIS REPORT

Spuerkeess joined the Net Zero Banking Alliance (NZBA) in October 2021 and committed to transition its own operations GHG emissions and its attributable GHG emissions from its lending and investment portfolios to align with pathways to net-zero by 2050 or sooner[3].

Applying the *UNEP FI Guidelines for Climate Target Setting for Banks*[4], Spuerkeess has to set

- within 18 months of committing to the NZBA, its first round of sector-level targets (in priority carbon-intensive sectors), meaning a 2030 target (or sooner) and a 2050 target. Further intermediary targets shall be set every five years after the initial interim target (2030). As each subsequent interim target year is approached, the next interim five-year target shall be set;
- within a further 18 months, sector-level targets in all or a significant majority of carbon intensive sectors as illustrated in the figure below:

In April 2024, Spuerkeess will disclose the progress against the targets set in this report, as required by the guidelines, and also disclose a sectoral transition plan which explains how those targets can be reached.



Source: NZBA Intermediate Target Disclosure Checklist, June 2022.

3 The Commitment – United Nations Environment – Finance Initiative (unepfi.org).
4 UNEP FI Guidelines for Climate Target Setting for Banks, April 2021.

2 ABOUT THIS REPORT

This report gives an insight into the carbon footprint stemming from our exposures on climate relevant sectors[5] and into our transition pathways to net zero for key sectors. As of 31 December 2022, about 43% (46% in 2021) of our total assets stems from climate relevant sectors. Spuerkeess discloses its financed GHG emissions across the following four main asset classes:

Corporate bonds **Corporate equities** **Business loans** **Residential mortgage loans**

The emission figures are built with reference to the Partnership for Carbon Accounting Financials (PCAF) Standard[6] by using a combination of reported and estimated greenhouse gas (GHG) emissions, as well as economic activity emission proxy factors[7] for clients/issuers where no data is yet available. We set our baseline by using GHG emissions data from 2021 (or earlier) as those are the most recent data available and applying it to the Bank's exposures as of 31 December 2022.

Defining the pathways to net zero goes first of all along with selecting the climate scenario, key sectors and key metrics. In defining pathways to net zero, Spuerkeess uses the International Energy Agency's (IEA) Net Zero scenario (NZE) as applied by TPI[8] (Transition Pathway Initiative), as well as decarbonisation rate from National Energy and Climate Plan (NECP) for Luxembourg's real estate sector.

We focus on five carbon intensive sectors for target setting by using sector-specific production based carbon intensity metrics which best capture the decarbonisation pathways of each of those sectors:

Portfolio	Sector	Territory	Metric[9]	GHG scopes determined by TPI
Corporate bonds	Oil&gas	International	g CO2e / MJ	Scope 1 + 2 + 3
Corporate bonds	Power generation	International	g CO2e / MWH	Scope 1
Corporate bonds	Automotive	International	g CO2e / KM	Scope 3
Corporate equities	Airlines	International	g CO2e / RTK	Scope 1
Residential mortgage loans	Real Estate	National	g CO2e / SQM	Scope 1 + 2

Climate-intensive sectors under the asset class « Business loans » will only be covered by target setting in the « 2023 Climate Target Report ».

5 We applied the definition of climate relevant sectors / activities as given by the Regulation (EU) 2020/1818, namely code nace A - H &L.
6 PCAF (2022). The Global GHG Accounting and Reporting, Standard Part A: Financed Emissions, Second Edition.
7 All our GHG emissions calculations are based on data coming either from our Data Provider MSCI (verified / non verified GHG emissions & economy activity emission proxy factors) or PCAF (sectoral emission proxy factors).
8 The Transition Pathway Initiative Global Climate Transition Centre (TPI Centre) is an independent, authoritative source of research and data into the progress being made by the financial and corporate world in making the transition to a low-carbon economy.
9 MJ: Megajoule; MWH: Megawatt-hour; KM: Kilometer; RTK: Revenue tonne kilometer; SQM: Square Meter; g CO2e: Gram CO2 equivalent.

3

OUR CLIMATE SUMMARY

3 OUR CARBON FOOTPRINT

3.1.

As of 31 December 2022, Spuerkeess' total exposure on climate relevant sectors was EUR 24.549 mio from which about 96% (compared to 72% in 2021) where covered by our financed GHG emissions calculation. Based on PCAF methodologies, our financed GHG emissions from climate relevant sectors are 1,3 million tons of CO2 equivalent scope 1 and scope 2 GHG emissions and 1,1 million tons of CO2 equivalent scope 3[10] GHG emissions.

Our average data quality score[11] improved from 3,4 in 2021 to 3,17 in 2022. As indicated in the table below, our average data quality score for corporate bonds and equities displays a rather high quality score (around 2) whereas the data quality score of business loans shows low quality as we rely on sectoral estimates in the absence of GHG emissions data from SME's (data quality score 5). Regarding our residential mortgage loan portfolio, the average data quality score is mid-range 2,92 as we refer to PCAF emission factors (tons CO2e/sqm) applied for Luxembourg.

Exposures per asset class	Financed absolute GHG emissions 2022						
	Gross carrying amount (in mio €)	Scope 1 & 2 (in tons of CO2e)	Scope 3 (in tons of CO2e) only Oil, Gaz & Mining	Scope 1&2&3 (in tons of CO2e)	PCAF coverage (in %)	Average data quality score	Financial intensity (tons of CO2e/exposure)
Total climate relevant exposures included in GHG calculations	**23.468**	**1.259.349**	**1.086.303**	**2.345.652**		**3,17**	**100**
of which corporate bonds	**2.615**	**250.387**	**1.046.375**	**1.296.762**	**100%**	**2,11**	**96**
of which exposures from automotive sector	147	1.534		1.534			
of which exposures from power generation sector	270	84.366		84.366			
of which exposures from oil & gas sector	296	69.067	828.610	897.677			
of which corporate equities	**1.098**	**398.868**		**398.868**	**100%**	**1,48**	**363**
of which exposures from passenger airline sector	496	32.268		32.268			
of which exposures from freight airline sector	535	366.600		366.600			
of which residential mortgage loans	**15.257**	**146.033**		**146.033**	**94%**	**2,92**	**10**
of which business loans	**4.497**	**464.061**	**39.927**	**503.988**	**100%**	**5**	**103**
of which exposures from construction sector	1.242	31.051		31.051			
of which exposures from transportation & storage sector	464	135.451		135.451			
of which exposures from manufacturing sector	426	113.182		113.182			
of which exposures from electric utilities sector	333	109.704		109.704			
Total climate relevant exposures not included in GHG calculations	**1.081**						
Total non climate relevant sectors	**32.466**						
of which financials	**21.338**						
of which governments	**4.125**						
Total Gross Carrying Amount	**57.015**						
Own operations		**1.770**	**2.312**	**4.082**			

10 Scope 3 emissions calculated only for the Oil, Gas and Mining activities as required by PCAF. PCAF (2022). The Global GHG Accounting and Reporting, Standard Part A: Financed Emissions. Second Edition.

11 The PCAF data quality score gives an indication of the data used to calculate financial institutions financed GHG emissions. Scores are ranging from 1, highest data quality score (= reported verified / unverified GHG data) to 5, lowest data quality score (= estimated sectoral GHG data).

3 OUR CLIMATE TARGETS

3.2.

In compliance with the NZBA guidelines, we chose to set sectoral decarbonization targets on an intensity basis (instead of absolute basis). The carbon intensity of a company is determined against its primary output (e.g. kg CO2 per MJ of electricity produced) and compared with relevant sectoral transition benchmark pathways[12].

The table below summarizes Spuerkeess decarbonisation targets for its climate relevant sectors over the coming years to become net zero by 2050 (or earlier):

Based on the results of our analysis, our ambition is to reach net zero emissions by 2050 (or earlier). We have set intermediary targets for 2030 for GHG-intensive sectors which will be reviewed, and if necessary revised, at regular intervals to ensure consistency with the latest science and data availabilities.

Spuerkeess's climate relevant sectors	Metric	Baseline 2022	Target 2030		Measures to be taken
Corporate bonds portfolio		**Value**	**Value**	**Scenario***	
Oil & Gas	gCO2e/MJ	69,66	49,73	IEA 2°C	Partial divestment & reinvestment of 100% of matured bonds into best in class companies
Power generation	gCO2e/Mwh	0,15	0,06	IEA 1,5°C	Invest into best-in-class companies
Automotive	gCO2e/km	129,60	80,91	IEA 2°C	Partial divestment & reinvestment of 100% of matured bonds into best in class companies
Corporate equities portfolio					
Cargo airlines	gCO2e/RTK	463,00	370,00	IEA 1,5°C	Use of sustainable air fuel (SAF), investing into a new fleet (Boieng 777 substituting 747)
Passenger airlines	gCO2e/RTK	1.052,00	616,00	IEA 1,5°C	Use of sustainable air fuel (SAF), investing into a new fleet …
Residential mortgage loans					
Mortgage loans	kgCO2e/SQM	50,25	24,10	NECP	Collection of clients' EPC, Renovation effort to enhance average EPC,…

Other commitments		Baseline 2022	Target 2025	Measures to be taken
Own operations	tCO2e / FTE**	1,17	1,05	Digitalisation efforts, introducing further energy cost containment measures and innovative projects,…

*Based on the carbon intensity forecasts performed by TPI on individual companies, we considered that the 1,5°C transition pathways could not be followed by certain sectors.
For these reasons, we chose 2°C transition pathways for Oil & Gas and automotive sectors.
** FTE: Full-time equivalent

12 We used IEA (International Energy Agency) sectoral benchmark pathways and individual company pathways estimated scientifically by the Transition Pathway Initiative.

4

OUR APPROACH

4 OUR APPROACH

Spuerkeess aims to transition its own operations GHG emissions and attributable GHG emissions from its lending and investment portfolios to net-zero by 2050 or sooner.

The figure below highlights the different activities included in Spuerkeess' carbon footprint of its own operations (scope 1, scope 2 and upstream scope 3 emissions related to its headquarter and branch network buildings), as well as of its banking activities (downstream scope 3 emissions related to its lending and investment activities):

Upstream Activities

SCOPE 2 (INDIRECT EMISSIONS)	
Purchased electricity, heating & cooling for own use	●
SCOPE 3 (INDIRECT EMISSIONS)	
Purchased goods and services	●
Capital goods	○
Fuel and energy related activities	●
Transportation and distribution	○
Waste generated in operations	●
Employee commuting	●
Business travel	○
Leased assets	○

Reporting company

SCOPE 1 (DIRECT EMISSIONS)	
Combustion for heating	●
Fugitive emissions from cooling	●
Company Vehicles	●

Downstream activities

SCOPE 3 (INDIRECT EMISSIONS)	
Transportation and distribution	○
Processing of sold products	○
Use of sold products	○
End-of-life treatment of sold products	○
Leased assets	○
Franchises	○
Lending & investment	●

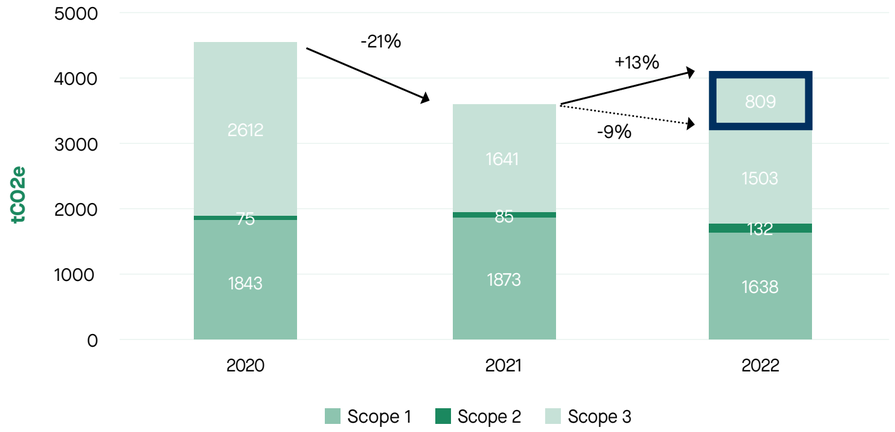
4 OWN OPERATIONS

4.1.

We expanded in 2022 the coverage of operations by integrating for the first time the emissions related to "employee commuting to work activity" (only for employees working in our headquarter buildings). These amount, based on an internal proxy method taking into account average distance of our employees and the national car statistics, for 809 tons of CO2e.

In order to rightly appreciate the efforts made by our facility management team during 2022, we compare the total of CO2e emissions based on the operations that were covered by the calculation in 2021. The conclusion is that we managed to further reduce our total emissions by 9% during 2022 following a reduction of 21% in 2021.

Evolution of our own operations GHG emissions



The reduction in our scope 1 emissions are mainly due to a decrease in

- fugitive emissions from cooling which results from:
  - the set temperature of air-conditioned offices that has been increased to 25° C;
  - a change in the methodology for calculating leak rates.
- combustion for heating due to energy saving measures put in place.

Our indirect scope 2 emissions related to the steam and heat consumption slightly increased in 2022 mainly due to the fact that the emission factors for district heating have been partially increased by the *"Règlement Grand Ducal"* of Luxembourg. With respect to our scope 2 emissions, our electricity consumption already relies on 100% renewable sources since 2019.

For our indirect scope 3 emissions[13], we account for a reduction of our purchased goods and services. On the other hand, by including the employee commuting to work activity for the first time, we have a bounce of 809 t CO2e. We are currently elaborating an action plan allowing us to reduce the emissions related to the employee commuting to work activity.

We consider that the efforts that were made in the past have been important as we managed to reduce our energy consumption (scope 1 & 2) by 49% compared to 2008.

In light to constantly improve our carbon footprint of our own operations (scope 1 and scope 2 GHG emissions), Spuerkeess set the following target:

Target 2025 (market-based) : 1,05 t CO2e / FTE (-10%)

Baseline 2022 (market-based) : 1,17 t CO2e / FTE

Measures to be taken to reach targets 2025:

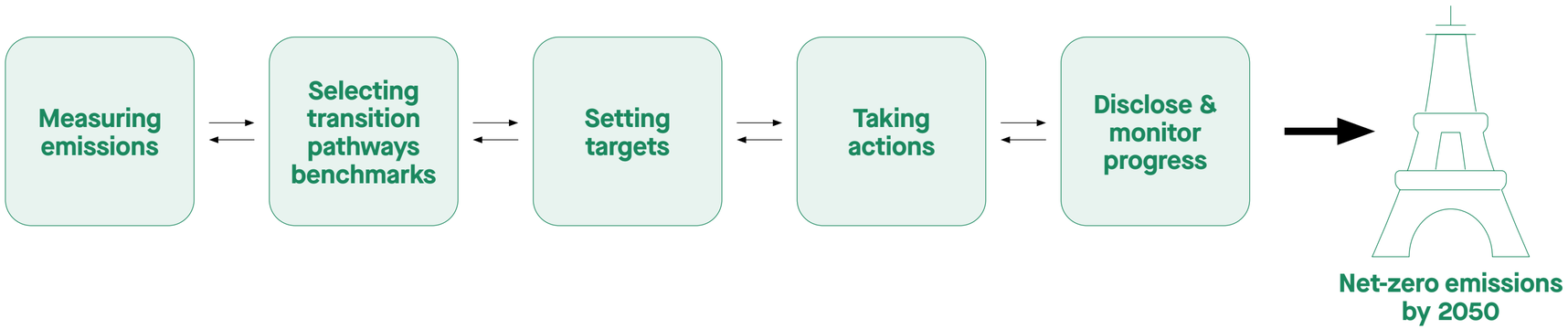
For the forthcoming years, Spuerkeess will continue its digitalisation efforts, introduce further energy cost containment measures (i.e. installation of photovoltaic panels on its buildings, etc.) and innovative projects (i.e. flexdesks, rent of office space, etc.) to reduce its carbon footprint an thus the negative impact on the environment of its own operations.

13 For the time being, our scope 3 emissions have only been parially covered (i.e. the use of cloud servers is not yet integrated, aso.)

4 BANKING ACTIVITIES

4.2.

With respect to the establishment of our carbon footprint, our approach consists of five phases that will enable us to transparently achieve emissions reductions across the Bank's entire value chain:



Thus the measuring of our financed GHG emissions allow us to

- establish the carbon footprint of our loan and investment activities,
- identify the most GHG-intensive and GHG-emitting sectors in our portfolios,
- set science-based short-, medium- and long-term targets based on scientifically recognized transition benchmarks pathways,
- design strategies, implement concrete actions and monitor the reach of our targets set to become Paris aligned and net zero by the latest in 2050.

4 MEASURING EMISSIONS

4.2.1.

In terms of calculating the financed GHG absolute emissions, we apply the Global GHG Accounting & Reporting Standard from PCAF (Partnership for Carbon Accounting Financials). PCAF methodology was launched in September 2019 in order to harmonise methods for accounting for greenhouse gases (GHG) and allowing financial institutions to measure and disclose in a consistent manner the GHG emissions financed by their loans and investments activities.

Spuerkeess's carbon footprint of its lending and investment activities includes its clients/issuers scope 1, scope 2 and scope 3 emissions where relevant and appropriate reliable data exists. We cover scope 1 and scope 2 emissions for all our asset classes. For Oil, Gas and Mining activities, we additionally take into account scope 3 emissions as required by PCAF.

List of sectors with required scope 3 emissions inclusion	
Phase-in period	**NACE Level 2 (L2) sectors considered**
For reports published in 2021 onwards	At least energy (oil & gas) and mining (i.e., NACE L2: 05-09, 19, 20)
For reports published in 2023 onwards	At least transportation, construction, buildings, materials, and industrial activities (i.e., NACE L2: 10-18, 21-33, 41-43, 49-53, 81)
For reports published in 2025 onwards	Every sector

Source : PCAF

From 2023, Spuerkeess will, as required by PCAF, include the scope 3 emissions for five additional sectors (i.e. transportation, construction, buildings, materials and industrial activities) and from 2025 for every sector in its financed GHG emissions calculations.

DEFINITION OF SCOPE 1, 2 AND 3 EMISSIONS[14]

Emissions type	Scope	Definition
Direct emissions	Scope 1	Emissions from operations that are owned or controlled by the reporting company
Indirect emissions	Scope 2	Emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company
	Scope 3	All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions

Our approach consists on focusing on climate relevant sectors (higher probability of transition risk) as defined by the Regulation (EU) 2020/1818. Based on this definition, we concluded in 2022 that approximately 43% of Spuerkeess total assets (or EUR 24.549 mio) as of 31 December 2022 stemmed from exposures on climate relevant sectors. Our financed GHG emissions calculation covered nearly 96% of the climate relevant exposures (EUR 23.468 mio) of Spuerkeess.

The asset classes to whom we applied the PCAF methodology were:

- Corporate bonds,
- Corporate equities,
- Business loans,
- Residential mortgage loans.

We will continuously improve the coverage of our financed emissions including also non-climate relevant assets. This helps us in our internal prioritisation of sectors and companies selected for targeted emission reductions and risk management (mainly transition risk) following our commitment becoming net zero by 2050.

14 World Resources Institute and World Business Council for Sustainable Development (2011). Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard, page 28.

4 SELECTING TRANSITION PATHWAYS BENCHMARKS

4.2.2.

Defining the transition pathways benchmarks to net zero goes first of all along with selecting Paris aligned climate scenarios, key sectors and key metrics.

Spuerkeess foresees a multiphase process to establish its portfolio-level climate transition pathways:

Phase 1: In order to strike a balance between initial coverage of carbon-intensive sectors and overall portfolio coverage, a first materiality analysis determined that the most exposed sectors included oil and gas, power generation, aviation, and automobiles.

Available transition pathways and net zero target frameworks included, among others, the Science-Based Target Initiative (SBTi) and the Transition Pathway Initiative (TPI).

Even though the SBTi offers a broader corporate coverage with ca. 4.500 companies vs. 580 firms for TPI, and seemingly additional methodological granularity, the TPI offers a straightforward process to establish a first assessment for Spuerkeess' aforementioned carbon-intensive sectors.

Furthermore, its data is publicly available and based on publicly disclosed self-reported data and targets from corporates. Albeit its use of IEA climate scenarios is more narrow than the SBTi reliance on IPCC scenarios, the IEA scenarios offer a good alignment for energy and commodity-related sectors. Furthermore, IEA climate scenarios have also to be applied by banks under the EBA ESG Pillar III.

TPI tracks carbon intensity and scopes 1-3 for specific carbon intensive sectors. Whereas SBTi expresses alignment in degrees of warming, TPI presents a more straightforward carbon alignment time series.

Based on these factors, we selected TPI in first instance to track the climate transition pathway alignment of companies across four of the most carbon-intensive sectors represented in our portfolios. For our residential mortgage loan portfolio, we use the decarbonisation rate from the National Energy and Climate Plan (NECP) for the Luxembourg's real estate sector.

Phase 2: In the following years, we intend to utilise the insights from the TPI exercise to expand our portfolio-level climate transition pathway monitoring onto almost the entirety of our business activities, from investment portfolios to mortgage loans.

We anticipate that SBTi, with its wider corporate coverage, reliance on IPCC scenarios, absolute emissions and carbon intensity, could complement the TPI data and allow a more granular and even more accurate representation of the point-in-time alignment of our portfolios with given emissions scenarios and pathways, ideally in line with scenarios in between 1.5°C and 2°C warming.

The following section details specific sector benchmark pathways per asset class and intermediary targets we've set to align with our net zero emission ambition.

4 SETTING TARGETS

4.2.3.

As required by NZBA, Spuerkeess applies selection criteria on its sectors/activities based on GHG emissions, GHG intensities and/or financial exposure. We focus on five carbon intensive sectors/activities in our portfolios:

- Oil & gas,
- Power generation,
- Automotive,
- Airline,
- Real estate.

We have prioritised those sectors based on the Bank's financial exposure and/or on their relative share of our financed emissions.

The five sectors were prioritised based on an initial top-down assessment of the overall Spuerkeess' portfolio, which indicated that they represent over 72% of the Bank's total climate relevant assets and 65% of Spuerkeess' financed emissions. Over time, other sectors and asset classes will be included as data availability and data quality will evolve and as we refine and expand our net-zero approach.

Among the climate relevant exposures where Spuerkeess applies GHG emissions calculation, Spuerkeess sets targets for 72% of these exposures, which it considers to be very representative for its first target setting round.

To set science-based targets, companies are required to select a baseline year for emission reductions. We set our baseline emissions year using emissions as reported for the year 2021 (or earlier) and using and applying it to the Bank's exposures as of 2022 (to be compliant with the financial statements) due to data availability issues with respect to GHG emission data.

Based on the results of our analysis, our ambition is to reach net zero emissions at the latest by 2050. Therefore, Spuerkeess has set intermediary targets for 2030 for its GHG-intensive sectors which will be reviewed, and if necessary revised, at regular intervals to ensure consistency with the latest science and data availabilities.

4 CORPORATE BONDS PORTFOLIO

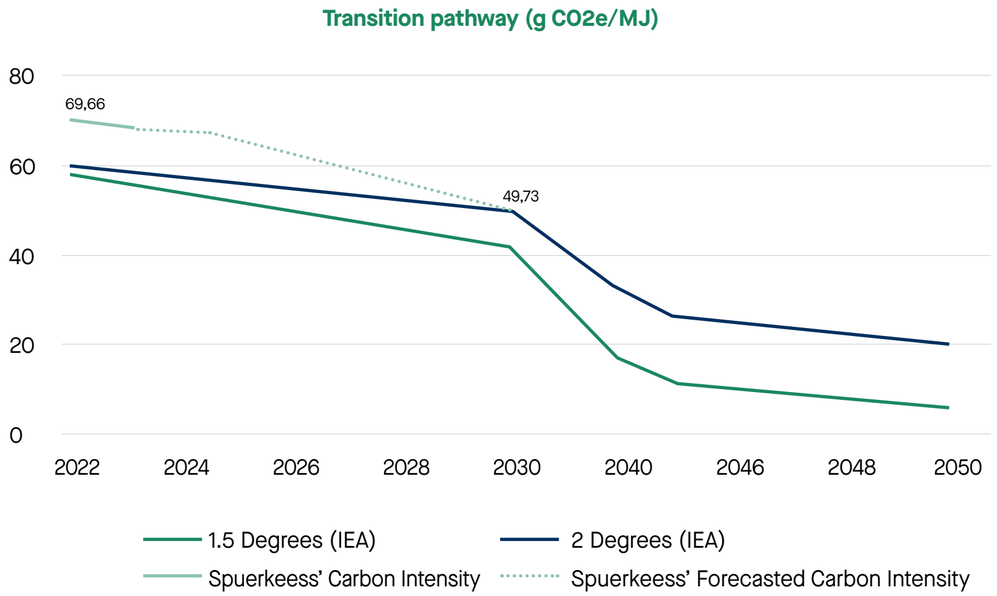
Among our corporate bonds portfolio, we focus, as explained, on the oil & gas, automotive and power generation sectors as they have the most significant impact on climate change within our portfolio.

Spuerkeess, depending on the considered sector, is aiming to align those sectors with the 2°C or 1,5°C IEA scenario by 2030 and become net zero by 2050 or earlier.

4.2.3.1. OIL & GAS

Spuerkeess is aiming to reach the 2°C IEA benchmark pathway from TPI for the oil & gas sector by 2030. This will be achieved by a

- divestment strategy from our "worst performers" within this portfolio,
- reinvestment strategy of 100% of the exposure from matured bonds into "best in class companies" in this sector.



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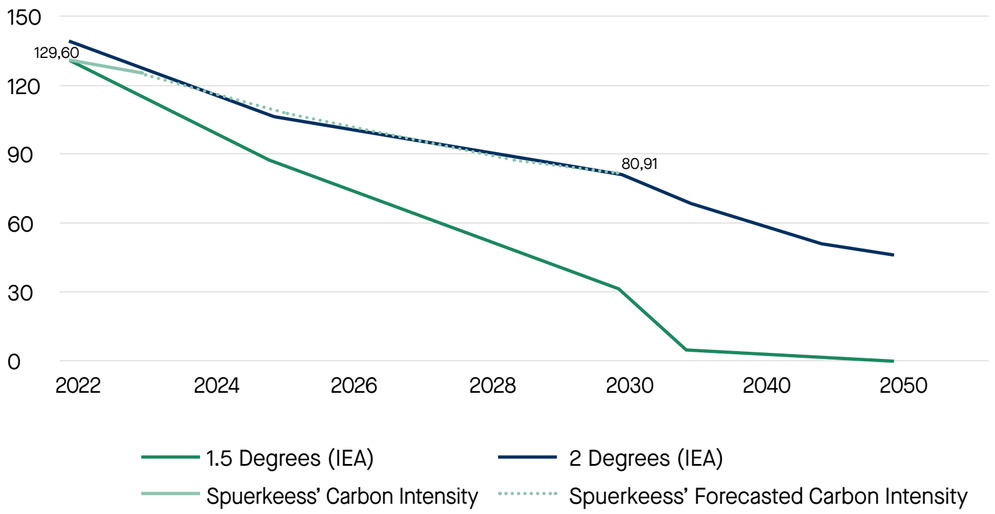
4.2.3.1.2. AUTOMOTIVE

Spuerkeess is aiming to reach the 2°C IEA benchmark pathway from TPI for the automobile sector by 2030. This goal will be achieved by a reinvestment strategy of 100% of the exposure from matured bonds into "best in class companies" in this sector.

Transition pathway (g CO2e/km)

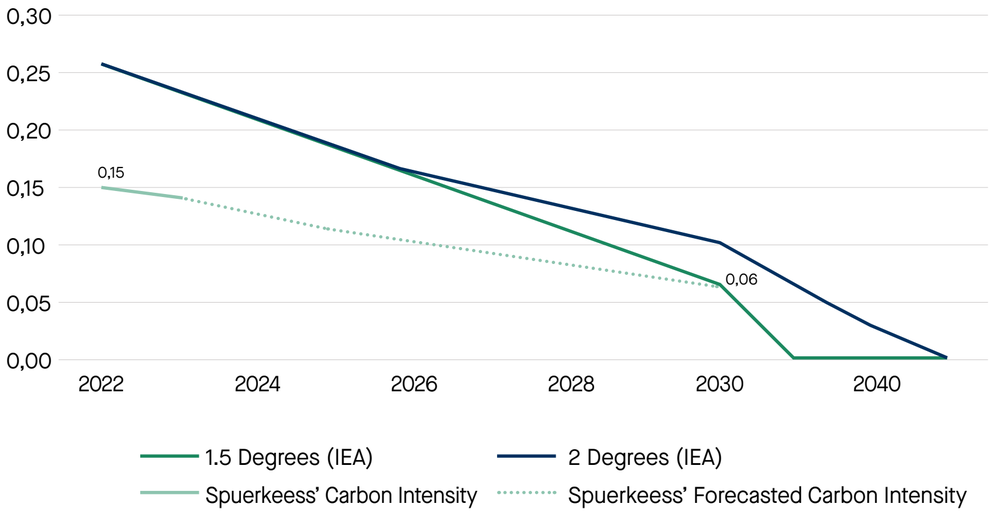


4.2.3.1.3. POWER GENERATION

With respect to our investments in the power generation sector, Spuerkeess aims to stay, as off today, well below the 1,5°C IEA scenario from TPI by 2030 by investing only in "best in class companies" in this sector.

However, it goes without saying that the achievement of the above mentioned targets is highly dependent on the efforts made in the forthcoming years in those sectors in order to improve their carbon footprint and thus consequently our corporate bonds portfolio alignment to the Paris Agreement goals.

Transition pathway (g CO2e/Mwh)

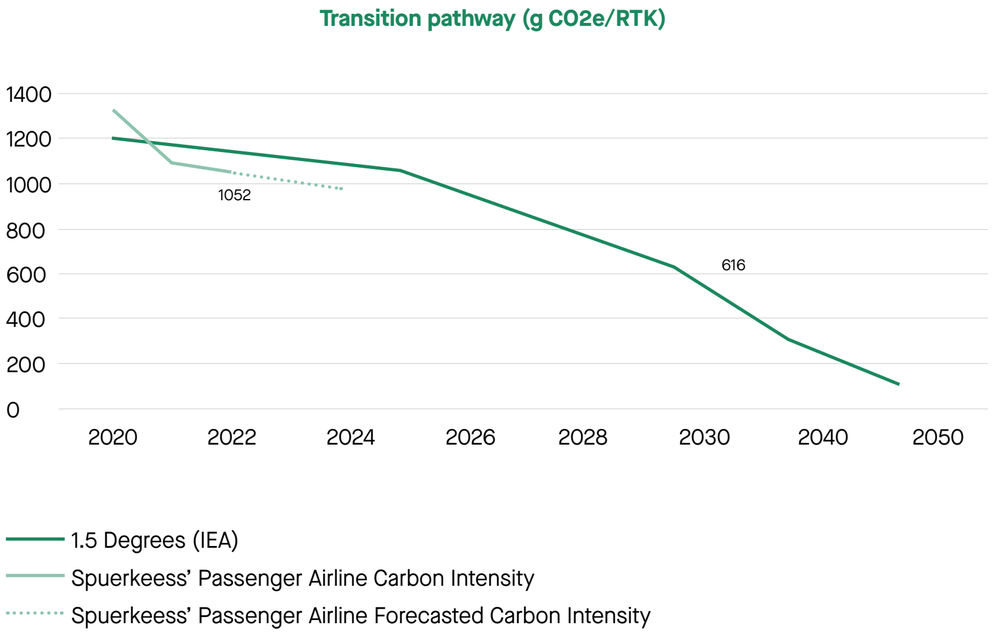


4 CORPORATE EQUITIES PORTFOLIO

Among our corporate equities portfolio, which are our long term financial assets, we focus on the aviation sector as they have the most significant impact on climate change within our portfolio. We aim to exercise our influence as a reference shareholder to the extent permitted under the applicable law.

4.2.3.2. PASSENGER AIRLINE

The forecasted transition pathway until 2024[15] shown hereunder for our passenger airline company stems from the company and expresses its ambition to stay below the 1,5°C IEA scenario from TPI and become net zero by 2050.



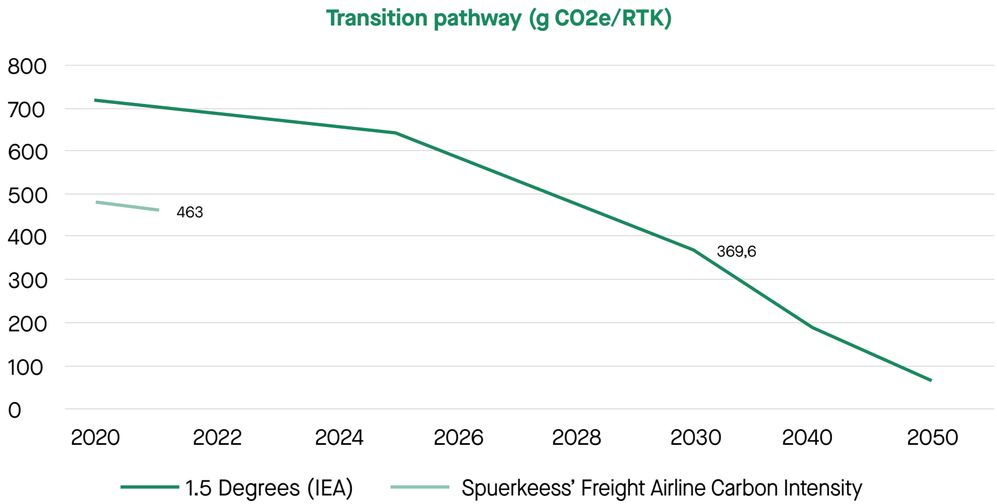
15 The remaining forecasted transition pathway until 2030 will be available once the company has finalized its review of its ESG strategy and more precisely its refleeting exercise.

4 FREIGHT AIRLINE

4.2.3.2.2.

As the TPI benchmarks for the aviation sector mainly fits for passenger airlines, we concluded that based on the Science Based Targets Initiative (SBTi) benchmarks provided for freight airlines, that the latter are 40% lower than for the rest of the sector over time.

Therefore, Spuerkeess used the TPI benchmark pathway for its passenger airlines and derived a pathway for freight airlines (- 40% of the TPI passenger airline benchmarks). The forecasted transition pathway for our freight airline company will be completed over the next weeks.



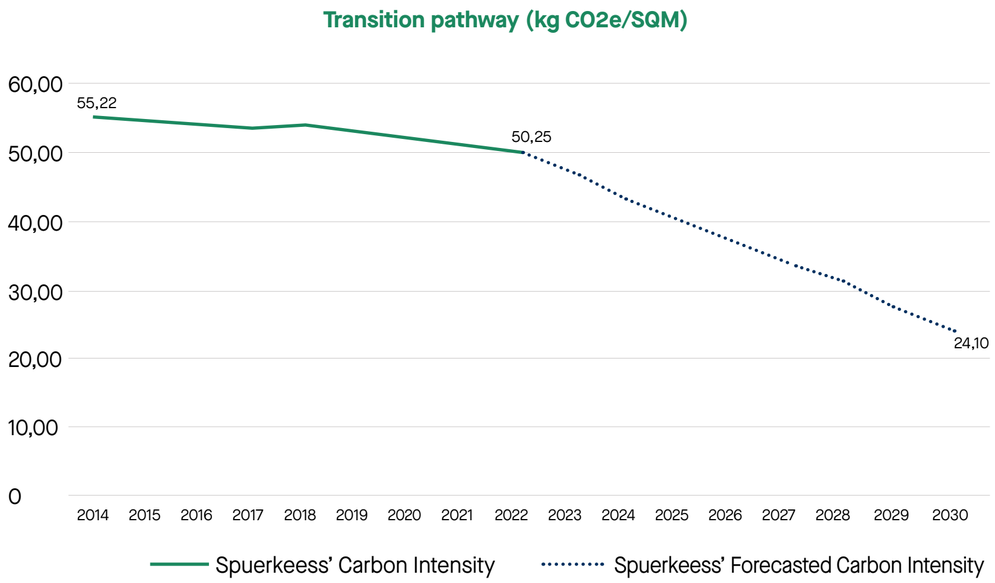
Based on our stakeholder engagements with our passenger and freight airline companies, both aim staying below the 1,5°C IEA scenario. This will mainly be reached by taking new measures such as a renewing of their fleets and the use of Sustainable Air Fuel (SAF) to reduce their carbon footprint (absolute emissions and carbon intensity) in the short, medium and long term.

4

4.2.3.3. RESIDENTIAL MORTGAGE LOANS

For our residential mortgage loans portfolio, we use the decarbonisation rate from the National Energy and Climate Plan (NECP) for the Luxembourg's real estate sector which consists of a 64% reduction from 2005 until 2030[16].

As mentioned earlier in this report, our baseline year is 2022 for all our portfolios. The figure below shows a decrease of 9% in the carbon intensity (kg CO2e / SQM) of our residential mortgage loan portfolio since 2014.



In order to align with the NECP target for the real estate sector and to become net zero at the latest by 2050, we consider two possible levers to reach that target:

a) Increase of the financing of A and B EPC classes,

b) Increase of the collection of EPC from our clients.

The potential impact of the first lever seems quite difficult to forecast for the time being given the macroeconomic circumstances we are currently facing (i.e. raise in interest rates and high real estate prices). On the other side, our average data quality score for our residential mortgage loan portfolio is mid-range 2,92, as we refer mainly to PCAF emission factors (tons CO2e/sqm) applied for Luxembourg. Based on our analysis, we concluded that for Luxembourg, the emission factor from the clients' EPC is 49% lower on average than the emission factors from the PCAF database.

Therefore, Spuerkeess liaised with its clients to systematically collect the EPC from their mortgage loans, which will result in an improvement of our data quality score since the reliance on proxy emission factors will decrease. In this context, we are aiming an increase of 30% of the collection of EPCs from our clients until 2030 which will represent a reduction of 52% until 2030 of our carbon footprint of our mortgage portfolio compared to 2022.

Beyond, Spuerkeess in its role as a Transition Enabler will further promote renovation loans to help our clients in their transition process.

16 The decarbonisation rate from the NECP considers only scope 1 GHG emissions but for all kind of buildings (residential, commercial and administrative buildings).

4

4.2.3.4. BUSINESS LOANS TO SMEs

For our SMEs portfolio, we identified the following climate intensive sectors based on the PCAF methodology:

- Maritime,
- Construction materials,
- Electric utilities,
- Trucking,
- REITs.

We intend to liaise with top emitting companies in each of those sectors based on emission data and exposure levels by helping in defining decarbonisation targets and in supporting the transition to net zero by 2050.

4.2.4. TAKING ACTIONS

As part of our commitment to net zero and our ambition to decarbonise our portfolios to become Paris aligned, we intend to

- review our intermediate goals and set further intermediate targets on a regular basis to be sure to align portfolios to net zero by 2050,
- include the remaining climate relevant assets into our analysis over the coming years, as well as non-climate relevant activities to increase the coverage of the banking assets,
- continue defining client-related targets and commitments together with our stakeholders for sectors where transition pathways do not yet exist,
- develop concrete action plans to decarbonise our portfolios and reach the defined targets,
- develop climate friendly products and services to reorientate capital flows towards more sustainable assets,
- increase our data quality score over time.

The identification of the most GHG emitting sectors within our portfolios, on which we set decarbonisation targets, represents a first milestone that helped us identify and measure the alignment gaps towards 2°C and 1.5°C transition pathways.

A detailed climate action plan for the five sectors/activities mentioned earlier in this report will follow in April 2024 and will be integrated into Spuerkeess' business strategy.

4 DISCLOSING & MONITORING PROGRESS

4.2.5.

Our ambition is to reach net zero emissions by 2050 and meet our intermediary goals to contribute towards a climate-safe future.

As part of that commitment, we will publish our progress annually in order to keep our stakeholders informed of our efforts.

As transition pathways and targets may be subject to changes as data availability, quality and granularity improves over time and the regulatory and industry environment evolves, we will continuously review and update our approach.

5

OUR GOVERNANCE

5 OUR GOVERNANCE

Our sustainability strategy is fully integrated into our business strategy which is governed by our Board of directors, our Executive Committee as well as our Extended Management.

In 2020, Spuerkeess developed a sustainability integration plan for all its banking activities. This plan applies the principle of dual materiality and defines the current and future material challenges and significant impacts that the Bank is facing based on its business activities, the sectors it supports and the regions where its clients operate.

The plan also defined new dedicated responsibilities for the Extended Management, which monitors the achievement of the objectives of the strategy in terms of sustainable development, as well as its implementation in action plans.

In particular, Spuerkeess has set up a Strategic and Sustainability Office (SSO) within the Secretary General Business Unit, a competence centre which is, inter alia, in charge of the monitoring of the regulatory and legal developments pertaining to ESG related matters and the review and monitoring of the implementation of Spuerkeess' strategy by delivering quarterly progress reports to the Board of directors, the Executive Committee and the Extended Management.

The SSO is also responsible for developing and monitoring both the sector exclusion policy and the methodology for financed GHG emissions, the coordination of internal and external reportings to ESG risks and the monitoring of the compliance with the carbon neutrality commitments taken for Spuerkeess' portfolios. Our Risk Management department is responsible for the development of our holistic climate risk management framework, including the management of climate-related and environmental risks and its impact on Spuerkeess' business model, as well as the definition of key metrics and risk appetite thresholds. Furthermore, our net zero commitment is embedded in our Risk Appetite Statement and our activities are governed by a dedicated Climate Risk Policy which outlines the roles, responsibilities as well as qualitative risk appetite principles and quantitative risk appetite metrics.

Spuerkeess' Audit and Compliance Board Committee monitors and evaluates the risk of non-compliance of Spuerkeess against the regulatory frameworks and the commitments signed. Starting 2023, the SSO will report to the Board of directors, the Executive Committee and the Extended Management on progress against climate policy commitments and targets set out in this report.

6

APPENDIX

6

6.1. METHODOLOGY OF OUR FINANCED GHG EMISSIONS CALCULATIONS

6.1.1. METHODOLOGY

In terms of calculating our financed GHG absolute emissions, we applied the methodologies described in the "Global GHG Accounting & Reporting Standard" from PCAF (2022), second edition published on December 2022. PCAF was launched in order to harmonise methods for accounting for greenhouse gases (GHG) and allowing financial institutions to measure and disclose in a consistent manner the GHG emissions financed by their loans and investments activities.

6

6.1.2. SCOPE

Spuerkeess's carbon footprint of its lending and investment activities includes its clients/issuers scope 1, scope 2 and scope 3 emissions where relevant and appropriate reliable data exists. More precisely, with respect to our financed scope 3 emissions, we cover scope 1 and scope 2 emissions for all our asset classes. For Oil, Gas and Mining activities, we additionally take into account scope 3 emissions as required by PCAF. From 2023, Spuerkeess will, as required by PCAF include the scope 3 emissions for five additional sectors (i.e. transportation, construction, buildings, materials and industrial activities) and from 2025 for every sector in its financed GHG emissions calculations.

Our approach consists on focusing on climate relevant sectors (higher probability of transition risk) as defined by the Regulation (EU) 2020/1818. Based on this definition, we concluded that approximately 43% of Spuerkeess total assets (or EUR 24.549 mio) as of 31 December 2022 stemmed from exposures on climate relevant sectors. Our financed GHG emissions calculation covered 96% of the Spuerkeess climate relevant exposures (EUR 23.468 mio euros or 41% of Spuerkeess' total assets).

The asset classes on which we applied the PCAF methodology were:

- Corporate bonds,
- Corporate equities,
- Business loans,
- Residential mortgage loans.

We will continuously improve the coverage of our financed emissions. This helps us in our internal prioritisation of sectors and companies selected for targeted emission reductions and risk management (mainly transition risk) following our commitment becoming net zero by 2050. Spuerkeess will continue to include the remaining climate-relevant assets into its analysis over the coming years, as well as non-climate relevant activities to increase the coverage of its banking activities of its total balance sheet.

6

6.1.3.

GHG EMISSION DATA

All our financed GHG emissions calculations are based on data coming either from our third party data provider MSCI (verified/non verified GHG emissions for our clients/issuers and sectoral economy activity emission proxy factors) or from PCAF (sectoral/activity emission proxy factors).

We used, where data was available, client-specific data to calculate our financed emissions. For some of our portfolios/sectors, we relied on proxies as, especially for smaller clients, data were not yet available.

- **Corporate bonds portfolio:** we used GHG emissions data and EVIC[17] for our clients/issuers from our third party data provider MSCI. Where GHG emissions data were not available, we calculated sectoral means based on the Nace Code (level 2) of our clients from MSCI data. For unlisted corporate bonds, PCAF requires replacing EVIC by clients' total equity + debt which we obtained from Bloomberg or clients' financial statements.
- **Corporate equities portfolio:** we obtained GHG emission data as well as total equity + debt directly from the companies as a result of stakeholder engagements.
- **Business loans portfolio:** we used sectoral GHG emissions and assets data from the PCAF database to calculate our financed emissions due to data unavailability for SME companies.
- **Residential mortgage loans portfolio:** we used the PCAF database to get specific emission factors (gCO2e/sqm) for Luxembourg associated with our energy performance certificate we either received directly from our clients or estimated based on the construction year of the building.

17 The sum of the market capitalization of ordinary shares at fiscal year end, the market capitalization of preferred shares at fiscal year-end, and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values. PCAF (2022). The Global GHG Accounting and Reporting. Standard Part A: Financed Emissions. Second Edition .p.53

6

6.1.4.

CALCULATION OF OUR FINANCED EMISSIONS

Based on the above defined scope and data sources, we used the following PCAF formulas to calculate our financed GHG emissions.

Corporate Bonds Portfolio:
For listed companies:

$$\sum_{i}^{n} \frac{\text{Outstanding amount}_i}{\text{EVIC}_i} * \text{Company Emissions}_i$$] Data Quality Score = 2

$$\sum_{i}^{n} \frac{\text{Outstanding amount}_i}{\text{EVIC}_i} * \text{Revenue}_i * \frac{\text{GHG emissions}_s}{\text{Turnover}_s}$$] Data Quality Score = 4

For unlisted companies:

$$\sum_{i}^{n} \frac{\text{Outstanding amount}_i}{\text{Total equity + debt}_i} * \text{Company Emissions}_i$$] Data Quality Score = 2

$$\sum_{i}^{n} \frac{\text{Outstanding amount}_i}{\text{Total equity + debt}_i} * \text{Revenue}_i * \frac{\text{GHG emissions}_s}{\text{Turnover}_s}$$] Data Quality Score = 4

Where i = investee company and s = sector

Corporate Equity Portfolio:

$$\sum_{i}^{n} \frac{\text{Outstanding amount}_i}{\text{Total equity + debt}_i} * \text{Company Emissions}_i$$] Data Quality Score = 1 or 2

Where i = investee company

Business Loans:

$$\sum_{i}^{n} \text{Outstanding amount}_i * \frac{\text{GHG emissons}_s}{\text{Assets}_s}$$] Data Quality Score = 5

Where i = investee company and s = sector

Portfolio data quality score:

$$\frac{\sum_{i}^{n} \text{Outstanding amount}_i * \text{Data Quality Score}_i}{\sum_{i}^{n} \text{Outstanding amount}_i}$$

Residential Mortgage Loans:

$$\sum_{b,e}^{n} \frac{\text{Outstanding amount}_b}{\text{Property value at orgination}_b} * \text{Actual energy consumption}_{b,e} * \text{Supplier specifiy emission factor}_e$$] Data Quality Score = 1

$$\sum_{b,e}^{n} \frac{\text{Outstanding amount}_b}{\text{Property value at orgination}_b} * \text{Estimated energy consumption from statistics}_{b,e} * \text{Floor area}_b * \text{Average emission factor}_e$$] Data Quality Score = 4

$$\sum_{b,e}^{n} \frac{\text{Outstanding amount}_b}{\text{Property value at orgination}_b} * \text{Estimated energy consumption from energy labels}_{b,e} * \text{Floor area}_b * \text{Average emission factor}_e$$] Data Quality Score = 3

$$\sum_{b,e}^{n} \frac{\text{Outstanding amount}_b}{\text{Property value at orgination}_b} * \text{Estimated energy consumption from statistics}_{b,e} * \text{Number of buildings}_b * \text{Average emission factor}_e$$] Data Quality Score = 5

Where b = building and e = energy source

6 DATA CHALLENGES

6.1.5.

In general, climate-related data is not yet comprehensively available today. Data availability and quality, however, will improve over the coming years as climate and ESG-related data disclosures are emerging world-wide.

Nevertheless, despite these current data limitations, we believe that it is key, especially for transparency reasons to our stakeholders, to disclose the data and methodologies we used for the establishment of financed GHG emissions as well as our climate action plan to decarbonise our portfolios to become net zero by 2050 or earlier.

Finally, we would like to mention that several external factors, out of the bank's control, could significantly impact the financed GHG emissions of some of our portfolios via a change in the PCAF attribution factor (outstanding amount/EVIC)[18]. For example, the company's EVIC can be affected by a raise/drop in its share price which can then lead to lower/higher financed emissions on our side due to a decrease/ increase in the PCAF attribution factor. The same holds for foreign exchange effects (i.e. EUR/USD, EUR/CHF, etc.) as we have to report in EUR currency.

18 Please refer to the section 6.1.4. Calculation of our financed emissions

6

6.2. EVOLUTION OF OUR CARBON FOOTPRINT OF OUR BANKING ACTIVITIES

This section gives an indication of the evolution of our financed GHG emissions over the last two years, where, based on the PCAF methodology, we calculated for the second year in a row our financed GHG emissions.

EVOLUTION OF OUR CARBON FOOTPRINT 2021 – 2022

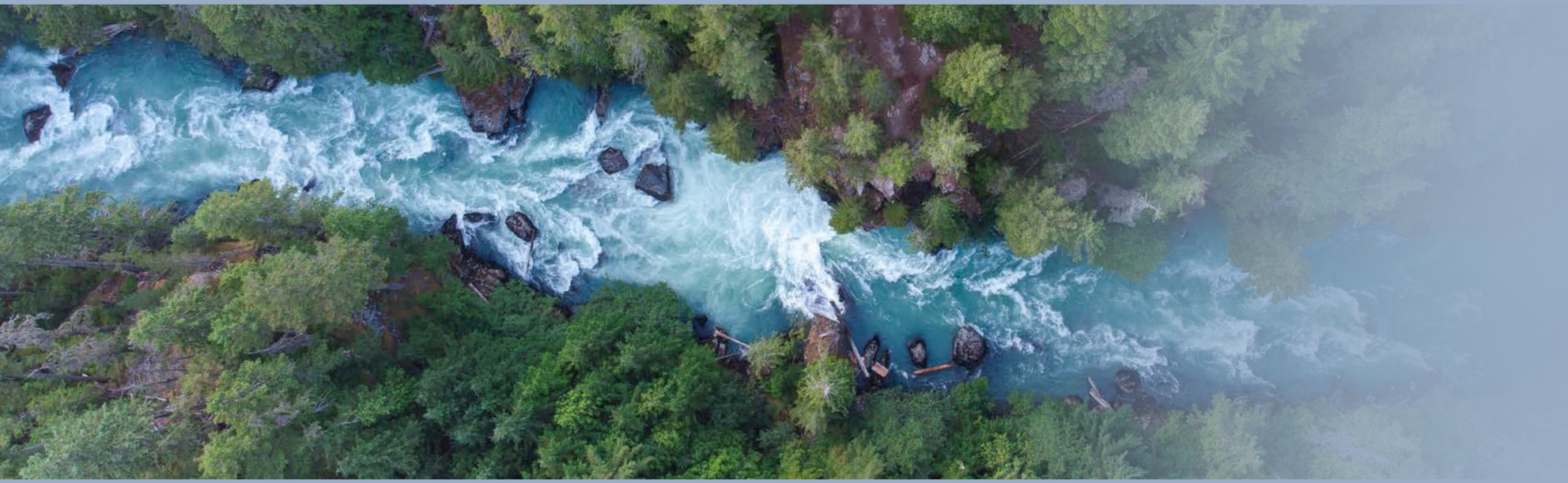
Asset Class	2021					2022					Δ 2022 / 2021 of total financed GHG Emissions
	Gross Carrying amount (in mio €)	Financed Scope 1 & 2 Emissions (in tons of CO2e)	Financed Scope 3 Emissions only Oil, Gaz & Mining (in tons of CO2e)	Total Financed GHG Emissions (in tons of CO2e)	Financial Intensity (tons of CO2e/ exposure)	Gross Carrying amount (in mio €)	Financed Scope 1 & 2 Emissions (in tons of CO2e)	Financed Scope 3 Emissions only Oil, Gaz & Mining (in tons of CO2e)	Total Financed GHG Emissions (in tons of CO2e)	Financial Intensity (tons of CO2e/ exposure)	
Corporate bonds	2.693,00	299.161,00	1.077.968,00	1.377.129,00	511,37	2.615,40	250.386,99	1.046.375,44	1.296.762,43	495,82	-5,84%
Corporate equities	1.283,00	339.435,00		339.435,00	264,56	1.098,00	398.867,83		398.867,83	363,27	17,51%
Residential mortgage loans	13.941,00	146.248,00		146.248,00	10,49	15.257,00	146.033,00		146.033,00	9,57	-0,15%
Business loans						4.497,40	464.061,00	39.927,27	503.988,27	112,06	
Total Gross Carrying Amount	**17.917,00**	**784.844,00**	**1.077.968,00**	**1.862.812,00**	**103,97**	**23.467,80**	**1.259.348,82**	**1.086.302,71**	**2.345.651,53**	**99,95**	

* Gross carrying amount expressed in mio EUR
** Financed emissions expressed in tons of CO2e

At constant scope, we observe

- A reduction of 5,84% of our financed GHG emissions stemming from the corporate bonds portfolio, reflecting already measures taken in 2022 such as divesting from "worst climate performers" and investing in best in class companies.
- An increase of 17,51% of our financed GHG emissions for our corporate equity portfolio basically due to a resumption of the airline activity after a long Covid-19 pandemic
- A slightly decrease in the financed GHG emissions for our residential mortgage loan portfolio.

In 2022, we added a fourth asset class Business loans to our carbon footprint.



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