



BANCA ETICA'S CARBON FOOTPRINT ACCOUNTING

September 2021

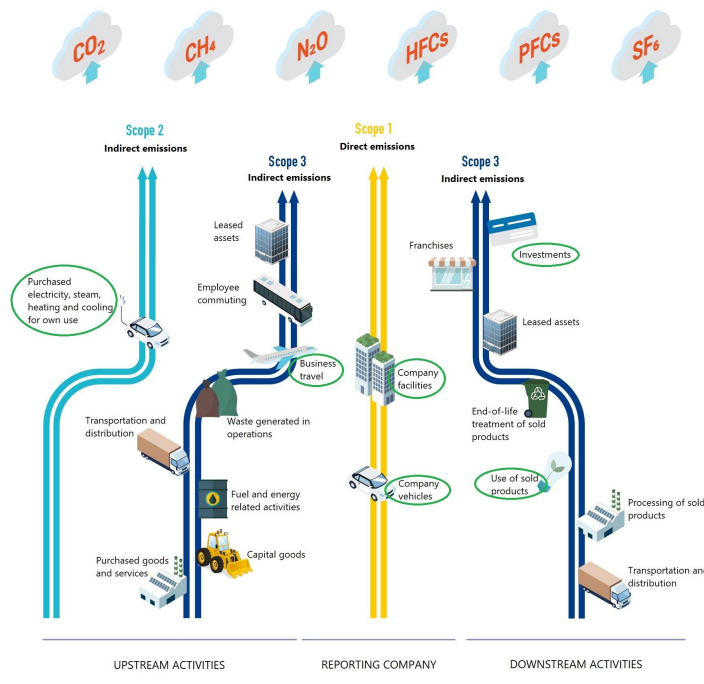
Introduction

Banca Etica is a cooperative bank that operates in Italy and Spain. It was established thanks to the commitment of a number of individuals and organizations who joined forces to create a credit institution based on Ethical Finance principles: transparency, participation, sobriety, efficiency and attention to the non-economic consequences of economic actions.

The carbon footprint is a parameter that is used to estimate the greenhouse gas emissions associated directly or indirectly with a product, service, organization, event or individual, generally expressed in tons of CO₂ equivalent (tCO₂e, those greenhouse gases that are equivalent to CO₂ in the effects of global warming).

Banca Etica reports data on the climate impact of its activities both considering the emissions directly produced and those generated by the investments and loans granted.

Member of Global Alliance for Banking on Values (GABV), Banca Etica has committed to disclose its climate impact resulting from its portfolio of loans and investments according to the Climate Change Commitment (3C Initiative).



Source: GHG protocol

Total greenhouse gas emissions

Indeed, this year Banca Etica has published its second [Impact Report](#), with a specific chapter on Carbon Footprint accounting, based on PCAF standard¹.

Banca Etica fully evaluated Scope 1 & 2 emissions.

In the case of Scope 3 Downstream indirect emissions the evaluation covers 87% of its assets. Its assets overall produced 116 thousand tonnes of CO₂ equivalent (almost 40% less than 2019 emissions).

Direct and indirect emissions produced by Banca Etica in 2020			
Category	tCO ₂ e	notes	
SCOPE 1: Direct emissions			
Company facilities	11		
SCOPE 2: Indirect emissions			
Purchased energy	5.7		
SCOPE 3: Upstream indirect emissions			
Business travel	52		
SCOPE 3: Downstream indirect emissions			
Loans and investments:			
Investments			
Sovereign bonds	5,308	54% of assets	
Other investments	2,069	0.6% of assets	
Use of sold products			
Corporate/SME loans	107,717	27% of assets	
Mortgages	818	1% of assets	
TOTAL EMISSIONS	115,981	Emissions per €M of loans & investments 43 tCO₂e/€M	
Emissions avoided	37,144		

¹ [PCAF, Global GHG Accounting and Reporting Standard for the Financial Industry](#)

The adopted methodology for the calculation of the emission factors is certainly crucial for the footprint's estimation. We present in the following chapters methodologies and estimations for the covered assets.

Scope 3 emissions: **Sovereign bonds**

In 2020 sovereign bonds represent 54% of Banca Etica's assets. It is estimated that they produce emissions (Scope 1 and Scope2) for 5,308 tonnes of CO₂e .

The bigger share of emissions is ascribable to Italian bonds which are 90% of the total amount held by the bank and 87% of the produced emissions. This is due to the fact that the emission factor of Italian bonds is quite low compared to other countries that use more fossil fuels in their energy mixes.

For the evaluation of the sovereign bonds' Scope 1 emissions, the emission factor is the ratio between CO₂ equivalent tonnes produced by the public administration of each country and their central government consolidated gross debt. Then, the emission factor is multiplied by the amount of euros invested in a specific sovereign bond.

$$(1) \quad Scope\ 1 = \sum_{i = country} \frac{Public\ administration\ GHG_i}{Central\ government\ consolidated\ gross\ debt_i} \times exposure_i$$

For the estimation of the sovereign bonds' Scope 2 emissions (equation 2), the emission factor used is the ratio between CO₂ equivalent tonnes produced by the Nace D (*energy sector*) sector of each country and the respective Nace D GDP. Then, the emission factor is multiplied for the value of products from the energy sector (*Nace D*) used by the public administration (*Nace O*), which we call "IO table value". This is then multiplied by the share owned by Banca Etica of the total country's public debt (*%exposure*).

$$(2) \quad Scope\ 2 = \sum_{i = country} \left(\frac{Nace\ D\ GHG_i}{Nace\ D\ Gdp_i} \times IO\ table\ value_i \right) \times \% \ exposure_i$$

Lastly, within the estimated emissions for sovereign bonds, Banca Etica did not include Scope 3 emissions, as provided by PCAF methodology. Nevertheless, we did calculate Scope 3 Upstream emissions for sovereign bonds (4,298 tCO₂e), which were evaluated referring to public administration's emissions due to the use of resources supplied by all the other sectors, excluding the energy and public administration sectors already accounted for in Scope 2 and 1 (equation 3). The "IO table value" in this case is the value of products used by Nace O from all other sectors with the exclusion of Nace D. The "% exposure" is the share owned by Banca Etica of the total country's public debt.

$$(3) \quad Scope\ 3 = \sum_{i = country} \left[\frac{(Total\ GHG - Nace\ O\ GHG - Nace\ D\ GHG)_i}{(Total\ Gdp - Nace\ O\ Gdp - Nace\ D\ Gdp)_i} \times IO\ table\ value_i \right] \times \%exposure_i$$

Indirect emissions produced by sovereign bonds held by Banca Etica in 2020			
Country	Total amount held (M€)	Emission factor (tCO ₂ e/M€)	Emissions (tCO ₂ e)
Austria	7.6	3.1	24
Belgium	7.5	3.8	28
France	45.1	1.9	87
Germany	5.0	7.5	38
Greece	10.3	9.7	100
Ireland	2.3	5.7	13
Italy	1,321.1	3.5	4,639
Netherlands	8.8	6.8	60
Portugal	17.8	5.0	89
Spain	42.8	5.4	231
Total	1,468.5		5,308

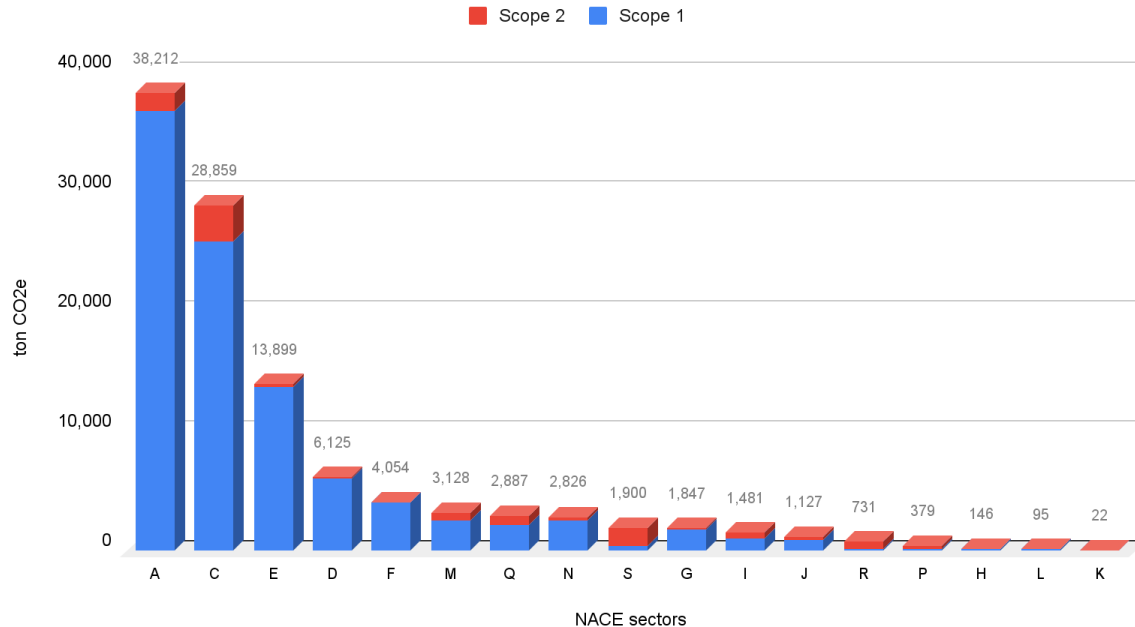
Scope 3 emissions: **Corporate/SME loans**

The emissions produced by corporate/SME loans (27% of Banca Etica's assets in 2020) were estimated assigning to each granted organisation the average sectoral emissions and calculating the emission proportionally to the outstanding loans. The considered emissions were relative to Scope 1 and 2, as required by PCAF methodology. The emission factors per euro of assets were provided by PCAF.

$$(4) \quad \text{SME loans GHG} = \sum_{i=\text{SME}} \text{Av. sectoral GHG} \times \text{outstanding loans}_i$$

Corporate/SME loans produced in 2020 accounted for almost 108 thousands tonnes of CO₂e. The three sectors that most contributed to total loans emissions were "Agriculture, forestry and fishing" for 35%, "Manufacturing" for 27% and "Water supply; sewerage; waste management and remediation activities" for 13%.

Emissions from corporate/SME loans for NACE sector - outstanding at 31.12.2020



The adopted methodology leads to overestimated figures, since the agricultural sector's emissions are considered in its sectoral average - which is typically high - while Banca Etica finances mainly companies using organic farming techniques which are often less polluting.

Banca Etica also estimated Scope 3 Upstream emissions, even if not accounted for in total corporate/SME loans emissions: the total Scope 3 emissions would be 130,893 tCO₂e.

Scope 3 emissions: **Mortgages**

Emissions from mortgages in 2020		
Granted loans, (M€)	Number of houses	CO ₂ e tonnes
19.1	275	817.9

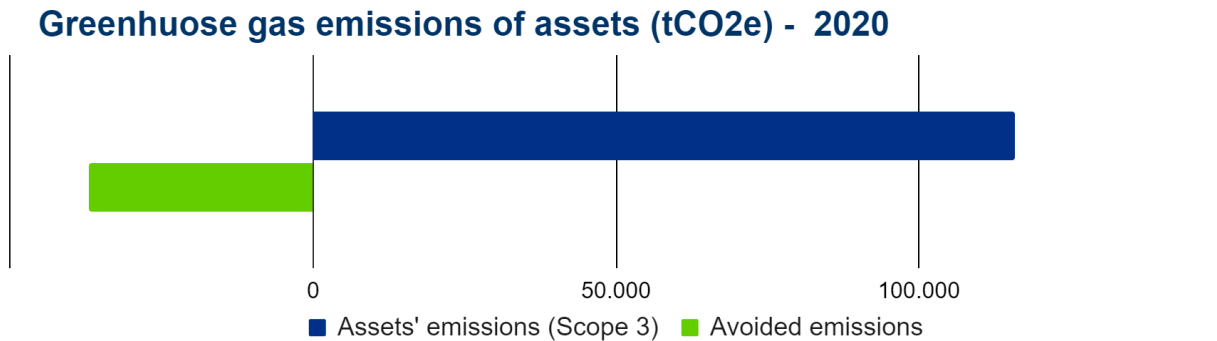
Because of lack of information about the specific building characteristics, square meters in particular, Banca Etica could only estimate emissions for the 36% of total house mortgages granted in 2020. The emissions were estimated multiplying the square meters of the 275 houses funded for which the information was available by an emission factor, resulting in a total of 818 tonnes of CO₂ equivalent.

$$(5) \quad \text{Mortgages' GHG} = \sum_{i=\text{mortgage}} \text{Average apartment GHG} \times \text{square meters}_i$$

The Scope 1 and 2 emission factors per square meter were provided by Navigant Consulting - Guidehouse.

No distinction was possible to adopt in emission coefficients about single or multi-family houses and when only compartments were available, a conversion table to square meters according to cadastral type was adopted.

Scope 3: **Avoided emissions**



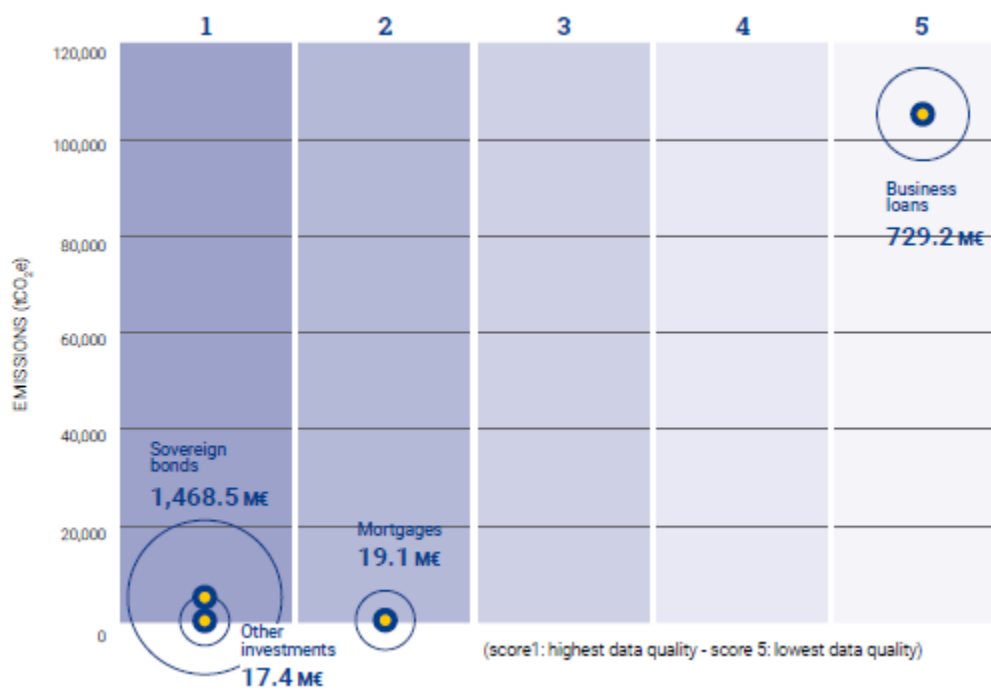
Total avoided emissions by Banca Etica's loans in 2020 were 37,144 tCO₂e.

Regarding the estimation of the avoided emissions we considered the loans granted by Banca Etica to organizations declaring they would use the loan to implement energy efficiency projects or to install renewable energy plans..

The data on energy savings resulting from our loans, already expressed in KWh in clients' estimations, were directly multiplied by an emission factor based on the national energy mix published by the Italian Ministry of the Environment, thus obtaining the tonnes of CO₂e avoided. In order to convert the data on newly installed renewable energy installations, provided by clients in kW, the European Union's PVGIS platform was used, converting according to the municipality where the renewable energy plant was installed.

Data quality of scope 3 emissions

According to the PCAF methodology classification, a scoring of data quality was assigned to each different kind of estimate. The highest levels of emissions data quality are for sovereign bonds and other investments, that have a score 1 level of data quality, and for mortgages, which have a score 2 level. The remaining data, business loans emissions, have a score 5 level of data quality.



References:

PCAF (2020). *The Global GHG Accounting & Reporting Standard for the Financial Industry. First edition.*