

Determinants of Adopting Extraordinary Bank Taxes in the Euro Area in the Post-COVID 19 era

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Abstract. *Monetary policy tightening in the Euro Area has driven record-high bank profitability, increasing public pressure and prompting legislative proposals for bank profit levies in several Euro Area countries during 2022 and 2023. While much focus has been directed to the effects of bank levies introduced in the aftermath of the Global Financial Crisis, the motivation behind the introduction of the recent wave of extraordinary bank taxes has not been studied. This paper seeks to identify the most important characteristics of the banking, macroeconomic and governmental sectors which lead to the introduction of such taxes. Our findings show that higher banking profitability increases the likelihood of a bank tax, while greater excess reserves at the central bank reduce it, suggesting that rising profitability was not driven by remuneration on these reserves. Regarding macroeconomic conditions, higher inflation lowers the probability of implementing an extraordinary bank tax, implying that countries adopting such measures were not disproportionately impacted by the Euro Area's inflation surge. In terms of government characteristics, we find no evidence that higher deficits or government debt made countries more likely to introduce a bank tax, suggesting revenue generation was not the primary motive. However, lower government effectiveness is linked to a higher probability of implementation.*

Keywords: banking, taxation, financial stability, political economy.

Introduction

Monetary policy tightening in the Euro Area has boosted banks' profitability, increasing public pressure and prompting legislative proposals for bank profit levies in several Euro Area countries during 2022 and 2023. Rapid growth in bank profits is being perceived by the general public to have been earned at the expense of bank customers, which faced rapidly rising mortgage rates, while the remuneration of retail deposits remained persistently low and inflation eroded real disposable income. As a result, extraordinary bank levies targeting 'excess' profits have been implemented in Spain, Lithuania, Italy, Slovenia, Netherlands, Latvia, Slovakia, and indirectly in Croatia (Maneely and Ratnovski, 2024).

Windfall taxes on banks reduce credit institutions' resilience and limit their ability to provide credit. Temporary levies can hamper banks' profitability and unexpectedly reduce capital available to credit institutions, depress their valuations and negatively affect their funding costs. This in turn may push banks to offer less favorable credit terms, increase lending rates and may reduce the overall credit supply, which can then adversely affect real economic growth.

This paper examines the key factors influencing the introduction of an extraordinary bank tax. Many legislative proposals cite high inflation, reduced purchasing power, and high bank

profitability as primary reasons for implementing such a tax¹. In addition to these factors, we will assess whether the political affiliation of governing parties plays a role. According to Rooduijn et al. (2024), the share of far-right parties doubled from 7% in 2010 to 15% in 2023, thus the evolving political landscape and the rise of extremist parties in the Euro Area could have significant implications for the future.

Our findings indicate that higher bank profitability, measured by return on equity, increases the likelihood of introducing an extraordinary bank tax. However, higher excess reserves at the central bank decrease this probability, suggesting that rising profitability in countries introduced extraordinary bank taxes was not driven by remuneration on these reserves. Regarding macroeconomic factors, we find that a higher inflation rate reduces the likelihood of implementing an extraordinary bank tax, indicating that countries which introduced such a tax were not affected to a greater extent by the inflationary wave which hit the Euro area. This is also supported by the fact that both the level of incomes or changes in average wages are insignificant. Higher income inequality also increases the probability of an extraordinary bank tax introduction in the univariate specification, however becomes insignificant in our final model design.

In terms of characteristics of the governmental sector, we find no evidence that countries with higher deficits or government debt were more inclined to introduce an extraordinary bank tax. This suggests that the introduction of extraordinary bank taxes was not primarily implemented to support government revenues or assist countries with greater financing needs. However, government effectiveness is negatively associated with the introduction of an extraordinary bank tax. Finally, far-right affiliation of political parties in the most recent parliamentary elections is significant in a univariate analysis, but loses significance when included in a multivariate analysis.

Croatia, Spain, Lithuania, Italy, Slovenia, Netherlands, Latvia and Slovakia have implemented heterogeneous designs of taxes targeting ‘excess profits’ (Table 1). In almost all countries, the tax is expected to affect most of the banking sector. In Lithuania, Slovenia, Italy, Slovakia, Netherlands and Latvia, all credit institutions operating in the countries are liable to pay the tax, while in Spain the tax affects banks with non-negative profits which recorded net interest income (NII) and net fee and commission income (NFCI) above 800 EUR mln in 2019 (corresponding to 90% of banking assets). In Croatia, only banks with profits above EUR 40 have to pay the tax on excess profits. In Italy, banks can be exempted if they allocate 2.5 times the amount owed to strengthening their CET 1 ratio. For 2023, most of the bank have decided to increase their capital rather than paying the tax. In all cases the tax overall applies to the domestic profits of banks.

The tax schemes differ significantly in what concerns the tax base. In Slovenia, the tax is proportional to a bank’s total assets, but is capped at 30% of net profits. For Latvia, the tax base relates to mortgage exposures, as well pre-tax profits. In the Netherlands, the tax applies to unsecured liabilities above a EUR 23,5 bn threshold, as well as paid dividends. Lithuania and Italy have chosen to link the tax more directly to measures of excess profits, such as the NII increases compared to the previous years. However, in Italy the tax cannot exceed 0.26% of risk-weighted-assets, which is expected to be a de facto binding cap for most credit institutions. Finally, the tax base in Spain includes both NII and NFCI, thus having a broader base of banks’ revenues. In terms of envisaged duration of the measures, Croatia, Italy and Latvia have implemented the tax as a one-

¹ See ECB Opinions on the extraordinary taxes on bank profits in Spain (CON/2022/36), Lithuania (CON/2023/9), Italy (CON/2023/26), Slovenia (CON/2023/35), Latvia (CON/2023/42), Netherlands (CON/2023/45), Slovakia (CON/2024/4).

time measure, Netherlands has recalibrated existing bank levies, while in other jurisdictions the tax is planned to be in effect for 2 years (Lithuania), 3 years (Spain), 4 years (Slovakia) or 5 years (Slovenia).

Table 1. Overview of the bank tax schemes introduced in the Euro area post COVID-19

Country	Date of implementation	Tax design	Period of application	Eligibility criteria
Croatia	Dec-22	33%*(Net Profits – 1.2 x Net Profit average past 4 years)	2023	Credit institutions with profits greater than EUR 40 mn in 2022
Spain	Dec-22	4.8% * (NII + NFCI)	2022- 2025	Banks with domestic NII and NFCI in 2019 > €800 million
Lithuania	May-23	60% * (NII – 1.5 x NII average past 4 years)	2023 Q2 - 2025 Q2	All credit institutions*
Italy	Oct-23	Min (40% * (NII – 1.1 * NII 2021), 0.26% * RWA)	2023	All credit institutions* except those who allocate 2.5 times the amount owed to strengthening their CET1
Slovenia	Dec-23	Min (30% * Pre-tax profits, 0.2% * Total Assets)	2023-2027	All credit institutions*
Netherlands	Dec-23	0.058% * ST non-secured liabilities**	Permanent	All credit institutions*
		0.029% * LT non-secured liabilities**		
		15% * Share buybacks		
Slovakia	Dec-23	30% * Pre-tax profits***	2024-2027	All credit institutions*
Latvia	Dec-23	2% * Mortgage exposures	2024	All credit institutions*
		20% * Net profits	Permanent	

Notes: * Credit institutions at unconsolidated level operating in the countries, i.e. in case of banking groups only the domestic profits are part of the tax base.** Unsecured liabilities refer to the difference between total liabilities minus regulatory capital, deposits covered by the national deposit, guarantee scheme (DGS) and liabilities related to the business of insurer. The tax applies only to above a threshold of 23.5 EUR bn *** Decreasing by 5 percentage points every following year.

Source: National authorities.

Literature review

Governments started to introduce heavier taxation on bank through the use of bank levies predominantly after the 2008 Global Financial Crisis (GFC) as a way of compensating for the bail-out actions occurred during the GFC. The literature on the effect of bank levies or higher bank taxes is growing area of interest. Devereux et. al (2019) analyse the impact of bank tax levies introduced in Europe after the financial crisis in 2007-2008 and find that banks reduce liability-side risk, by increasing equity finding, however increase risk on the asset-side, by shifting to assets with higher risk weights, granting loans with a higher probability of default and increasing the volatility of the return on their trading assets. Bremus et al. (2020) demonstrate that the impact of bank levies depends on the existing corporate income tax structure (CIT): in countries with a higher CIT prior to the introduction of the bank levy, the increase in use of equity for funding is less pronounced.

Kogler (2019) find that in jurisdictions characterized by a high degree of concentration, banks are able pass on higher costs due to bank levies to consumers by increasing lending rates, while deposit rates are unaffected. This is also supported by Capelle-Blancard and Havrylchuk (2017) which find that for Hungary, larger banks were able to pass on higher costs of the bank tax, especially to households, which are characterized by a more inelastic demand for credit products. In regards to the impact of bank tax levies on credit supply, Buch et al. (2016) find that the introduction of the German bank levy had a negative effect on lending. Borsuk et al. (2024) use credit registry data for Poland, which introduced a tax on bank assets in 2016. In line with previous studies, they find a negative impact of a bank tax on lending. Furthermore, they demonstrate this had consequences on real economic activity, by reducing firms' investment and sales.

In our paper we will not focus on the impact of bank taxes, but on the determinants of introducing such measures. This approach is closely related to Karpowicz et al. (2022), which also examines the determinants of bank tax introduction. However, there are two key differences. First, their study focuses on an earlier period (2011–2019), whereas this paper analyses the post-COVID-19 era (2022–2023). Since the introduction of recent bank taxes has been driven by unique macroeconomic conditions, the findings from the two studies are not directly comparable. Following the Great Financial Crisis, bank levies were implemented to curb excessive risk-taking and accumulate funds to address potential future bank failures. The latest round of bank taxes, however, has been introduced during a time of record-high profitability and stringent regulation of banks, a situation quite different from the post-GFC period. As a result, the reasons and mechanisms behind the introduction of bank taxes in these two distinct periods are expected to differ significantly.

Second, Karpowicz et al. (2022) use a continuous dependent variable—the total revenue collected from the bank levy at the country level—whereas this study employs a binary dummy variable to indicate whether an extraordinary bank tax was introduced or not. Karpowicz et al. (2022) find that higher bank profitability and larger bank size lead to increased bank levy revenues. Additionally, they show that higher government deficits are associated with higher expected revenues from the bank tax, while higher average net earnings have a negative effect. In addition to examining banking sector and macroeconomic variables, our study is further enhanced by incorporating factors related to inequality and the influence of political parties' ideologies.

Methodology

The methodology chosen is a panel logit model with quarterly vintages:

$$y_{i,t} = \beta_0 + \beta_1 * \text{Banking controls}_{i,i} + \beta_2 * \text{Macro controls}_{i,i} + \beta_3 * \text{Government controls}_{i,i} + \text{Year FE}_t + \varepsilon_{i,t}$$

Where $y_{i,t}$ equals 1 in the quarters when a bank tax was implemented. Given that the first bank tax was implemented in Spain in December 2022, while the latest bank tax levy for which data is available² were announced in December 2023, the dataset spans from 2021Q1 to 2023 Q4. The panel includes all 20 Euro area countries. The variables are included sequentially and were chosen in relation to the literature (Karpowicz et al., 2022), as well as the reasoning included by national authorities in the respective legislative projects (Table 2). Year fixed-effects are included to absorb

² Spain and Latvia extended bank taxes in December 2024, however this does not affect our research design as they are extensions of existing measures.

shock which are common to all euro area countries, such as the monetary policy tightening which occurred during the period of our analysis.

In the first stage, a t-test is performed to observe whether there exist significant differences in the means of the relevant variables between countries where bank taxes have been recently introduced and those where this has not occurred. In a second stage, pairwise correlation between each variable for the respective hypothesis is tested. If there exists a correlation greater than 60%, then only one of the variables will be employed in the multivariate model. The choice between variables is done based on which transmission channel would be most relevant. For example, highly profitable banking sectors tend to be characterized by high interest rates on loans as well. As the two are correlated, Return on equity would be a preferred choice as it gives a comparable measure of profitability between different jurisdictions and also takes into account the impact of operational expenses and loan loss provisions, which are not covered when only focusing on the interest rate of household loans. After each variable is included sequentially, to check whether they are significant on an individual basis, they are also included together with the other explanatory variables in the respective hypothesis. The final model contains only the individual variables from the specific hypothesis which were statistically significant.

Table 2. Main hypothesis of the research

Hypothesis	Independent variables included to test hypothesis
H1 – Role of banking sector characteristics: Greater banking sector profitability and higher indebtedness of the private sector are linked to an increased likelihood of introducing an extraordinary bank tax.	Return on equity
	Loan margin households
	Excess reserves/ Total assets
	Cost of borrowing households
	Interest rate on new agreed maturity deposits to households
	Bank credit-to-GDP ratio
H2– Role of macroeconomic conditions: Adverse macroeconomic conditions, such as high inflation or low GDP growth, increase the probability of an extraordinary bank tax introduction. Countries where households have higher incomes or where income inequality is less pronounced are less likely to introduce an extraordinary bank tax.	Inflation
	GDP Growth
	Average net earnings (PPS - absolute values)
	Average net earnings (y-o-y growth rate)
	Income quintile share ratio S80/S20 for disposable income
H3– Role of governmental sector characteristics: A more indebted, less effective government has a greater likelihood to introduce an extraordinary bank tax. Populist parties and those with extreme left views are more likely to introduce an extraordinary bank tax.	Government deficit
	Government debt
	Government effectiveness
	Share Populist in most recent parliamentary elections
	Share Far Right in most recent parliamentary elections
	Share Far Left in most recent parliamentary elections

Source: Authors' own calculations.

More information regarding the data sources and type of data can be found in Table A1 of the Annex. Data regarding banking sector variable has been taken from the Consolidated Banking

Data and Monetary Financial Institutions Interest rates datasets from the Statistical Data Warehouse of the European Central Bank, while macroeconomic and government indicators have been taken from Eurostat.

In order to measure government efficiency, a proprietary indicator from World Bank Government indicators is used. The indicator captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

In order to calculate the share of different parties in the most recent parliamentary elections, we combine two datasets. First of all, we rely on Rooduijn et al. (2024) which has constructed a database of populist, far-left, and far-right parties in Europe based on the ideational approach. Populist parties focus on the importance of the general will of the people. Far left parties are critical of existing capitalistic structures and advocate for more redistribution, while far right parties believe in the importance of homogeneity in society and the beneficial role of authority. Parties can be classified as both populist and far-right or far-left at the same time. This classification is merged with Doring et al. (2023) database which covers the voting share of all parties in national lower house elections in the European Union until 2023. The results for the most recent elections are taken.

Results and discussions

Table A2 in the Appendix shows that countries that have implemented an extraordinary bank tax tend to have a more profitable banking sector, with an average return on equity of 15.4% compared to 9.8% in countries without such a tax. This higher profitability is driven by elevated borrowing costs for households and lower deposit rates in these jurisdictions. Additionally, countries that have recently introduced a bank tax exhibit lower financial intermediation, as reflected in their lower bank-credit-to-GDP ratio (54.4% versus 70.8%).

Inflation is significantly lower in countries that have introduced a bank tax (5.7% versus 8.4%), suggesting that these jurisdictions were not disproportionately affected by rising prices. Moreover, these countries tend to have lower wage levels (measured in Purchasing Power Parity), although nominal earnings are growing at a faster rate. Income inequality is also higher in countries with a bank tax, as indicated by a greater ratio between the 80th and 20th income percentiles (5.3 versus 4.6).

Regarding government characteristics, both groups of countries exhibit similar levels of government debt and budget deficits, indicating that the bank tax was not an instrument used only in highly indebted countries as a means for rapid budgetary adjustments. However, government effectiveness—measured by the World Bank Governance Indicator—is lower in countries that have implemented a bank tax. This result can indicate that governments with less options to stabilise the budget opt for this type of measure. In terms of political dynamics, countries with a recently introduced bank tax have a higher share of populist parties in parliament (38% versus 26%) and a larger presence of far-right parties (25.5% versus 15%). However, there are no significant differences in the representation of far-left parties between the two groups.

Table 3 presents the regression results for banking sector characteristics. As shown in Table A3, we exclude the cost of borrowing for households and the deposit rate for new household loans, as they are highly correlated with the loan margin for households and return on equity. The coefficient for return on equity is positive and statistically significant in both univariate and

multivariate models, indicating that higher profitability contributed to the introduction of a bank tax. This aligns with statements from national authorities, who frequently cited profitability as a justification for the introduction of the extraordinary bank taxes³. Specifically, an increase in return on equity from 10% to 15% (equivalent to one standard deviation) raises the probability of introducing a bank tax from 5% to 23%.

The lending margin for households is not statistically significant, suggesting that there were other drivers of profitability that influenced the introduction of a bank tax. Similarly, the level of indebtedness—measured by the bank-credit-to-GDP ratio—does not show a significant effect, indicating that a higher stock of debt does not increase the probability of implementing a bank tax. Unexpectedly, the share of excess reserves in total assets has a negative and significant coefficient. This suggests that countries benefiting from remuneration on central bank deposits were less likely to introduce a bank tax. This contradicts the reasoning provided by national authorities and indicates that remuneration of excess reserves was not a key driver of banking profitability in countries that implemented the tax. A reduction in the share of excess reserves from 14% (the sample mean) to 7% decreases the probability of introducing a bank tax from 25% to 10%.

Table 3. Regression results for estimating the impact of Banking sector characteristics on the probability of introducing a bank tax

	(1)	(2)	(3)	(4)	(5)
Return on equity	0.13** (0.052)				0.43*** (0.134)
Bank-credit-to-GDP ratio		-0.03** (0.012)			-0.002 (0.019)
Loan margin households			0.12 (0.255)		-0.12 (0.422)
Excess reserves/Total assets				-0.05 (0.050)	-0.30*** (0.094)
Observations	160	160	160	152	152
Year FE	Yes	Yes	Yes	Yes	Yes
R2	0.189	0.186	0.139	0.162	0.379
Likelihood	-48.89	-49.07	-51.90	-41.04	-30.41
AUROC	0.806	0.817	0.736	0.785	0.904

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' own calculations.

Table 4 presents the regression results regarding the impact of macroeconomic conditions. All variables are included, given that Table A4 shows that there are no cases where pair-wise correlation is higher than 60%. Consistent with the univariate analysis, but contrary to the justifications provided by national authorities, a higher inflation rate is associated with a lower likelihood of introducing an extraordinary bank tax. A decrease in inflation from 8% (the sample

³ Please see for Opinion of the European Central Bank of 4 April 2023 on the imposition of a temporary solidarity contribution (CON/2023/9) regarding Lithuania; Opinion of the European Central Bank of 12 September 2023 on the imposition of an extraordinary tax on credit institutions (CON/2023/26) for Italy; Opinion of the European Central Bank of 2 November 2023 on the imposition of a temporary tax on banks (CON/2023/35) for Slovenia; and Opinion of the European Central Bank of 11 December 2023 on a temporary mortgage loan borrower protection fee payable by credit institutions (CON/2023/42) for Latvia.

mean) to 4% increases the probability of introducing a new bank tax from 11% to 18%. In the univariate analysis, higher average earnings are linked to a lower probability of implementing a bank tax. However, this relationship becomes insignificant when included in the multivariate model. Regarding income changes, one would expect countries with a more dynamic labour market and rapid wage growth to be less likely to introduce a bank tax, as rising wages help mitigate the impact of reduced purchasing power due to a high inflation rate. However, the change in average net earnings is not statistically significant. Finally, we measure inequality as the ratio between the 80th and the 20th percentile of the income distribution. A higher coefficient signifies a greater gap between those with high incomes compared to those with low incomes. The coefficient is significant and positive in both the univariate and the multivariate specification, demonstrating that a higher level of income inequality increases the odds of a bank tax adoption, possibly because higher inequality is associated with more extremist parties in power (Stoetzer et al. 2023).

Table 4. Regression results for estimating the impact of Macroeconomic conditions on the probability of introducing a bank tax

	(1)	(2)	(3)	(4)	(5)	(6)
Inflation	-0.05 (0.076)					-0.20** (0.093)
GDP Growth		0.14 (0.096)				0.04 (0.119)
Average net earnings (PPS - level)			-0.13*** (0.046)			-0.09 (0.071)
Average net earnings (y-o-y)				0.20 (0.030)		0.20 (0.142)
Income quintile share ratio S80/S20 for disposable income					0.95*** (0.324)	0.76** (0.371)
Observations	160	160	160	160	160	160
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.142	0.155	0.220	0.174	0.219	0.307
Likelihood	-51.73	-50.92	-47.03	-49.78	-47.09	-41.76
AUROC	0.757	0.787	0.834	0.784	0.823	0.881

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' own calculations.

Table 5 presents the regression results regarding the impact of government characteristics on the probability of introducing a bank tax. As shown in Table A5, there is a strong degree of correlation between the share of populist parties and the share of far-right parties, given that most of far-right parties are also classified as populist parties, therefore we do not include the share of populist parties as an explanatory variable. Both coefficients regarding the level of government debt, as well as government deficit, are insignificant. This suggests that the introduction of bank taxes was not primarily implemented to support government revenues or assist countries with greater financing needs. Government efficiency is negative and significant in both the univariate and multivariate specification, thus more efficient governments are less likely to introduce a bank tax. A one standard deviation reduction in government efficiency from the sample mean would lead to a doubling in the probability of introducing a bank tax (23.5% versus 12%). Finally, in terms of political affiliation, a larger share far-right parties is associated with a larger probability

of a bank tax introduction, whereas affiliation to far-left parties does not play a significant role. These results are also supported by the univariate analysis performed in Table A2. Many far-right parties position themselves as defenders of the "common people" against elites. Consequently, taxing banks would align with their ideology, portraying it as a way to hold powerful financial institutions accountable. Analysing the marginal effects, an increase in the representation of far-right parties from the sample mean (16%) by one standard deviation (+13%) would entail an increase in the probability of introducing a bank tax from 12.5% to 17%, a more limited impact compared to other variables of interest.

Table 5. Regression results for estimating the impact of government characteristics on the probability of introducing a bank tax

	(1)	(2)	(3)	(4)	(5)	(6)
Government deficit	0.07 (0.104)					-0.10 (0.152)
Government debt		0.00 (0.007)				0.00 (0.013)
Government effectiveness			-2.11*** (0.733)			-1.80** (0.781)
Share far-right				5.64*** (1.831)		3.74* (1.976)
Share far-left					-3.15 (3.225)	-4.01 (5.284)
Observations	160	160	144	160	160	144
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.141	0.137	0.231	0.223	0.146	0.270
Likelihood	-51.79	-52	-44.60	-46.86	-51.48	-42.37
AUROC	0.745	0.729	0.841	0.793	0.726	0.848

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' own calculations.

Finally, all significant variables from each hypothesis are included in multivariate specification. Return on equity and excess reserves in total assets maintain their magnitude and significance, thus emphasizing the importance of banking profitability in the adoption of extraordinary bank taxes. Inflation and government effectiveness maintain their significance in the updated regression design, while income inequality and the share of far-right parties become insignificant, suggesting that indeed they are confounding factors. The rise of far-right parties has been linked to a decline in long-term prosperity (Rodríguez-Pose et al., 2024), indicating a complex relationship between economic trends and the growth of populist and right-wing parties. This study focuses on a limited set of factors, such as income levels and changes in wages, and might not fully account for the long-term characteristics that influence public perceptions of the political landscape and household trust in the banking sector.

Table 6. Regression results for the probability of introducing a bank tax – multivariate estimation

	(1)
Return on equity	0.42** (0.173)
Excess reserves / Total Assets	-0.30** (0.129)
Inflation	-0.29* (0.155)
Income quintile share ratio S80/S20 for disposable income	0.15 (0.624)
Government effectiveness	-2.32* (1.304)
Share far-right	0.33 (4.988)
Observations	136
Year FE	Yes
R2	0.512
Likelihood	-23.05
AUROC	0.946

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Authors' own calculations.

Conclusion

This paper is the first to quantify the determinants for introducing extraordinary bank taxes in the Euro Area in the post-COVID 19 period. We look at banking sector, macroeconomic and governmental characteristics.

Our findings show that higher bank profitability, measured by return on equity, increases the likelihood of an extraordinary bank tax, while higher excess reserves at the central bank reduce this probability, indicating that profitability gains were not driven by reserve remuneration.

Among macroeconomic factors, a higher inflation rate is associated with a lower probability of implementing an extraordinary bank tax. This contradicts the claim of governments which presented the bank tax as a way to protect debtors which were excessively affected by higher inflation. Additionally, income levels, wage growth and income inequality are also insignificant, suggesting that declining purchasing power due to the high inflation rates in the affected countries was not a key driver for introducing new bank levies.

Regarding government characteristics, we find no evidence that higher deficits or debt levels made countries more likely to introduce a bank tax, suggesting that the introduction of extraordinary bank taxes was not primarily a result of existing fiscal vulnerabilities. However, lower government effectiveness is associated with a higher likelihood of implementation.

These results show that the reasoning invoked by national authorities was only partially correct. Therefore ideological concerns also played an important role, not just need to increase government funding. The need for a stable banking system is crucial for the development of the economy. The taxation of these institutions should follow a stable and predictable pattern, thus allowing them to finance the real economy and support companies' development. The introduction of such ad-hoc measures increases legislative uncertainty, heightens the risk of fragmentation in the Euro area and may lead international banking groups to divert more of their activities in

countries with lower tax rates. Moreover, it creates an uneven playing field that might hamper the banking union project in the EU.

One of the primary functions of the banking sector is to allocate funds from savers to borrowers with the most productive projects. The taxation of the banking sector emerged due to the exceptional profits banks earned in a high-interest-rate environment. The discontent from households and politicians is linked to longer-term structural issues. On one hand, governments could introduce savings products, such as allowing households to directly invest in government bonds, to increase competition in the savings market and organically raise deposit returns. On the other hand, the excess profits of the banking sector should not be vilified, especially following a period of poor profitability during the low-interest-rate environment. Instead, governments should focus on enhancing existing capital buffers to ensure that extraordinary profits contribute to a more resilient banking sector capable of supporting lending and absorbing more losses in the event of an economic downturn.

In the long term, the discretionary imposition of taxes on extraordinary profits is expected to result in a change in strategy for banks in affected countries, particularly those that are part of transnational groups. International banking groups allocate capital to subsidiaries that offer the highest returns, and prohibitive tax rates would discourage lending in those jurisdictions, causing a shift towards more stable and lower-tax regions.

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Appendix

Table A1. Data series description

Variable name	Source	Number of observations	Mean	Standard deviation
Return on Equity	Statistical Data Warehouse	160	10.5	5.6
Loan margin households	Statistical Data Warehouse	160	1.6	0.9
Excess reserves/ Total assets	Statistical Data Warehouse, own calculations	152	14.1	6.5
Cost of borrowing households	Statistical Data Warehouse	156	3.3	1.2
Interest rate on new agreed maturity deposits to households	Statistical Data Warehouse	160	1.6	1.3
Bank credit-to-GDP ratio	Statistical Data Warehouse, Eurostat, own calculations	160	68.9	24.0
Inflation	Eurostat	160	8.0	4.8
GDP Growth	Eurostat	160	2.5	3.4
Average net earnings (PPS - absolute values)	Eurostat	160	23.1	6.8
Average net earnings (y-o-y growth rate)	Eurostat	160	6.5	2.6
Income quintile share ratio S80/S20 for disposable income	Eurostat	160	4.7	0.9
Government deficit	Eurostat	160	2.2	2.5
Government debt	Eurostat	160	74.3	37.5
Government effectiveness	World Bank Government indicators	150	1.1	0.5
Share Populist	Rooduijn et al. (2024), Doring et al. (2023), own calculations	160	27.5	18.3
Share Far Right	Rooduijn et al. (2024), Doring et al. (2023), own calculations	160	16.1	13.6
Share Far Left	Rooduijn et al. (2024), Doring et al. (2023), own calculations	160	7.6	9.0

Source: Authors' own calculations.

Table A2. T-test comparison between countries depending on bank tax implementation

	Countries without a bank tax		Countries with a bank tax		Difference
	Number of observations	Mean	Number of observations	Mean	
Return on equity	141	9.8	19	15.4	5.5***
Loan margin households	138	14.3	14	11.9	-2.4
Excess reserves/ TA	141	1.6	19	1.5	-0.1
Cost of borrowing households	138	3.2	18	4.2	1.0***
Interest rate on new agreed maturity deposits to households	141	1.5	19	2.3	0.8***
Bank credit-to-GDP ratio	141	70.8	19	54.4	-16.3***
Inflation	141	8.4	19	5.7	-2.70***
GDP Growth	141	2.5	19	2.1	-0.4
Average net earnings (PPS - thousands)	141	23.7	19	18.5	-5.23***
Average net earnings (y-o-y growth rate)	141	6.3	19	7.8	1.4***
Income quintile share ratio S80/S20 for disposable income	141	4.6	19	5.3	0.7***
Government deficit	141	2.2	19	2.6	0.4
Government debt	141	74.1	19	75.5	1.4
Government effectiveness	125	1.1	19	0.8	-0.35***
Share Populist	141	26.1	19	38.0	11.9***
Share Far Right	141	14.8	19	25.5	10.6***
Share Far Left	141	7.9	19	5.9	2.0

***, **, and * indicate statistical significance at the 1 %, 5 %, and 10 % levels, respectively.

Source: Authors' own calculations.

Table A3. Cross-correlations of control variables related to Banking sector hypothesis

	ROE	Loan margin households	Excess reserves/ Total assets	Cost of borrowing households	Interest rate on new agreed maturity deposits to households
Loan margin households	23%				
Excess reserves/ Total assets	13%	48%			
Cost of borrowing households	60%	5%	25%		
Interest rate on new agreed maturity deposits to households	43%	-26%	-48%	70%	
Bank credit-to-GDP ratio	-34%	-13%	-46%	-39%	8%

Source: Authors' own calculations

Table A4. Cross-correlations of control variables related to Macroeconomic conditions hypothesis

	Inflation	GDP Growth	Average net earnings (PPS)	Average net earnings (y-o-y growth rate)
GDP Growth	6%			
Average net earnings (PPS)	-36%	-16%		
Average net earnings (y-o-y growth rate)	29%	-8%	-46%	
Income quintile share ratio S80/S20 for disposable income	21%	7%	-38%	15%

Source: Authors' own calculations.

Table A5. Cross-correlations of control variables related to Government hypothesis

	Government deficit	Government debt	Government effectiveness	Share Populist	Share Far Right
Government debt	39%				
Government effectiveness	-36%	-38%			
Share Populist	21%	29%	-51%		
Share Far Right	23%	18%	-31%	81%	
Share Far Left	-7%	56%	-5%	19%	1%

Source: Authors' own calculations.