

# Income tax and the proxied average tax rate of the collective European co-operative banking sector and the entire banking system

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## Executive summary

*This research letter aims to proxy total income tax as well as the average tax rate of 16 European co-operative banking groups from 13 European countries on the one hand, and the aggregated banking system of all these countries on the other for the period 2000-2023.<sup>2</sup> To this end, data on tax expenses and pre-tax profits have been collected from multiple data sources. Dividing aggregated income tax by aggregated pre-tax profits yield proxies for average income tax rates of the collective co-operative banking sector (henceforth, CBS) and the entire banking system (henceforth, EBS).<sup>3</sup>*

*Our research reveals that both banking sectors posted the highest pre-tax profits and consequently also made the largest income tax payments in the last year of the sample period (2023). CBS recorded a pre-tax profit of more than EUR 64 billion and paid around EUR 15 billion in income tax in 2023. The resulting proxy for its average tax rate is nearly 23 per cent. For EBS, we computed a pre-tax profit estimate of EUR 294 billion and an income tax estimate of about EUR 63 billion, implying a proxied average tax rate of about 21.5 per cent.*

*For the entire time span 2000-2023, the proxied average tax rate equalled 26.7 for CBS and 24.8 for EBS. The standard deviation of this rate is notably lower for CBS (4.8) compared to that of EBS (8.4), i.e., the proxied average tax rate of CBS is more stable over time. Furthermore, our computations suggest that the share of CBS in total income tax of all banks (i.e., CBS plus EBS) is somewhat higher (22.7) than its share in total pre-tax profits of all banks (21.5). When the whole period is split into two 12-year subperiods, this overall picture does not change significantly. We also found that in nearly 55 per cent of all observations (i.e., 384), the approximated tax rate of individual co-operative banking groups exceeded that of the entire banking sector in their respective countries by at least 2 percentage points. Taken together, our findings hint at differences in the orientation and business models between CBS and EBS.*

## Background

Simply put, taxes paid by banks are equal to the applicable – income – tax rate multiplied by pre-tax profits. An analysis of tax regimes (including tax rates) pertaining to – co-operative – banks in different countries is beyond the scope of this research letter due to its complexity and the fact that tax regimes have also likely been subject to change over the past 24 years. Moreover, it is conceivable that some co-operative banks may be under a different taxation scheme than other banks in their respective countries. However, the issue of potentially differing tax regimes for banks is actually irrelevant for the purpose of this research note as will be explained below. Pre-tax profits are generally defined as

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<sup>2</sup> Financial Group of the German Volks- und Raiffeisenbanken (Germany), Austrian Volksbanken Group (Austria), Raiffeisenbanken Group (Austria), Federazione Italiana delle Banche di Credito Co-operativo-Casse Rurali ed Artigiane (Italy), combined figures for two Spanish cooperative banking groups (Unión Nacional de Co-operativas de Crédito and Banco de Crédito Co-operativo, Spain), Federação Nacional das Caixas de Crédito Agrícola Mútuo (Portugal), Rabobank (The Netherlands), Banque Raiffeisen Luxembourg (Luxembourg), Raiffeisen Switzerland (Switzerland), Nykredit (Denmark), Crédit Agricole Group (France), Crédit Mutuel Group (France), BPCE (France), OP Financial Group (Finland), Building Societies Association (United Kingdom), KZBS (representing BPS Group and SGB Group, Poland).

<sup>3</sup> Throughout this note, figures for the entire banking sector exclude data for the co-operative banking groups in footnote 2.

operating results less operational expenses and costs of risk. Key components of operating banking revenues are net interest and net fee/commission income. The main parts of operational expenditures are staff costs, other administrative expenses (e.g., ICT costs, marketing expenses, fees for consultancy/audit), and depreciation of property and equipment and intangible assets. Costs of risk are predominantly provisions and impairment charges on financial assets. Operating income, operating expenses and risk costs of individual banks depend on a myriad of factors (e.g., bank's size, business model, pricing strategy, ownership structure, risk profile and overall strategy), but of course also on numerous external factors (e.g., the economic climate, banking competition, monetary policy and bank regulation).

This note focuses on two components of the profit and loss accounts of the consolidated co-operative banking sector (CBS) and the entire banking sector (EBS): profits (or losses) before tax from continuing operations and tax expenses (or income) related to profits (or losses) from continuing operations.<sup>4</sup> As outlined above, numerous factors can cause pre-tax profits and consequently taxes paid to differ between the CBS and the EBS. However, this document concentrates on the ratio of tax expenses to pre-tax profits, i.e., we will calculate a proxy for the average income tax rate for CBS and EBS. Key questions are whether CBS and EBS pay proportionally the same amount of taxes on their pre-tax profits and whether the variance of both proxied tax rates differs over the time span 2000-2023. Hence, for the objective of our analysis, we can simply treat tax regimes for CBS and ESB in different countries as given. Finally, we have to stress that this research letter presents numerical facts and is descriptive in nature. Explaining potential differences in – the variance of – proxied tax rates between CBS and EBS requires further thorough qualitative and quantitative analysis.

## **Data**

Baseline data for co-operative banks on pre-tax profit and income tax are collected manually from public sources (annual reports, national central banks, or national supervisory authorities) or provided by individual co-operative banks. For national banking sectors in the countries where these co-operative banks are located, similar baseline data are retrieved from renowned databases of the European Central Bank, national central banks, national supervisory authorities, International Monetary Fund, and the OECD. Because we had to utilize multiple data sources, the baseline data had to be edited to construct consistent time series and to correct for breaks in the data. These edited data are used for the calculations and figures to be presented.<sup>5</sup> For the non-euro countries in the sample, all figures were converted into euro at the exchange rate prevailing at the statement date.

Although the time series have been constructed with great care, we have to point out that bank figures should always be interpreted with caution due to numerous reasons, e.g., definitions and accounting standards have changed over time. Bearing all aforementioned qualifications in mind, pre-tax profit, income tax and average tax rates to be presented should be interpreted as approximations.

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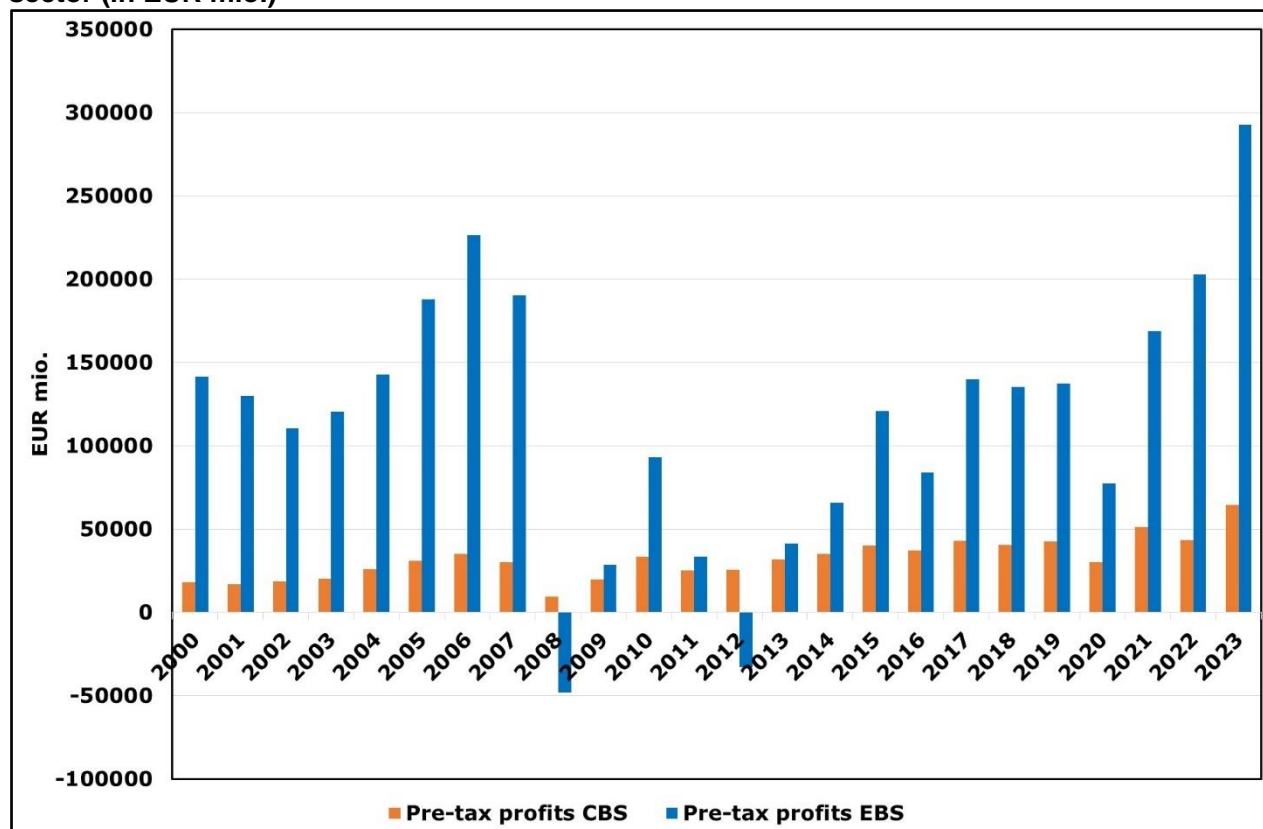
<sup>4</sup> In many countries, banks have to pay so-called regulatory levies. These levies could consist of a national bank tax and contributions to the Single Resolution Fund and/or to a Deposit Guarantee Fund. These charges are part of banking expenses and thus already included in pre-tax profits. They are not part of income tax.

<sup>5</sup> Selected data for CBS and EBS are available upon request from the author.

## Preliminary look at pre-tax profits and income tax

The evolution of pre-tax profits for CBS and EBS in millions of euro is depicted in Figure 1. The entire period is characterized by several turbulent events, for example, the Great Financial Crisis, turmoil in the Eurozone and the COVID-19 years. As expected, the graph shows substantial fluctuations in pre-tax profitability of banks. It is also noteworthy that EBS posted negative pre-tax profits in 2008 and 2012. CBS has not incurred pre-tax losses in any year, but did book its lowest pre-tax profits in 2008. Furthermore, the record high pre-tax profits in 2023 for both CBS and EBS clearly stand out. The continued favourable economic climate and the improvement in the interest margin in banking due to monetary policy tightening are the main explanations for these high pre-tax profits.

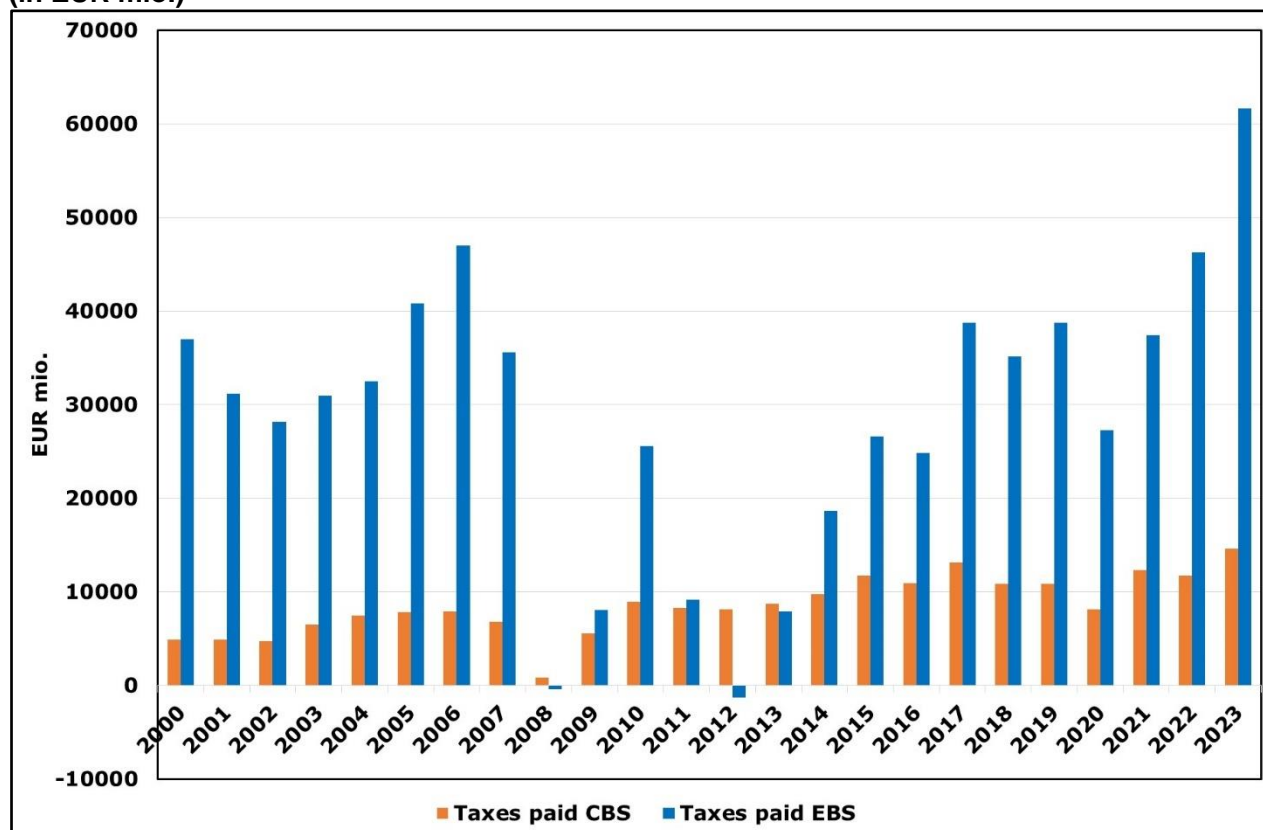
**Figure 1 Pre-tax profits of the consolidated co-operative banking sector and entire banking sector (in EUR mio.)**



Source: Author's calculations based on edited data from co-operative banks, central banks, supervisory authorities, IMF and OECD. The sample includes 16 co-operative banking groups in 13 European countries. Data for EBS in these 13 countries exclude figures for CBS.

Chart 2 displays income tax expenses in millions of euro of both banking categories. Obviously, this chart mirrors Figure 1. Tax payments of EBS were slightly negative in 2008 and 2012. This means that, on average, EBS received tax income in these two years. CBS paid taxes in both years, but the income tax amount was very small in 2008.

**Figure 2 Income taxes of the consolidated co-operative banking sector and entire banking sector (in EUR mio.)**



Source: Author’s calculations based on edited data from co-operative banks, central banks, supervisory authorities, IMF and OECD. The sample includes 16 co-operative banking groups in 13 European countries. Data for EBS in these 13 countries do not comprise data for CBS.

**Analysis of cumulative profit before tax and income tax of CBS and EBS**

Table 1 records the aggregated pre-tax profits and income tax of CBS and EBS for the period 2000-2023 and two equal subperiods of 12 years. In the full sample, CBS posted cumulative pre-tax profits of nearly EUR 770 billion. Its collective tax payments amounted to EUR 206 billion over that period. A rough approximation of the average tax rate for CBS can be obtained by dividing income tax by pre-tax profits. It appears that, on average, CBS have remitted 26.7 per cent income tax on their profits before tax in the period 2000-2023. Over the same period, EBS reported cumulative pre-tax profits of EUR 2,815 billion and paid around EUR 698 billion in income tax. Based on these figures, the EBS’ average tax rate can be roughly estimated at 24.8 per cent. This suggests that CBS paid proportionally slightly more income tax on average than EBS over the period 2000-2023. It cannot be concluded that the two rates are statistically significantly different from each other, though. The reason for this is that the variability of CBS’s tax rate (4.8) is remarkably smaller than that of EBS (8.4) as the table clearly demonstrates.

**Table 1 Approximated pre-tax profits and income tax**

	Collective co-operative banking sector			Entire banking sector		
	2000-2023	2000-2011	2012-2023	2000-2023	2000-2011	2012-2023
Pre-tax profits	€ 770	€ 284	€ 485	€ 2,815	€ 1,359	€ 1,456
Income tax	€ 206	€ 75	€ 131	€ 698	€ 328	€ 371
<i>Proxied average tax rate</i>	26.7	26.3	27.0	24.8	24.1	25.5
<i>Variance of average tax rate</i>	4.8	6.2	2.6	8.4	7.9	9.2

*Source:* Author's calculations based on edited data from co-operative banks, central banks, supervisory authorities, IMF and OECD.

*Note:* Nominal figures are in billions of euro. Figures for the entire banking sector exclude data for co-operative banks. A proxy for the average tax rate is obtained by dividing tax expenses by pre-tax profits. We performed a simple robustness check to see if the results are stable and not dominated by outliers or developments in certain countries. To this end, we successively removed each country from the sample and examined whether the results changed significantly. This was not the case.

Splitting the entire period into two equal sub-periods of 12 years provides some interesting insights. The first subperiod (2000-2011) encompasses the Great Financial Crisis, whereas the second one saw major upheaval in the euro area. Firstly, it turns out that CBS realized just over one-third of total pre-tax profits in the first 12 years and two-third in the time span 2012-2023. For its tax expenses, roughly the same distribution applies. For EBS, total pre-tax profits and income tax payments are almost evenly distributed between the two sub-periods. Underlying figures show that this is due to national banking sectors in some countries being hit severely hard by the sovereign debt crisis in the eurozone and many co-operative banks – in the same or other countries – to a much lesser extent. Second, it is noteworthy that the proxied average tax rate of CBS is about 1.5-2 percentage points higher in both sub-periods. Thirdly, the variance of the estimated average tax rate of CBS is considerably lower than that of EBS in all periods considered, i.e., the proxied tax rate of CBS is more stable.

Our data can also be employed to approximate the share of CBS in total pre-tax profits and total income tax payments. In the entire sample, the average share of CBS in pre-tax profits amounted to 21.5, whereas the average share of CBS in income tax payments equaled 22.7. For both subperiods, CBS's share in tax payments was also slightly higher than its share in pre-tax profits.

**Table 2 Share of CBS in total pre-tax profits and total income tax of all banks (= CBS plus EBS)**

	2000-2023	2000-2011	2012-2023
Share of CBS in total pre-tax profits	21.5	17.3	25.0
Share of CBS in total income tax	22.7	18.6	26.1

*Source:* Author's calculations based on edited data from co-operative banks, central banks, supervisory authorities, IMF and OECD.

### **Comparison of proxied tax rate of individual cooperative banking groups with that of respective national banking systems in whole sample period**

To verify the robustness of the analysis, we performed an alternative exercise by using all observations individually. In this approach, we proxied the tax rate for each individual co-operative banking group each year. At the same time, we approximated the average tax rate for the entire banking system by country each year. The sample period covers 24 years and includes 16 co-operative banking groups. This means that we have a total of 384 observations for all co-operative banks. We then examined how often the approximated tax rate of co-operative banks was at least 2 percentage points higher or lower than that of the national banking systems in question. So we used a tax rate gap of 2 percentage points as threshold.

Using this boundary, we found that in nearly 55 per cent of all observations, the approximated tax rate of co-operative banking groups exceeded that of the entire banking sector in their respective countries by at least 2 percentage points. In nearly 14 percent of all cases, the two rates diverged by less than 2 percentage points, which we regard as equal tax rates. In about 31 per cent of all observations, the proxied tax rate for co-operative banking groups was more than 2 percentage points lower than that of the respective national banking system. Looking at individual years, it only happened twice during the entire time span that the majority of co-operative banks had a lower proxied tax rate than that of the respective national banking sector. This was the case in 2020 and 2021.

The conclusion from this additional analysis aligns with that from the previous section. In the majority of cases, the proxied tax rate for co-operative banks was above (or equal to) that of the national banking system.