



BANCA ETICA'S CARBON ACCOUNTING

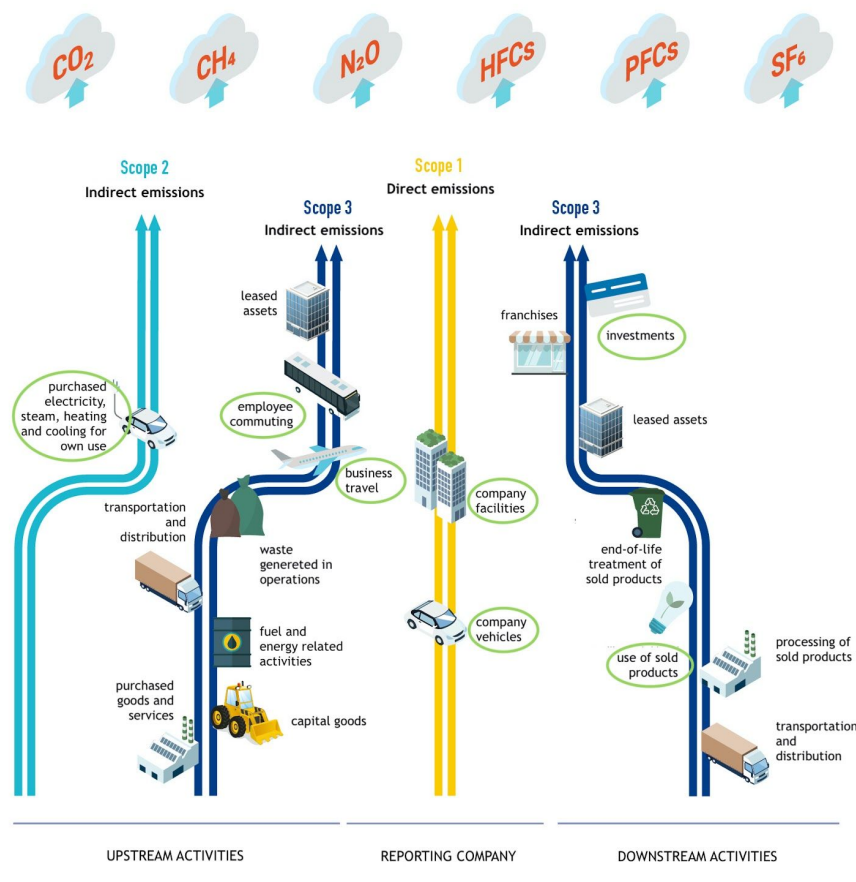
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Banca Etica is a cooperative bank that operates in Italy and Spain. It was established thanks to the commitment of a number of individuals and organizations who joined forces to create a credit institution based on Ethical Finance principles: transparency, 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 the 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 Climate Change Commitment (3C Initiative).



Source: GHG protocol

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

Banca Etica fully evaluated Scope 1 & 2 emissions.

In the case of Scope 3 Downstream emissions the evaluation covers 87% of its assets. Its assets overall produced 194 thousand tonnes of CO2 equivalent.

Direct and indirect emissions produced by Banca Etica in 2019		
Category	tCO2e	notes
SCOPE 1: Direct emissions		
Company facilities	13	
Company vehicles	19	
SCOPE 2: Indirect emissions		
Purchased energy	0.4	
SCOPE 3: Travel		
Employee commuting	196	
Business travel	204	
SCOPE 3: Loans and investments		
Investments		
Sovereign bonds	7,750	47% of assets
Equity holdings and investments	477.4	0.3% of assets
Use of sold products		
Corporate/SME loans	184,893	39% of assets
Mortgages	395	0.7 % of assets
TOTAL EMISSIONS	193,947	Emissions per €M of loans & investments 92.1 tCO2e/€M
Emissions avoided	4,907	

Overall, Banca Etica's activities generate **194 thousand tonnes of CO2 equivalent**. In terms of emission intensity, **92 tonnes of CO2 are generated for every Euro 1 million** used by the bank.

Finally, thanks to the positive impact of loans to companies producing renewable energy or the adoption of energy saving measures, Banca Etica's credit activity has also made it possible to avoid the emission of almost 5 thousand tons of CO2 equivalent.

Scope 3 emissions: sovereign bonds

In 2019 sovereign bonds represent 47% of Banca Etica's assets. It is estimated that they produce emissions for 7,750 tonnes of CO₂e .

The bigger share of emissions is ascribable to Italian bonds which are 84% of the total amount held by the bank and 78% 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.

The adopted methodology for the calculation of the emission factors is certainly crucial for the footprint's estimation.

For the evaluation of the sovereign bonds' Scope 1 emissions, the emission factor calculated by Banca Etica is the ratio between CO₂ equivalents 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, the emission factor used is explained in equation 2 where "IO table value" is the value of products from Nace D used by Nace O and "%exposure" is the share owned by Banca Etica of the total country's public debt.

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

Lastly, Scope 3 Upstream emissions 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 in Scope 2 and 1. The "IO table value" 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

Country	Total amount held (M€)	Emission factor (tCO2e/M€)	Emissions (tCO2e)
Australia	0.3	51.4	16
Austria	7.1	7.2	52
Belgium	8.0	9.6	76
France	43.1	6.8	292
Germany	4.7	26.8	125
Greece	10.4	17.0	177
Ireland	2.4	10.1	24
Italy	823.5	7.3	6,031
Netherlands	7.6	24.9	190
Portugal	18.0	9.2	165
Spain	58.4	10.3	602
Total	983.5		7,750

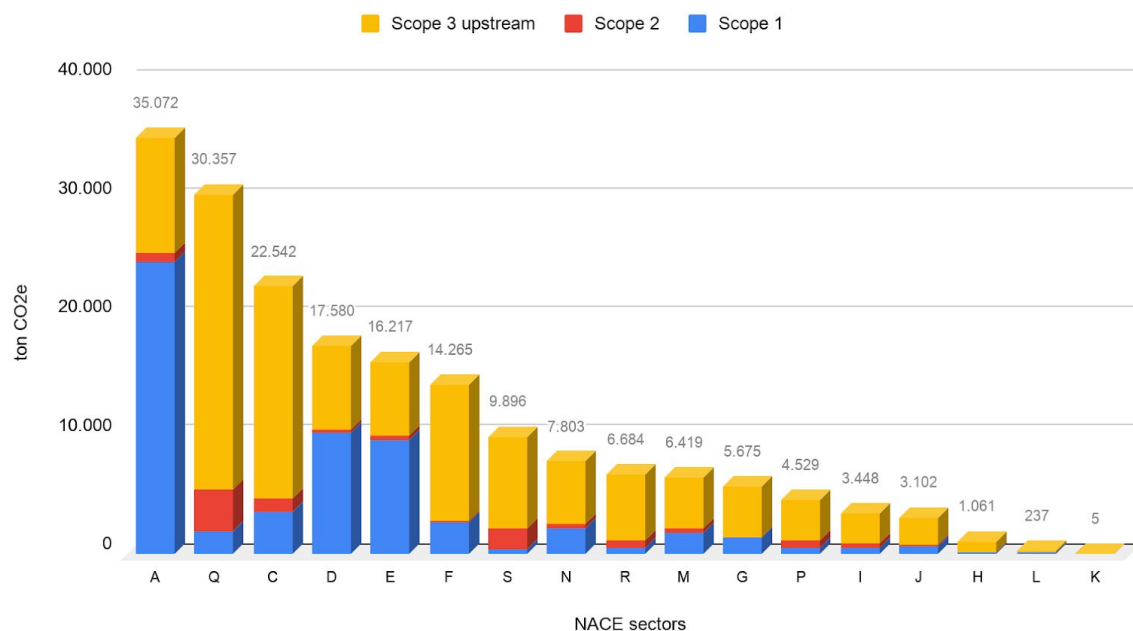
Scope 3 emissions: corporate/SME loans

The emissions produced by corporate/SME loans (39% of Banca Etica’s assets in 2019) 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, 2 and Scope 3 Upstream. The emission factors per euro of assets were provided by Navigant Consulting - Guidehouse.

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

Corporate/SME loans produced in 2019 accounted for almost 185 thousands tonnes of CO2e. The three sectors that most contributed to total loans emissions were “Agriculture, forestry and fishing” for 19%, “Human health and social work activities” for 16% and “Manufacturing” for 12%.

Emissions from corporate/SME loans for NACE sector - outstanding at 31.12.2019



The adopted methodology leads to overestimated figures, since the the energy sector’s emissions are considered in its sectoral average - which is typically high - while Banca Etica funds exclusively renewable energy companies. The exposure of the bank to carbon critical sectors (as defined in Faiella and Lavecchia, 2020) is 30% of corporate/SME loans, which is lower than the national average exposure of 53%.

Scope 3 emissions: mortgages

Emissions from mortgages		
Granted loans, (M€)	Number of houses	CO2e tonnes
10.9	115	394.8

In this first approach to carbon accounting, Banca Etica can only estimate emissions for the 14% of the total house mortgages granted in 2019, because of lack of information about the specific building characteristics, square meters in particular. The emissions were estimated multiplying the square meters of the 115 mortgages for which the information was available by an emission factor, resulting in a total of 395 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.

References:

Faiella I. e L. Lavecchia (2020) "The carbon footprint of Italian loans", *Questioni di Economia e Finanza* n. 557, Banca d'Italia.

PCAF Netherlands, *Accounting for and steering carbon: harmonised approach for the financial sector*. December 2019. PCAF The Netherlands.

Protocol, G.H.G. (2015). *GHG Protocol Corporate Standard (revised edition)*.