TCX Fund Greenhouse gas (GHG) accounting report

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Acronyms and abbreviations

AC	air conditioning
AR	assessment report
BEIS	United Kingdom Department for Business, Energy and Industrial Strategy
CH_4	methane
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DACH	Austria, Germany and Switzerland
EIIO	environmentally extended input-out tables
GHG	greenhouse gas
GJ	gigajoule
GRI	Global Reporting Initiative
GWP	global warming potential
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
KPI	key performance indicator
m^2	square metre
m^3	cubic metre
MWh	megawatt hour
N_2O	nitrous oxide
PCAF	Partnership for Carbon Accounting Financials
PFCs	perfluorocarbons
pkm	passenger-kilometre
SBT	Science Based Target
SBTi	Science Based Targets initiative
SDA	sectoral decarbonisation approach
SF_6	sulphur hexafluoride
t	tonne
TCFD	Task Force on Climate-Related Financial Disclosure
TCX	The Currency Exchange Fund

Executive summary

The objective of this report is to outline the 2020 greenhouse gas (GHG) account of The Currency Exchange Fund (TCX). The total GHG footprint of TCX's operations and investment screening for the calendar year 2020 is 408 metric tonnes of carbon dioxide equivalent (tCO_2e). Table 1 and Table 2 provide overarching key performance indicators (KPIs) and main emissions by scope, while Figure 1 gives an overview of the emissions by source. Figure 2 displays an overview of the sources according to the GHG Protocol emission scopes.

The largest emission source in 2020 was investments, followed by business travel, which corresponded to 70% and 23% of total emissions respectively.

Table 1: Summary of KPIs

Number of employees	25	**tCO_2e/employee**	16.3
Profit	USD 20.2 million	**tCO_2e/million USD**	20.2
Premises area	651 m^2	**tCO_2e/m^2**	0.6

(Source: South Pole, 2021)

Table 2: GHG emissions by emissions source

Scope	Emissions (tCO_2e)	% of total
Scope 1: direct GHG emissions	**0**	**0.0%**
Gross emissions without carbon neutral gas	21	
Avoided emissions from carbon neutral gas	21	
Scope 2: indirect GHG emissions from purchased electricity, heating and cooling	**0**	**0.0%**
Gross emissions without contractual instruments	32	
Avoided emissions from contractual instruments[1]	32	
Scope 3: other indirect GHG emissions	**408**	**100.0%**
Gross emissions without contractual instruments	408	
Total GHG emissions	**408**	**100.0%**
Total avoided GHG emissions	**53**	

(Source: South Pole, 2021)

[1],[2] Contractual instruments refer to renewable energy purchase instruments and contracts such as renewable energy certificates, renewable power contracts, power purchase agreements and GoldPower offsets.

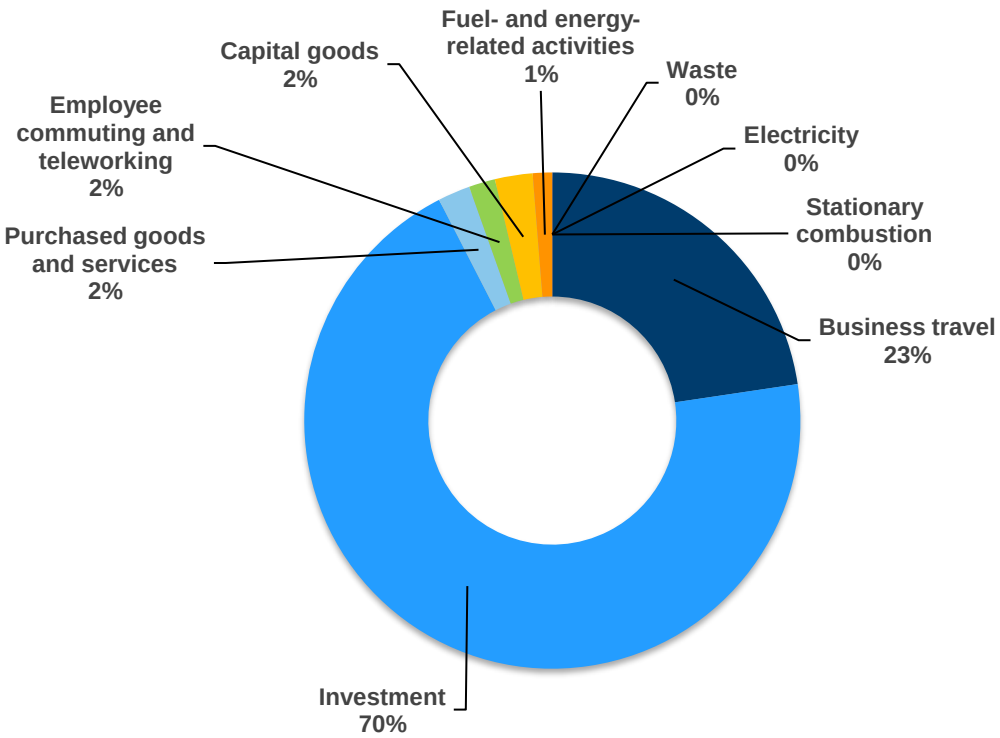

Figure 1: Sources of GHG emissions in 2020

(Source: South Pole, 2021)

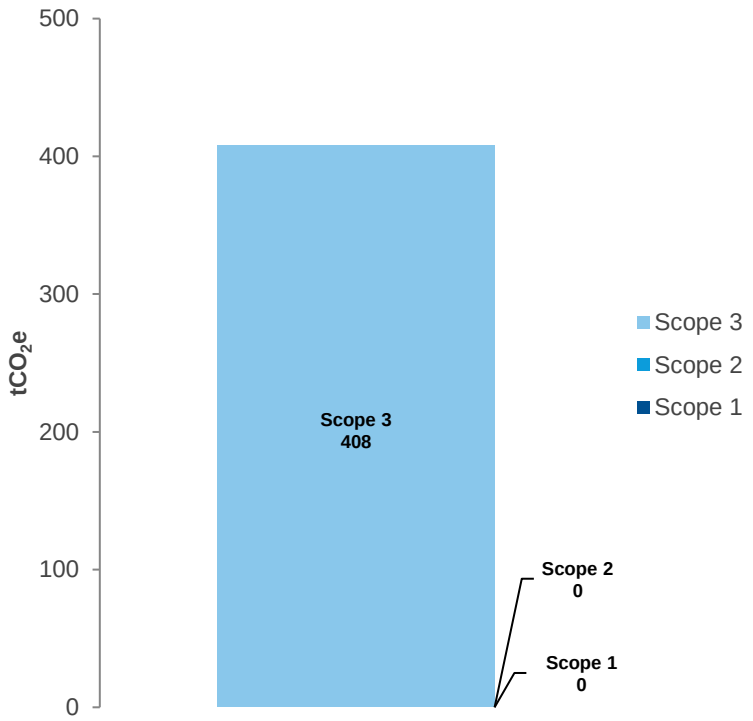

Figure 2: GHG emissions (tCO_2e) by scope in 2020

(Source: South Pole, 2021)

1 Introduction

This report provides a summary of the GHG emissions from TCX's operations and is financed from its liquidity portfolio from 1 January to 31 December 2020.

TCX was founded in 2007 by a group of Development Financial Institutions that specialise in Microfinance Investment Vehicles and donors to offer solutions to manage currency risk in emerging and frontier markets. As part of its commitment to achieving climate neutrality, TCX is continuously looking ahead and is determined to understand the GHG emissions of its operations as well as its liquid portfolio.

Company information and the reporting period are presented in Table 3.

Table 3: Company information

Company information	
Website	https://www.tcxfund.com
Business area	Finance
Reporting period	2020

(Source: South Pole, 2021)

2 South Pole's corporate GHG accounting approach

2.1 Methodology

The GHG accounting and reporting procedure is based on the 'The Greenhouse Gas Protocol: GHG Protocol: A Corporate Accounting and Reporting Standard – Revised Edition' (GHG Protocol) and the complementary 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' – the most widely used international accounting tools for government and business leaders to understand, quantify and manage GHG emissions. The standards were developed in a partnership between the World Resources Institute and the World Business Council for Sustainable Development.

The accounting was based on the principles of the 'GHG Protocol':

- **Relevance:** an appropriate inventory boundary that reflects the GHG emissions of the company and serves the decision-making needs of users.
- **Completeness:** accounting includes all emission sources within the chosen inventory boundary. Any specific exclusion is disclosed and specified.
- **Consistency:** meaningful comparison of information over time and transparently documented changes to the data.
- **Transparency:** data inventory sufficiency and clarity, where relevant issues are addressed in a coherent manner.
- **Accuracy:** minimised uncertainty and avoided systematic over- or under-quantification of GHG emissions.

2.2 System boundaries

2.2.1 Organisational boundaries

System boundaries were defined by the control approach, i.e. covering all entities over which TCX has operational control. The 2020 accounting included the operational emissions of TCX's office in The Netherlands.

Table 4: Key figures for TCX's office in 2020

Office key figures	
Location	Mauritskade 64, Amsterdam
Area (m^2)	651
Headcount	25

(Source: South Pole, 2021)

2.2.2 Operational boundaries

Under the 'GHG Protocol', emissions are divided into direct and indirect emissions. Direct emissions are those originating from sources owned or controlled by the reporting entity. Indirect emissions are generated as a consequence of the reporting entity's activities but occur at sources owned or controlled by another entity.

The direct and indirect emissions are divided into three scopes, as found below.

Scope 1

Scope 1 includes all carbon emissions that can be directly managed by the organisation (direct GHG emissions). This includes the emissions from the combustion of fossil fuels in mobile and stationary sources (e.g. owned or controlled boilers, power generators and vehicles) and carbon

emissions generated by chemical and physical processes, as well as fugitive emissions from the use of cooling and air conditioning (AC) equipment. Table 5 (below) gives an overview of the emission sources considered in Scope 1, based on the information provided by TCX.

Table 5: Overview of Scope 1 emission sources for 2020

Category	Emission sources	Boundary
Stationary combustion	Generation of electricity and heat	Included
Mobile combustion	Company-owned or leased vehicles	Included, no emissions
Physical or chemical processing	Manufacture or processing of chemicals and materials	Not applicable
Fugitive emissions	Emissions from the use of cooling systems and AC equipment, leakage from CO_2 tanks or methane tubes	Not applicable

Scope 2

Scope 2 includes indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling purchased by the organisation from external energy providers. Table 6 below gives an overview of the emission sources considered in Scope 2.

Table 6: Overview of Scope 2 emission sources for 2020

Category	Emission sources	Boundary
Electricity	Purchased electricity	Included
Steam	Purchased steam	Not applicable
District heating	Purchased district heating	Not applicable
District cooling	Purchased district cooling	Not applicable

Scope 3

Scope 3 includes other indirect emissions, such as emissions from the extraction and production of purchased materials and services, vehicles not owned or controlled by the reporting entity, outsourced activities and waste disposal.

According to the ‘GHG Protocol’, companies shall separately account for and report on emissions from Scopes 1 and 2. Scope 3 is an optional reporting category, but its reporting is often required for Climate Neutrality Labels.

Table 7 below gives an overview of the emission sources considered in Scope 3.

Table 7: Overview of Scope 3 emission sources for 2020

Category	Emission sources	Boundary
Purchased goods and services	Purchased goods (raw materials) and services	Partially included (i.e. food products, water supply and furniture)
Capital goods	Production of capital goods (e.g. machinery, IT equipment)	Included
Fuel- and energy-related activities	Upstream life cycle emissions from fuel and electricity generation, incl. transmission and distribution losses	Included
Upstream transportation and distribution	Transportation and distribution of goods and services to the company	Not included, immaterial emissions
Waste generated in operations	Waste management of operational waste (landfilling, recycling, etc.)	Included
Business travel	Travel and accommodation of employees/contractors	Included
Employee commuting	Employee travel between home and work	Included
Upstream leased assets	Operation of assets leased by the organisation (lessee) in the reporting year and not included in Scope 1 or 2	Included in Scope 1 and Scope 2
Downstream transportation and distribution	Transportation and distribution of products sold by the organisation	Not applicable
Processing of sold products	Processing of intermediate products sold by the organisation	Not applicable
Use of sold products	Use of sold goods that require energy to operate	Not applicable
End-of-life treatment of sold products	Waste disposal and treatment of sold products	Not applicable
Downstream leased assets	Operation of assets owned by the company (lessor) and leased to other entities, not included in Scope 1 or 2	Not applicable
Franchises	Operation of franchises not included in Scope 1 or 2	Not applicable
Investments	Operation of investments not included in Scope 1 or 2	Included

2.3 Data inventory and assumptions

TCX has provided data on natural gas consumption for leased office, purchased electricity, business travel, employee commuting, IT equipment, food and beverages, water supply and waste generation. Where activity data of the inventory was lacking, extrapolations and estimations were made. These are summarised in **Annex II**.

Overall, the data inventory, emission factors and assumptions are based on the 'GHG Protocol'. The choice of assumptions and emission factors followed a conservative approach. Unless otherwise specified, all emission values in this report are given in tCO_2e.

Where activity data of the inventory was lacking, extrapolations and estimations were made.

2.4 Global warming potentials

Global Warming Potential (GWP) is a measure of the climate impact of a GHG compared to carbon dioxide (CO_2) over a time horizon. GHG emissions have different GWP values depending on their efficiency in absorbing longwave radiation and the atmospheric lifetime of the gas. The GWP values used in GHG accounting include the six GHGs covered by the United Nations Framework Convention on Climate Change and Kyoto Protocol and combinations of these. They are presented in Table 8. These are the GWPs used by the United Kingdom's Department for Business, Energy and Industrial Strategy (BEIS) and are based on the 'Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4)'. Although the 'AR5' is more recent, it has not been accepted internationally by all stakeholders.

Table 8: Applied global warming potentials

GHG	GWP (100 years)
Carbon dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous oxide (N_2O)	298
Hydrofluorocarbons (HFCs)	See IPCC AR4 – Table 2.14
Perfluorocarbons (PFCs)	See IPCC AR4 – Table 2.14
Sulphur hexafluoride (SF_6)	22,800

(Source: IPCC AR4, 2007)

3 South Pole's investment footprint approach

The impact assessment carried out by South Pole analyses the climate impact of TCX's liquidity portfolio. South Pole's approach is based on the methodological guidelines of the GHG Protocol and the recommendations of the Partnership for Carbon Accounting Financials (PCAF), which are introduced in this section in greater detail. Our approach delivers absolute and intensity metrics that enable TCX to understand the carbon exposure of its portfolio and provide a first step towards future climate-related action, such as setting Science Based Targets (SBTs) or aligning the public equity portfolio with a 1.5°C pathway (i.e. Paris alignment).

3.1 Selecting and applying a carbon accounting approach

An investment carbon accounting exercise focuses on the Scope 1 and Scope 2 emissions of investees, as outlined in the GHG Protocol's Category 15: investments. Nevertheless, both the protocol and PCAF guidelines outline that, for Scope 3, the emissions of investees should be considered for companies in which they are deemed material or relevant.

Since the liquidity portfolio invests in short-term debt (notes and commercial papers) issued by financial institutions (FI) or sovereigns, Scope 3 emissions from the investment activities of companies have not been considered. Instead, the investee's Scope 3 emissions that have been considered stem from 'own-operations', such as business travel, as these account for up to 50% of the operational carbon footprint.

South Pole provides TCX with two overarching methods to conduct an investment portfolio footprint across different asset classes. The approach is selected based on the data availability per investment.

3.1.1 Investment-specific method

The investment-specific method collects and uses emissions data from investee companies based on an entity's annual reporting or through disclosure mechanisms such as CDP.

3.1.2 Average data method

When company-level emissions data is not available, South Pole estimates a company's absolute emissions using country-level industry-specific averaged data. In other cases, South Pole uses environmentally extended input-output (EIIO) tables. When employing the average-data method, company-level financial data, such as annual revenue and enterprise value, is combined with averaged emissions data to estimate investee emissions.

3.1.3 Attribution of financed emissions

In line with the GHG Protocol's 'ownership principle', emissions are allocated to those investors who 'own' or finance them. Accordingly, the GHG emissions are proportionally allocated 'per share' to the investor. For example, if an investor owns 0.1% of a company, 0.1% of the company's GHG emissions are allocated.

However, to set an adequate attribution factor for loans, PCAF recommends that emissions are calculated as a proportion of the company's total capital. To prevent double counting, emissions are attributed proportionally to the exposure, divided by the company's enterprise value. Furthermore, considering that the resulting figure is commonly expressed as financed emissions over a specific period (e.g. annually), the holding period of the investment must be considered.

In this light, TCX provided its portfolio composition and the trade or maturity dates with South Pole, which enabled the development of an attribution factor that encompasses the portfolio's characteristics and accurately attributes financed emissions to the portfolio, as illustrated below.

$$Attribution\ factor = \frac{(Exposure)_{TCX}}{(Total\ debt + Equity)_{Investee}} * \frac{Holding\ days}{365}$$

3.1.4 Data quality

The quality of investment and emissions data is an important element of investment carbon accounting. The data quality hierarchy developed by PCAF and illustrated in Figure 3, serves as an indicator of the accuracy of the data used to carry out the carbon accounting exercise. Given the strong data availability for the portfolio companies and industries, South Pole's assessment used data ranked score 1 to score 3.

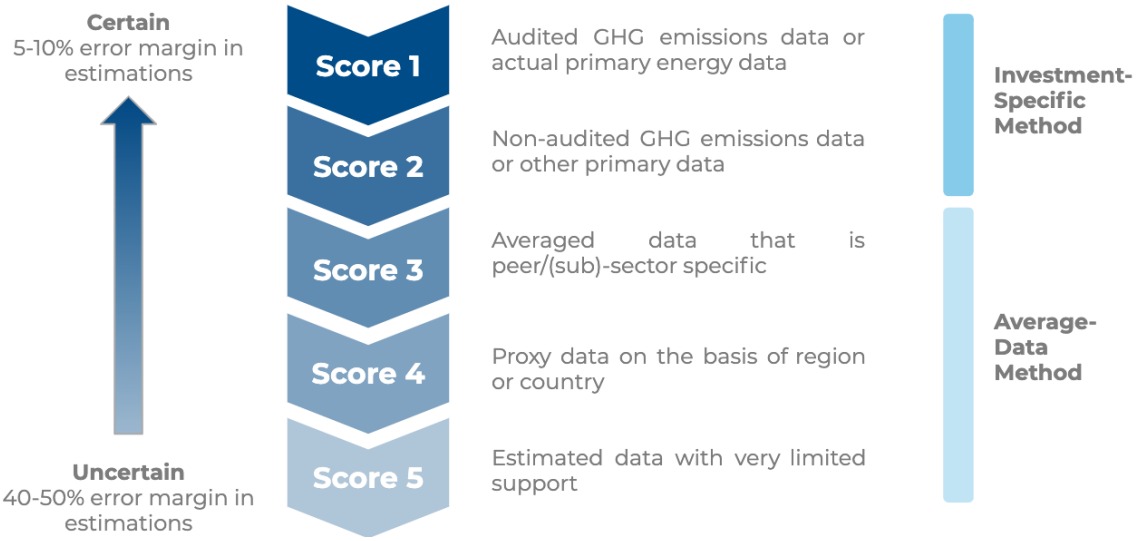

Figure 3: Data quality score

Source: PCAF, 2020 and South Pole, 2021

It is worth noting that because approximately 56% of investees report Scope 1 and 2 emissions, as well as Scope 3 emissions stemming from business travel, an investment-specific approach was used for most companies. An average-data method was used to estimate the emissions for approximately 44% of the portfolio, where country-level and industry-specific averaged data was used.

4 Results

4.1 Corporate GHG accounting

Based on the information provided by TCX, the total GHG emissions for 2020 were 408 tCO_2e.

Table 9 below illustrates the key figures in terms of GHG emissions (in CO_2e) and energy intensity (in gigajoules (GJ)) relevant to corporate sustainability reporting in accordance with the GHG Protocol.

'Total emissions' in this report refers to the emissions sources covered, as described in **Annex I.** Please note that, due to rounding of numbers, the figures may not add up exactly to the total provided.

Table 9: Key figures according to the Global Reporting Initiative (GRI)

GRI G4	GRI Standards	Topic	Quantity	Unit
G4-EN3	302-1	Direct energy consumption by primary source Carbon-neutral natural gas	412 412	GJ GJ
G4-EN3	302-1	Indirect energy consumption by primary source Renewable electricity Grid electricity	242 242 0	GJ GJ GJ
G4-EN15	305-1	Direct GHG emissions (Scope 1)	0	tCO_2e
G4-EN16	305-2	Energy indirect GHG emissions (Scope 2)	0	tCO_2e
G4-EN17	305-3	Other indirect GHG emissions (Scope 3)	408	tCO_2e
G4-EN18	305-4	GHG emission per employee	16.3	tCO_2e per employee

(Source: South Pole, 2021)

Table 10 and Figure 4 below present the breakdown of the GHG emissions by scope and by source, respectively. Figure 5 displays the breakdown of GHG emissions from business travel, with more detail on air travel provided in Figure 6.

The offset credits bought by the Royal Tropical Institute, from which TCX leases its office, in 2020 covered the building's emissions from natural gas, electricity, paper, air travel and commuter travel. Of these, natural gas and electricity consumptions are relevant for TCX, hence the zero emissions in Scopes 1 and 2. The building did not offset its fuel- and energy-related activities fully (Scope 3). The summary of avoided emissions is presented on Table 11. In total, TCX avoided emitting 53 tCO_2e in 2020.

Emissions from 2019 are included in the table for the sake of comparison between the two years; activity and consumption values refer only to the 2020 emissions.

Significant differences can be seen for some categories where emissions seem to have increased in 2020 compared to 2019, specifically for natural gas and stationary combustion. This is due to the differences in data sources between the two years. For 2019 calculations, natural gas consumption units were not provided and hence assumptions needed to be made.

Table 10: GHG emissions by scope and activity for 2020 (in comparison to 2019)

Activity	Consumption	Unit	2019 emissions (tCO_2e)	2020 emissions (tCO_2e)	Percentage of 2020 total (%)
Scope 1: direct GHG emissions			**0**	**0**	**0.0%**
Stationary combustion	**10,398**	**m^3**	**0**	**0**	**0.0%**
Natural gas[2]	10,398	m^3	0	0	0.0%
Scope 2: indirect GHG emissions from purchased electricity, heating and cooling			**0**	**0**	**0.0%**
Electricity	**67**	**MWh**	**0**	**0**	**0.0%**
Renewable[3]	67	MWh	0	0	0.0%
Grid	0	MWh	0	0	0.0%
Scope 3: other indirect GHG emissions			**386**	**408**	**100.0%**
Business travel			**270**	**92**	**22.6%**
Flights	162,860	pkm	253	59	14.4%
< 463 km	12,584	pkm	13	3	0.8%
463–3,700 km	35,181	pkm	35	7	1.6%
> 3,700 km	115,095	pkm	205	49	11.9%
Taxi	166,459	pkm	6	30	7.4%
Train	3,690	pkm	<1	<1	<0.1%
Accommodation	75	guest-nights	11	3	0.8%
Purchased goods and services			**15**	**9**	**2.1%**
Water	40	m^3	<1	<1	<0.1%
Supply	40	m^3	<1	<1	<0.1%
Treatment	40	m^3	<1	<1	<0.1%
Food and beverages	12,275	EUR	15	4	1.0%

[2,3] The offset credits bought by the Royal Tropical Institute in 2020 covered the building's emissions from natural gas, electricity, printed materials, paper and commuter travels. Of these, natural gas and electricity consumptions are relevant for TCX.

Activity	Consumption	Unit	2019 emissions (tCO_2e)	2020 emissions (tCO_2e)	Percentage of 2020 total (%)
Furniture	17,846	EUR	0	5	1.2%
Capital goods			**4**	**10**	**2.5%**
IT equipment			4	10	2.5%
Laptop	12	No. of devices	3	3	0.7%
Mobile phone	11	No. of devices	1	1	0.2%
Monitors	3	No. of devices	0	1	0.2%
Other IT devices	4,969	EUR	0	5	1.2%
Employee commuting and teleworking			**5**	**7**	**1.7%**
Bicycle	17,149	km	0	0	0.0%
Bicycle (e-Bike)	3,382	km	0	<1	< 0.1%
Walking	5,057	km	0	0	0.0%
Rail (International)	2,029	pkm	0	< 1	< 0.1%
Rail (National)	124,606	pkm	0	< 1	< 0.1%
Car	24,015	km	4	5	1.2%
Teleworking	1,143	Total days. employee	0	2	0.5%
Waste generated in operations	**2**	**t**	**<1**	**27**	**<0.1%**
Waste generated	2	t	<1	<1	<0.1%
Fuel and energy-related activities			**2**	**5**	**1.3%**
Natural gas	10,398	m^3	<1	3	0.7%
Electricity	67	MWh	2	2	1.5%
Investment	**2**	**Billion USD**	**89**	285	**23.1%**
Investment	2	Billion USD	89	285	23.1%
Total GHG emissions			**386**	**408**	**100.0%**

(Source: South Pole, 2021)

Table 11: Avoided GHG emissions in 2020

Activity	Consumption	Unit	2019 emissions (tCO_2e)	2020 emissions (tCO_2e)	Percentage of 2020 total (%)
Scope 1: direct GHG emissions			**2**	**21**	**35.6%**
Stationary combustion	**10,398**	**m^3**	**2**	**21**	**35.6%**
Natural gas[3]	10,398	m^3	2	21	35.6%
Scope 2: indirect GHG emissions from purchased electricity, heating and cooling			**44**	**32**	**54.2%**
Electricity	**67**	**MWh**	**44**	**32**	**54.2%**
Renewable electricity[3]	67	MWh	44	32	54.2%
Scope 3: other indirect GHG emissions			**6**	**0**	**10.2%**
Fuel and energy-related activities			**6**	**0**	**10.2%**
Renewable electricity[3]	67	MWh	6	0	10.2%
Total avoided GHG emissions			**52**	**53**	**100.0%**

(Source: South Pole, 2021)

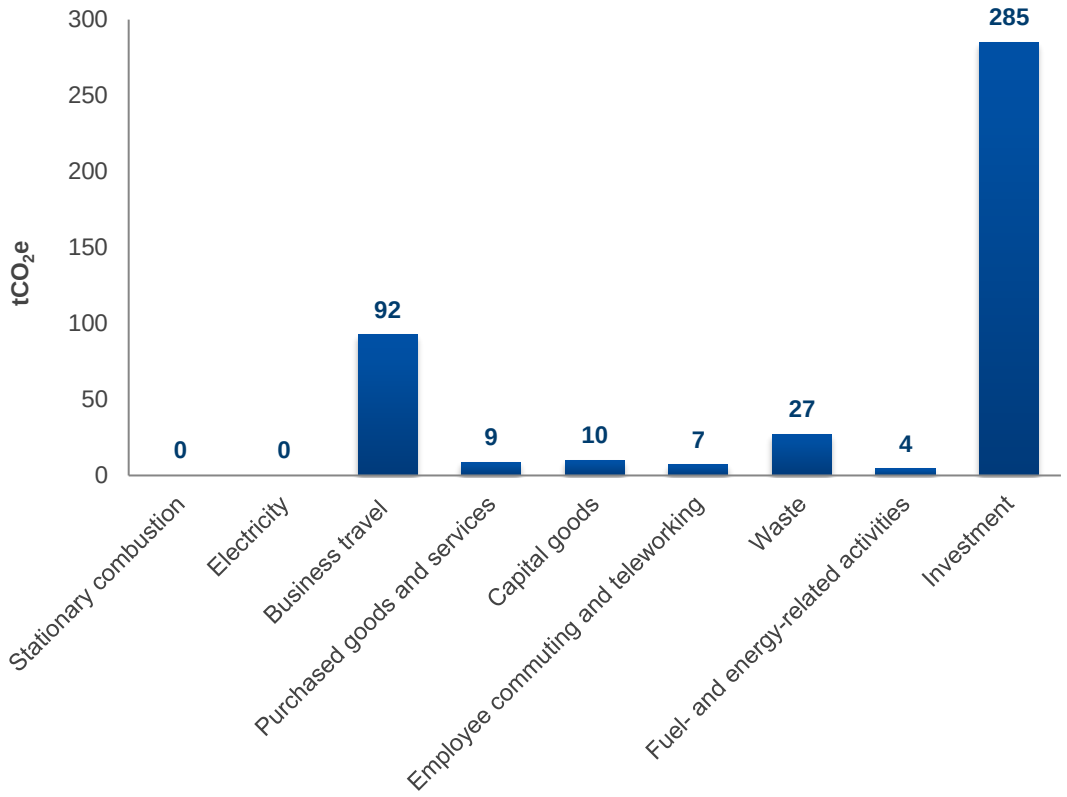

Figure 4: GHG emissions for 2020, by source

(Source: South Pole, 2021)

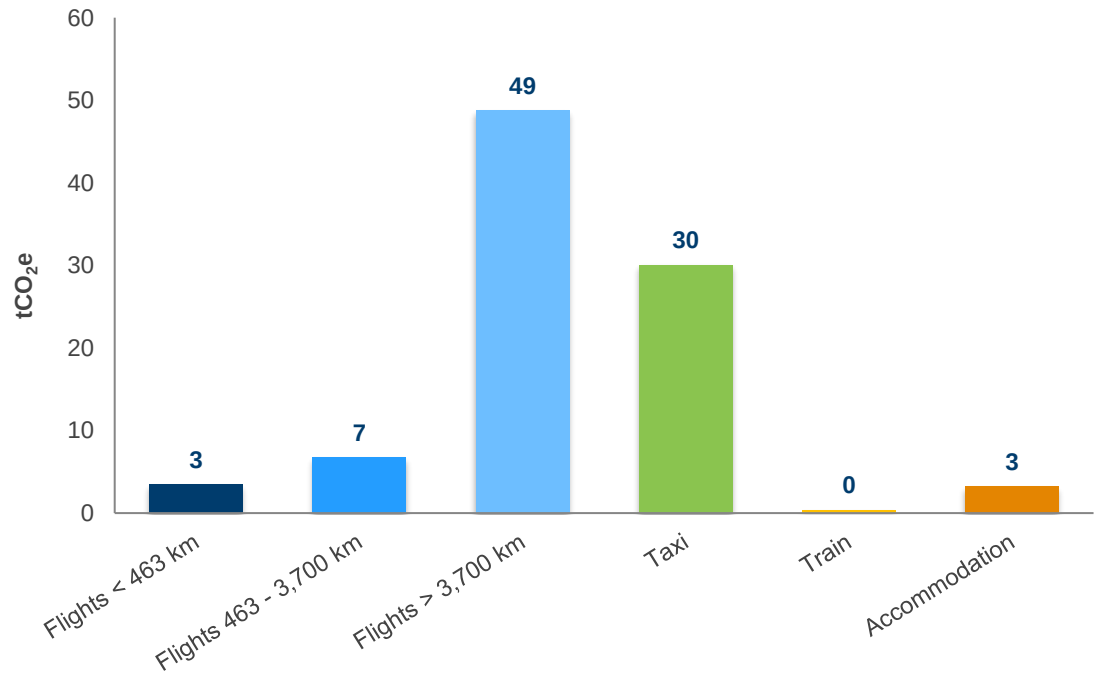

Figure 5: Sources of GHG emissions business travel

(Source: South Pole, 2021)

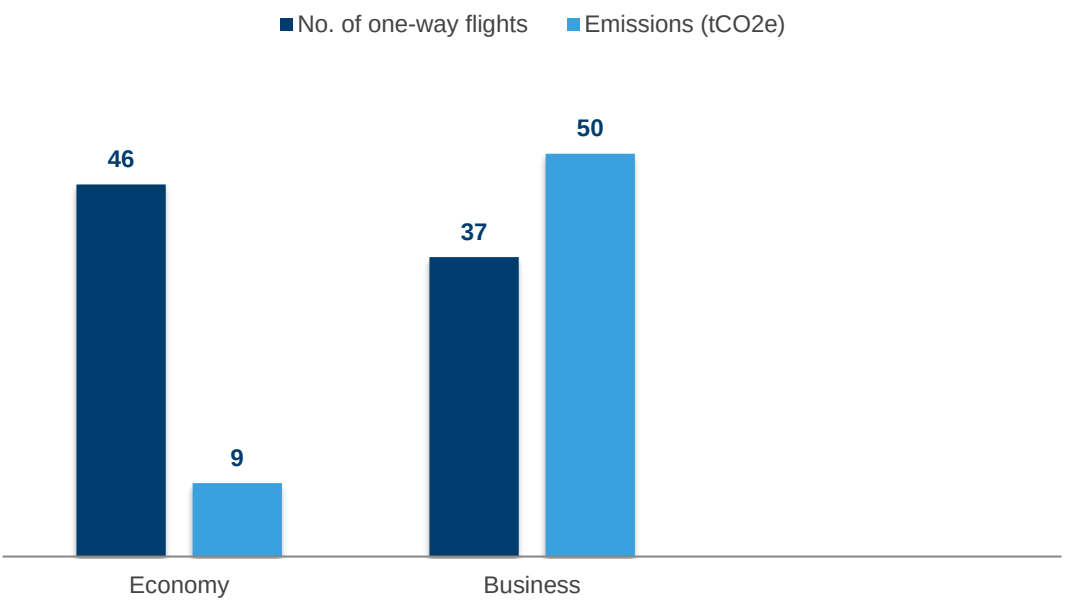

Figure 6: Breakdown of air business travel by seating class

(Source: South Pole, 2021)

4.2 Liquidity portfolio GHG accounting

South Pole carried out an analysis looking at the carbon footprint of the liquidity portfolio, which includes direct investments in 29 financial institutions.

Investments were made through notes and commercial papers, with a total value of USD 2 billion. Approximately 81% of the portfolio's investment weight was allocated to transactions that either matured in or were carried out during 2020. The remaining 19% of investment weight corresponds to investments that were held throughout all of 2020 and beyond. Only emissions financed during the assessment period (2020) were accounted for in this assessment.

As aforementioned, the financial and environmental data used in the analysis was sourced from company disclosures, CDP data and South Pole's calibrated industry-specific averaged data.

4.2.1 Key reporting metrics and results

Table 12 highlights the intensity indicators and aggregated results for the portfolio. The total value of the portfolio, as well as the weights shown below, do not represent a quarterly snapshot of the portfolio but rather the aggregation of all the active investments during 2020.

Table 12: Portfolio-level results

TCX liquidity portfolio	
Total portfolio value (USD)	$2,016,802,140
Total financed emissions (tCO_2e/year)	285.02
Carbon intensity * (tCO_2e/USD million invested)	0.1413
Weighted average carbon intensity ** (tCO_2e/USD)	0.3442

(Source: South Pole, 2021)

* *Emissions during the holding period*

** *Emissions during the entire year*

As illustrated in Table 12, the portfolio finances approximately 285.02 tCO_2e for the period analysed. It is worth noting that this accounts for operational emissions, which stem from Scope 1, 2 & 3 (business travel) emissions.

Furthermore, the portfolio's carbon intensity, which represents the carbon emissions per million USD of investment in the portfolio, is 0.1413. The weighted average carbon intensity (WACI) by portfolio weight illustrates the portfolio's exposure to high-emitting companies, particularly their carbon intensity expressed in terms of emissions per million USD of revenue.

Table 13 and Table 14 compare the top 10 holdings by investment weight and their corresponding contribution to the portfolio's financed emissions, as well as the top 10 contributors of financed portfolio emissions.

Table 13: Top 10 counterparties by portfolio weight and their equivalent contribution to financed emissions

Counterparty	Portfolio weight	% of total emissions	Financed emissions (tCO_2e/year)	Data quality score
KfW	9.5%	0.1%	0.434	1
FMS Wertmanagement	8.6%	3.8%	10.869	3
Landeskreditbank	6.5%	3.8%	11.090	3
Rentenbank	5.9%	1.2%	3.649	3
NWB	5.7%	0.01%	0.033	1
EBRD	5.4%	11.1%	31.831	3
OKB	4.9%	0.27%	0.781	1
EIB	4.5%	0.85%	2.428	1
BNG	3.9%	0.03%	0.073	1
IADB	3.7%	1.6%	4.592	1

(Source: South Pole, 2021)

Table 14: Top 10 contributors to the portfolio's financed emissions

Counterparty	Portfolio weight	% of total emissions	Financed emissions (tCO_2e/year)	Data quality score
Kingdom of Denmark	3.6%	25.7%	73.517	3
NDB	2.4%	22.9%	65.493	3
Korea Development Bank	2.6%	11.9%	33.973	3
EBRD	5.4%	11.1%	31.831	3
IFC	3.3%	4.3%	12.475	3
Landeskreditbank	6.5%	3.8%	11.090	3
FMS Wertmanagement	8.6%	3.8%	10.869	3
IBRD	2.6%	2.8%	8.046	1
Erste Abwickl. Anst.	2.4%	1.7%	4.904	3

IADB	3.7%	1.6%	4.592	1

(Source: South Pole, 2021)

Table 15 lists the carbon intensity of each portfolio company, which represents the annual tonnes of CO_2e emissions financed per million USD invested. It is worth noting that these only consider operational emissions.

Table 15: Counterparty carbon intensity

Counterparty	Country of domicile	Portfolio weight	Carbon intensity of investment (tCO_2e/MUSD)	Data quality score
Kingdom of Denmark	Denmark	3.6%	4.0080	3
NDB	China	2.4%	1.4916	3
Export-Import Bank of Korea	South Korea	1.4%	1.1902	3
Korea Development Bank	South Korea	2.6%	0.8909	3
IBRD	United States	2.6%	0.5168	1
EBRD	United Kingdom	5.4%	0.5174	3
Municipality Finance	Finland	1.1%	0.4124	3
IFC	United States	3.3%	0.3177	3
Landeskreditbank	Germany	6.5%	0.1944	3
CBA	Australia	1.0%	0.2117	1
FMS Wertmanagement	Germany	8.6%	0.2065	3
CAIDEP	France	2.3%	0.1897	3
Erste Abwickl. Anst.	Germany	2.4%	0.1778	3
Rentenbank	Germany	5.9%	0.1549	3
FMO	Netherlands	1.5%	0.1232	1
Banque et Caisse d'Epargne de l'Etat Luxembourg	Luxembourg	1.7%	0.0737	1
IADB	United States	3.7%	0.0604	1
IIC	United States	0.6%	0.0604	1

Counterparty	Country of domicile	Portfolio weight	Carbon intensity of investment (tCO_2e/MUSD)	Data quality score
Asian Development Bank	Philippines	3.6%	0.0454	1
EDC	Canada	0.1%	0.0336	1
EIB	Luxembourg	4.5%	0.0335	1
OKB	Austria	4.9%	0.0173	1
KfW	Germany	9.5%	0.0123	1
NRW.Bank	Germany	3.0%	0.0089	1
State of NRW	Germany	0.5%	0.0089	1
Kommuninvest	Sweden	3.4%	0.0025	1
Kommbanken AS	Norway	3.0%	0.0012	1
BNG	Netherlands	3.9%	0.0011	1
NWB	Netherlands	5.7%	0.0009	1

(Source: South Pole, 2021)

Table 16 outlines the aggregated results based on the investment region. The regions in which the portfolio companies are based encompass the following countries: DACH (Austria and Germany), Benelux (Luxembourg and Netherlands), Nordics (Denmark, Finland, Norway and Sweden), rest of western Europe (France and United Kingdom), Asia Pacific (China, South Korea, The Philippines and Australia) and North America (Canada and United States).

The table is also intended to serve as a reference to understand carbon intensities at a higher level, as the results listed below are aggregated figures for companies in the respective regions.

Table 16: Regionalised results

Region	Portfolio weight	% of total emissions	Carbon intensity of investment (tCO_2e/MUSD)
DACH	41.5%	11.2%	0.0381
Benelux	17.6%	2.3	0.0191
Asia Pacific	11.2%	37.6%	0.4715
Nordics	11.2%	27.4%	0.3448
North America	10.5%	9.0%	0.1217
Rest of Western Europe	7.7%	12.2%	0.2233

(Source: South Pole, 2021)

4.2.2 Corporate transparency

The first step for a company to understand its own climate impact, risks and opportunities is to conduct a carbon footprint at the company level. In most cases, the result of such an exercise is published in the public domain and subsequently collected by South Pole. Refraining from executing or publishing such results is usually an indicator of the absence of a climate strategy, which, from an investor's point of view, constitutes a risk.

In the assessed portfolio, 56.0% of holdings, accounting for 44% of the portfolio's investment weight, reported their annual CO_2e emissions. For the remaining companies, accounting for 46% of investment weight, approximations were carried out based on the average-data method, as outlined in Figure 7 below.

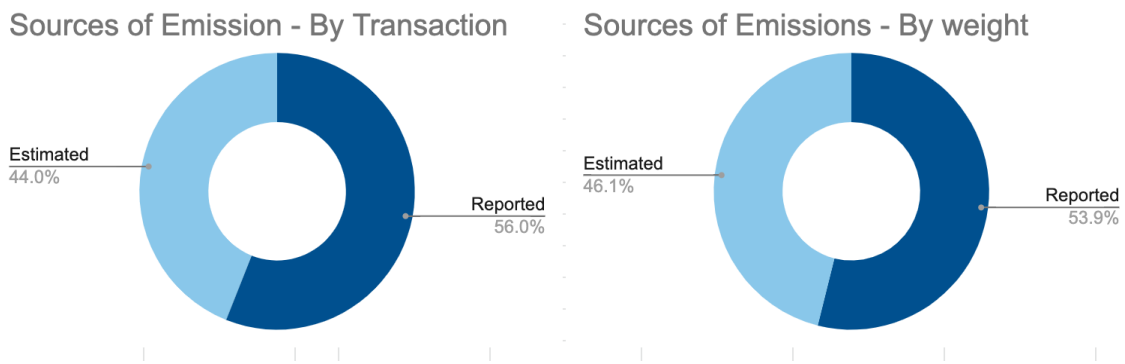

Figure 7: Portfolio GHG disclosure

(Source: South Pole, 2021)

5 Conclusions and recommendations

5.1 Corporate GHG accounting recommendations

Considering business travel makes up 23% of total emissions, of which business class flights represent 12% of total flight emissions, South Pole recommends setting up an internal travel policy that limits business class flights. Switching to premium economy or economy class flights has the largest potential in terms of reducing emissions from a corporate GHG accounting perspective.

5.2 Portfolio accounting: conclusions and recommendations

Every year, increasing numbers of financial institutions disclose their carbon footprint. For the purpose of this exercise, 46% of the emissions required estimation, which points to a high level of climate strategy already present across portfolio companies.

The results of the analysis show that TCX's liquidity portfolio finances a negative carbon impact of 285 tCO_2e per year, which can be seen as a low figure in proportion to the size of the portfolio.

There are three key reasons to explain this result:

- The first and most important reason is the nature of the activities financed. Since the portfolio invests only in short-term debt instruments (notes and papers), which often finance the liquidity needs of companies rather than the FI's other activities, the analysis only considered the operational footprint of investees and did not attribute emissions from the entities' project financing or lending activities (Scope 3).
    - This vastly lowers both the absolute and intensity figures for the portfolio in comparison to a portfolio invested in the same FI through equity or other forms of debt.
- The second is the holding period. The average holding period for the transactions was 183 days, which indicates that TCX only has a claim on a portion of the annual operational emissions of investees.
- The third is the proportion of enterprise value that TCX's loans represent. On average, TCX's investments account only for 0.02% of a company's enterprise value for the year.

As a result of the pandemic, the carbon intensity of some financial institutions that disclose GHG emissions was drastically reduced. This is a consequence of the reduction of air travel, which accounts for the majority of a financial institution's operational carbon footprint.

An additional element to note in the accounting were loans to sovereigns, such as the Kingdom of Denmark, which had the largest carbon intensity among all other counterparties. As this was considered an investment in sovereign debt, for which all the public administration activities are accounted for, it results in a higher carbon intensity compared to traditional financial institutions.

Annex I

Emission factors

Table 18: Emissions factors

Activity	Emission factor reference[3]
Stationary combustion and fuel-related activities	BEIS, 2020
Electricity and electricity-related activities	International Energy Agency, 2019; co2emissiefactoren, 2020
Business travel	BEIS, 2020
Commuter travel	BEIS, 2020; co2emissiefactoren, 2020
Accommodation	Cornell Hotel Sustainability Benchmarking, 2020
Food and beverages	UK Department for Environment, Food & Rural Affairs, UK Footprint Results (1990–2017), 2020
IT equipment	Apple, 2012, 2013, 2016; Dell, 2010, 2011, 2013, 2014, 2016, 2017, 2018; LCA, 2017; IBM, 2016
Waste	BEIS, 2020
Water supply and treatment	BEIS, 2020

[3] South Pole derives its emission factors from reliable and credible sources. South Pole is not responsible for inaccuracies in emission factors provided by third parties.

Annex II

Data assumptions and extrapolations

The data inventory, emission factors and assumptions follow the principles of the 'GHG Protocol'. Where activity data of the 2020 inventory was lacking, extrapolations and estimations were made. The choice of assumptions and emission factors followed a conservative approach.

Stationary combustion, electricity and water

The natural gas, electricity and water consumption in TCX's office was based on the annual consumption of the building from which TCX leased its office in 2020. TCX's consumptions were extrapolated based on the proportion of the floor area of the building that was occupied by TCX (2.61%). The offset credits bought by the Royal Tropical Institute, from which TCX leases its office, in 2020 covered the building's emissions from natural gas, electricity, paper, air travels and commuter travels. Of these, natural gas and electricity consumptions are relevant for TCX; therefore, there are zero emissions for natural gas (Scope 1) and electricity (Scope 2). The building did not offset its fuel- and energy-related activities (Scope 3).

Business travel

TCX provided actual data on flights, trains and taxi travel records in 2020. The activity data for accommodation was based on the data for flights and trains travels. The number of guest nights were based on the arrival and departure dates from one destination to another. An average fuel type was assumed for rail travel and taxis.

Commuter travel

TCX conducted a commuter travel survey at the end of June–beginning of July 2021. This was completed by 17 employees out of 25 TCX employees at the time (68%). The emissions from the survey have been extrapolated to account for the total number of employees in 2020. The extrapolation assumed five working days in a week and 46 working weeks in 2020.

Food and beverage

TCX provided its grocery receipts for one of its weekly office gatherings in 2019, which were used to extrapolate its annual grocery consumption. Food and beverage emissions in 2020 were calculated following the same approach with one exception; this applied to three months only: January, February and March 2020.

Waste

The amount of waste generated in TCX's office was extrapolated from the total waste generated by the building, using the same approach of occupied space by TCX (2.61%).


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