European Commission

Taxation of the financial sector

Final Report

Volume 2 - Annexes

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Introduction

This Volume presents the Annexes to the **Final Report of the 'Study on the taxation of the financial sector'**. The study was conducted for the European Commission, Directorate General for Taxation and Customs Union (DG TAXUD)[1], by a group of consulting firms and research institutions led by Syntesia and comprising Intellera, Dale Conseil, Mazars, CASE and SEURECO. It was completed in June 2026.

This Volume 2 complements the findings of the study presented in Volume 1 with the following annexes:

- **Annex 1 - Stakeholders' consultation synopsis report**, summarising the strategy and results of the extensive targeted consultation exercise conducted for the study;
- **Annex 2 – Analytical methods**, detailing the technical aspects of several of the economic methods and models used for the study (i.e., tax incidence; partial equilibrium model and methodology for the macro-econometric modelling);
- **Annex 3 – Supporting data**, provides additional data collected for the assessment of the current situation, including more granular data on the sectoral analysis and the statistical annex to the VAT analysis;
- **Annex 4 – Sectoral taxes** providing a detailed breakdown of each sectoral tax identified for the study in terms of aspects like their tax base and rate, and the amount of revenue collected.
- **Annex 5 - Supporting data from the economic models**, providing data derived from the partial equilibrium model and the macro econometric model to support the assessment of potential policy considerations.

[1] Contract Nr. TAXUD/2024/DE/312.

1. Stakeholder consultation synopsis report

1.1 Overview

The consultation exercise took place as a cross-cutting research activity supporting all analytical tasks of the assignment, combining three strands of activities:

- **In-depth interviews in a sample of 12 fieldwork Member States**, targeting tax authorities, other public authorities (e.g., central banks) and providers of financial services, as well as sectoral business federations and VAT experts (specialist practitioners, lawyers, academics). These interviews were held primarily in person;
- **Written contributions in the form of a survey for tax authorities and business federations in the non-fieldwork Member States**;
- **Interviews with EU-level and international stakeholders** targeting:
  - EU federations representing financial services providers, international organisations and institutions, primarily held online though in some cases taking place in person;
  - Third countries experts, including tax authorities, academics and expert practitioners, primarily held online;
  - Interviews with stakeholders from non-fieldwork countries wishing to take part in the study, including business federations, businesses and tax experts.

The Table below summarises the number of interactions held per type of organisation, country and strand of consultation.

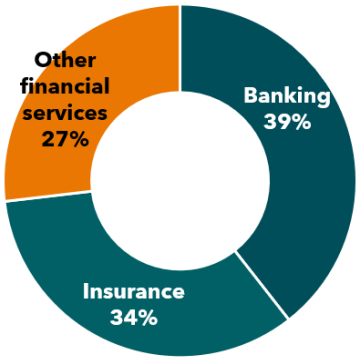
Table 1. Overview of stakeholders contacted (number of organisations)

	Tax authorities/other public authorities	Bank federation	Bank	Insurance federation	Insurance companies	Other financial services federation	Providers of other financial services	Tax expert	Total
Fieldwork	**24**	**18**	**35**	**18**	**31**	**15**	**10**	**24**	**175**
France	4	1	6	1	2	3	0	3	20
Germany	3	6	4	2	3	2	2	1	23
Greece	1	1	4	1	0	1	0	1	9
Ireland	1	0	1	1	3	1	0	2	9
Italy	3	3	3	1	5	1	3	7	26
Lithuania	4	1	4	5	0	0	0	0	14
Luxembourg	1	1	0	1	2	1	0	1	7
Malta	1	0	1	2	1	0	1	5	11
Netherlands	2	1	6	1	2	3	4	0	19
Poland	1	1	4	1	1	0	0	1	9
Spain	2	2	1	1	8	1	0	1	16
Sweden	1	1	1	1	4	2	0	2	12
EU-level and international interviews	7	2	9	2	3	5	6	12	**46**
EU level	4	2	0	2	0	5	0	0	13
Third countries	3	0	0	0	0	0	0	10	13

Non-fieldwork	0	0	9	0	3	0	6	2	20
Survey Tax Authorities (non-fieldwork MS)	14								**14**
Survey business federations (non-fieldwork MS)	0	5	0	5	0	11	0	0	**21**
Total interactions									**256**

Among the providers of financial services consulted the consultation achieved broad representation across the financial sector. As shown in Figure 1, banking institutions represented the largest share of participants, accounting for 39% of stakeholders consulted, followed by insurance companies at 34%, while other financial services providers – including investment firms, asset managers, payment institutions and fintech operators – accounted for the remaining 27%. This relatively balanced distribution highlights the captured perspectives from a wide range of financial services providers.

Figure 1. Representation per sector



The **consultation process relied primarily on detailed questionnaires adapted to different stakeholder categories**, through an iterative and flexible engagement process. Separate versions were developed for different types of stakeholders and combined requests for quantitative information (e.g., fiscal data, company micro-data etc.), closed-ended questions and open-ended qualitative questions. These covered a range of themes linked to the objectives of the study, including the functioning of the current VAT exemption for financial services, national sectoral taxes, and possible future policy considerations.

Stakeholders were able to provide feedback through different channels and to varying levels of detail depending on their expertise, data availability, and areas of interest. While some stakeholders completed the questionnaires in full, others focused their contributions on the issues most relevant or pressing to them, particularly during interviews and individual exchanges. The consultation process was therefore not limited to a single round of information gathering but involved extensive follow-up interactions, clarification requests, and supplementary evidence collection, allowing the study team to explore emerging issues in greater depth and ensure the robustness of the evidence base.

This synopsis report provides a **structured overview of the responses from the questionnaires administered during the stakeholder consultation**. This synopsis encompasses fieldwork interviews and surveys of both tax authorities and businesses[2], which are presented in turn. The results are presented for the closed-ended questions as an indication of the range of stakeholder views expressed, followed by a high-level summary of the qualitative feedback received through interviews, written comments and follow-up exchanges. This combined approach provides a more complete picture of stakeholder perspectives than would be possible through quantitative response counts alone.

Taken together, **the synopsis report aims to provide a concise yet informative representation of the consultation**, and thereby allow for high-level and comparative understanding of the responses. The emphasis is on the closed-ended questions, as well as summaries of the open-ended data. Additional insight on highly specific issues and experiences, often obtained through iterative, continued exchanges,

[2] The findings from EU-level interviews, interactions with non-EU fieldwork business associations and third countries were less structured and thus are presented wherever relevant in Volume 1.

is then provided in Volume 1, where it could be reported on in an appropriate manner with a view to the surrounding context and need to preserve anonymity.

Throughout, it should also be borne in mind that, while the consultation involved a wide cross-section of stakeholders, **it was not conducted with a view to statistical representativeness**. The findings should therefore be interpreted as indicative of the types of views different categories of stakeholders hold rather than indicating relative prevalence among each category.

1.2 Analysis of tax authorities' responses

Tax authorities represented a key source of information for the study. The approach used for the consultation aimed at involving all national tax authorities in the process through a combination of in-depth interviews and an e-mail survey.

- The **tax authorities in the 12 fieldwork Member States** (France, Germany, Greece, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Poland, Spain, Sweden) included in the field work sample were contacted for an interview via conference call, using a semi-structured questionnaire. Invitations to participate were sent well in advance, and efforts were made to involve all relevant officers and units. Where necessary, multiple interviews were conducted with different officials to ensure comprehensive coverage.
- The **remaining 15 tax authorities** (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Hungary, Latvia, Portugal, Romania, Slovakia, Slovenia) **were consulted through an e-mail survey**, based on a shortened version of the same questionnaire. This survey focused primarily on closed-ended questions to streamline the response process.

The questionnaire, used for both interviews and the e-mail survey, was divided into three main sections. Section 1 concerned detailed fiscal data on financial services which served as a basis also for the VAT liability analysis[3]. Section 2 aimed at collecting information on the assessment of the current situation. This included questions on definitions, structural provisions (option to tax, VAT groups, proportional deduction rules), litigation administrative costs compliance and overall views on the current tax regime. This section was tailored to each tax authority – especially when addressing structural provisions – and served to validate and supplement findings from the legal mapping and desk research. Finally, Section 3 covered national tax authorities views on possible policy considerations.

Participation was high across the board: only two national tax authorities did not participate to the consultation while all others were actively engaged throughout the process. However, the number of responses varies by question, for two main reasons. Firstly, certain questions (e.g. those concerning the use of structural provisions) were only addressed to authorities in Member States where such arrangements are available or relevant; for example, the option to tax is only available to providers of financial services in nine Member States. Secondly, while the questionnaire was broad in scope and highly detailed, the priorities and areas of interest varied, with some authorities focusing on the questions of most importance to them rather than systematically answering all of them. Throughout the report, the number of respondents for each question is indicated under the relevant Figure, and any percentages reported are calculated on the basis of the number of respondents to that specific question rather than the overall number of consultation participants. The following subsections present an overview of the responses to the closed ended questions of Section 2 and Section 3 of the questionnaires as well as a short analysis of the qualitative replies

1.2.1 Functioning of the tax regime for financial services

The questionnaire covered the functioning of the current VAT framework for financial services, the administrative burden it generates for tax authorities, overall views on the framework's objectives, and

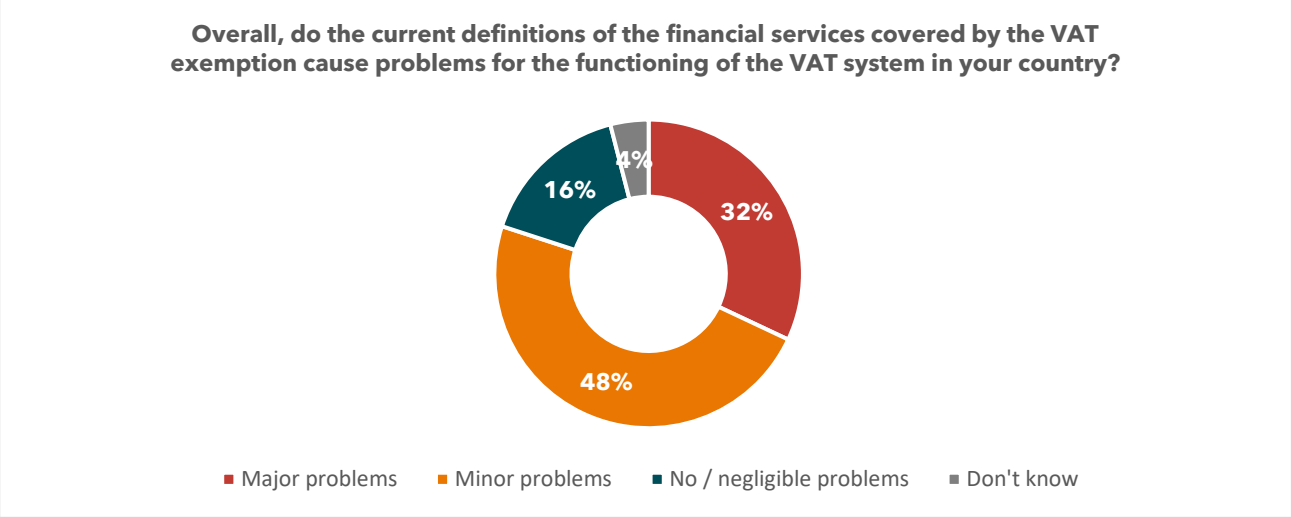
[3] Cf Annex 3.1

positions on possible reform. Given that the questionnaires were tailored to each country, particularly with regard to the structural provision, response rates varied across questions, ranging from 7 for questions on the option to tax, only put to tax authorities from Member States where the measure is available, to 25 for the broader questions addressed to all respondents.

➢ *Definitions*

Problems with the current definitions of financial services covered by the VAT exemption were reported by most tax authorities. As shown in Figure 2 below, almost half reported minor problems (12 of 25) while a third reported major problems (8 of 25) and around a sixth indicated no or negligible problems (4 of 25).

Figure 2. Problems with the current definitions of financial services



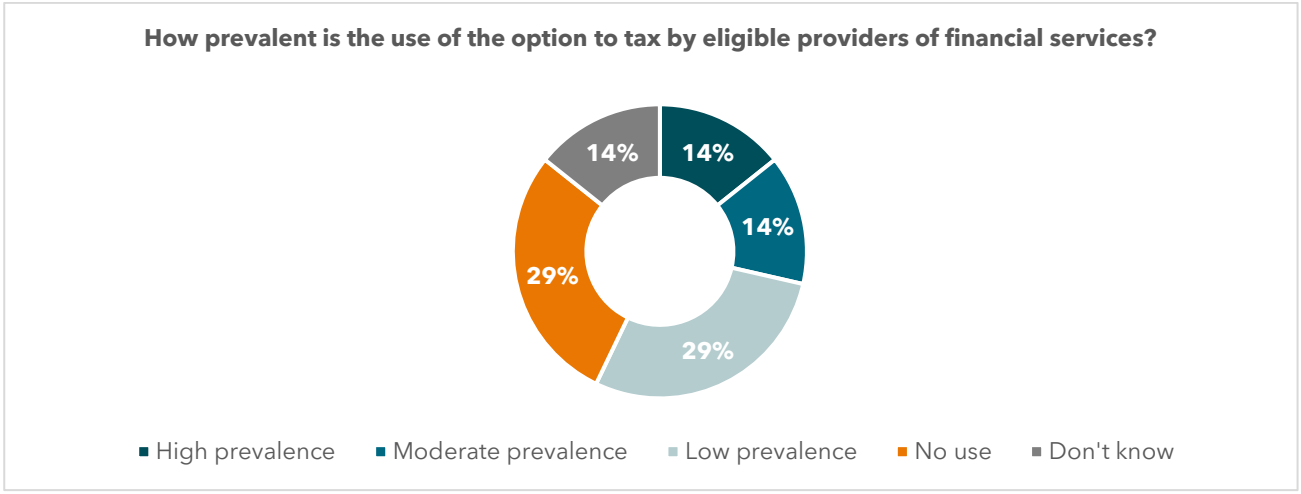
Note: Number of respondents: 25

Respondents considered the current scope of the VAT exemption for financial services to be broadly appropriate. Nevertheless, some highlighted challenges linked to the interpretation and application of the existing definitions, particularly in relation to newer financial products and digital developments such as crypto-assets and blockchain-based services. Several responses suggested that the current framework has not kept pace with market innovation, creating uncertainty regarding the VAT treatment of emerging activities. More generally, some tax authorities emphasised that exemptions inherently give rise to interpretative difficulties and boundary issues, while others indicated that they rely on existing national legislation and administrative practice. Overall, the responses point to a broad acceptance of the current scope, combined with concerns about legal certainty and the need to clarify its application to evolving financial services.

➢ *Option to tax*

Given that the option to tax is available in only a minority of Member States, questions on this topic were only put to relevant tax authorities, resulting in 7 responses. As shown in Figure 3 below, prevalence was reported as low or non-existent by most with only one tax authority to report high prevalence and one moderate prevalence. Two tax authorities both indicated no use and only one indicated 'don't know'.

Figure 3. Prevalence of option to tax

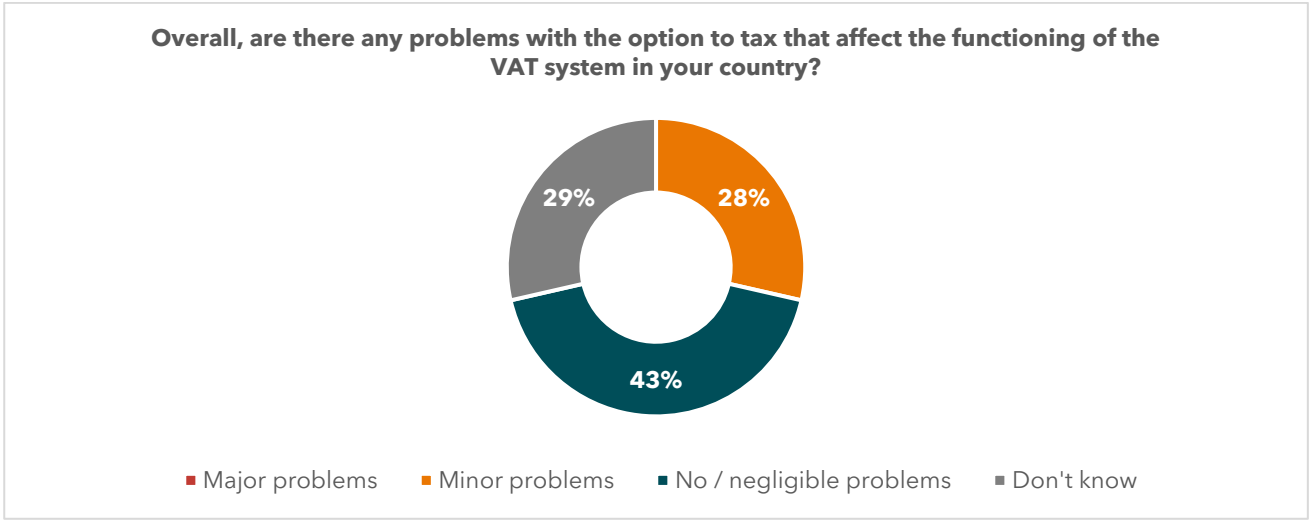


Note: Number of respondents: 7

The prevalence of the use of the option to tax appears reportedly varies considerably across jurisdictions, ranging from limited or no use to more widespread uptake. Where explanations were provided, use of the option was generally linked to the potential recovery of input VAT and the characteristics of the services supplied and customer base.

Problems with the option to tax were limited, with almost half of respondents (3 of 7) reporting no or negligible problems and a further two reporting minor problems, as illustrated in Figure 4 below. No tax authority reported major problems, suggesting that where the measure exists, it does not generate significant administrative difficulties. Two tax authorities responded 'don't know'.

Figure 4. Problems with the option to tax

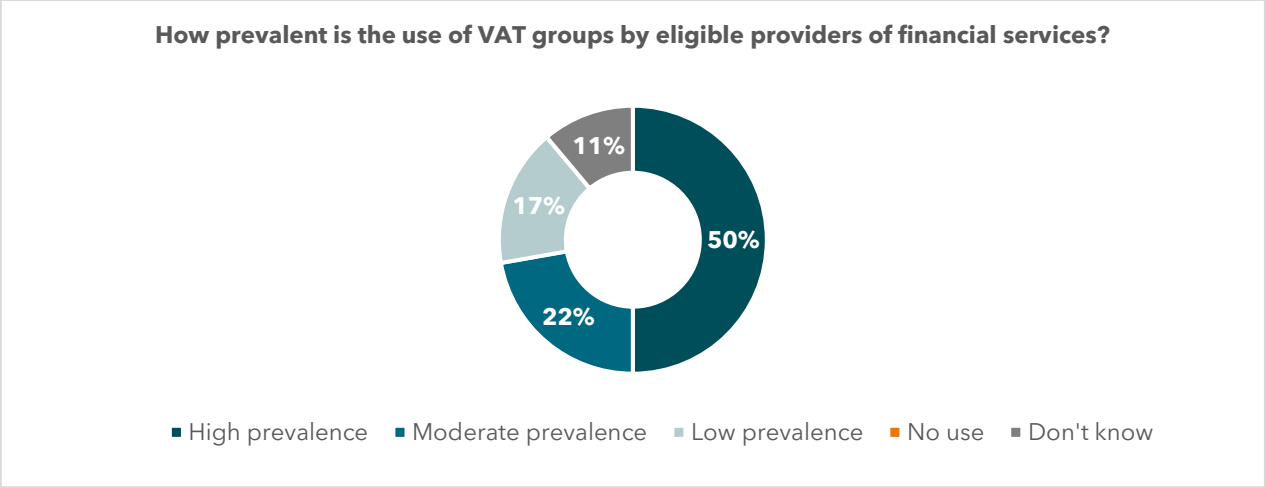


Note: Number of respondents: 7

➢ *VAT groups*

VAT groups were reported as considerably more widespread than the option to tax in Member States where the option is available. Half of the 18 responding tax authorities indicated high prevalence (9 of 18) and the minority (4 of 18) moderate prevalence.

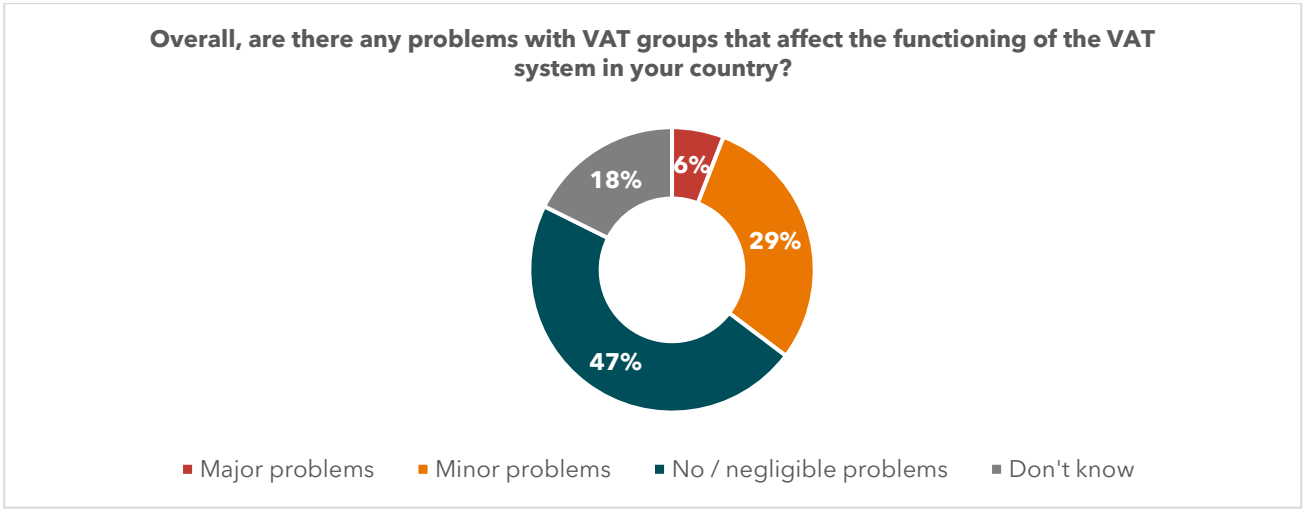
Figure 5. Prevalence of VAT groups



Note: Number of respondents:18

Figure 6 shows how problems with VAT groups were limited, with almost half of tax authorities reporting no or negligible problems (8 of 17) and only 1 of 17 reporting major problems. 5 of 17 reported minor problems, suggesting that while VAT groups function broadly well across most Member States its practical application may vary depending on national design and implementation.

Figure 6. Problems with the VAT groups



Note: Number of respondents: 17

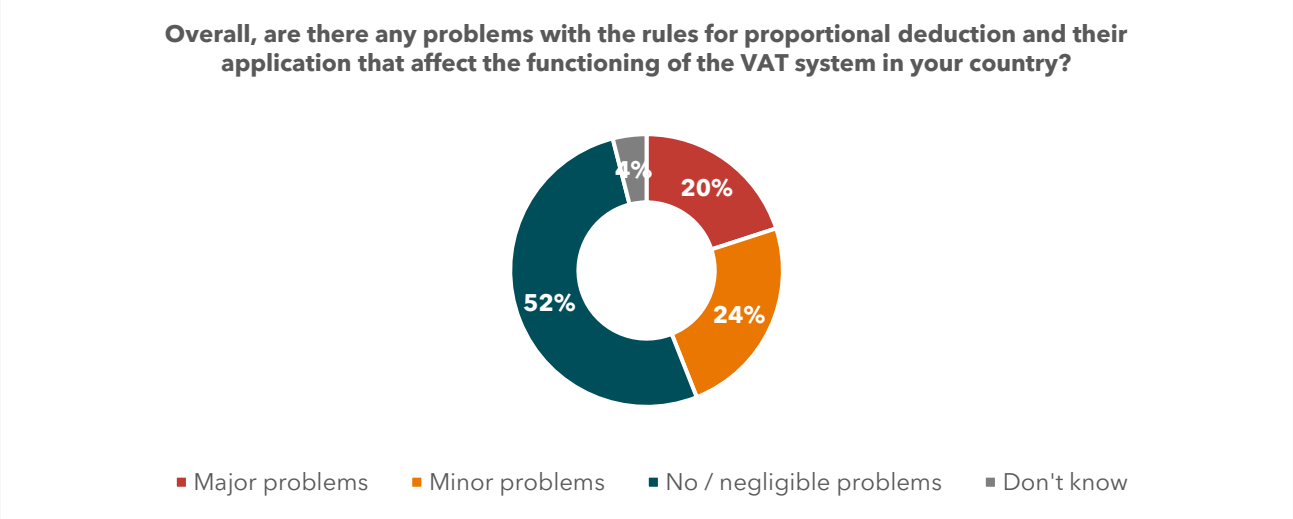
The open-ended responses suggest that VAT grouping is an important mechanism for financial service providers in those jurisdictions where it is available, primarily because it reduces irrecoverable VAT and removes VAT costs on intra-group transactions. Respondents generally indicated that VAT grouping is widely used by financial institutions where available, reflecting its role in mitigating VAT costs and facilitating group structures and internal service arrangements. While most authorities did not identify

major systemic problems, some highlighted administrative and audit challenges stemming from the size and complexity of VAT groups, differences in implementation across jurisdictions, and interactions with input VAT deduction rules. Some also pointed to the benefits of VAT grouping in reducing hidden VAT and supporting organisational efficiency.

➢ *Proportional deduction*

On proportional deduction rules, over half of the responding tax authorities reported no or negligible problems (13 of 25), with only 5 reporting major problems and 6 minor problems, as shown in Figure 7 below.

Figure 7. Problems with proportional deduction



Note: Number of respondents: 25

Responses indicate that proportional deduction remains a key challenging aspect of the VAT system for financial services providers. The majority of authorities reported no significant issues with the existing framework. However, those noticing minor to major problems highlighted difficulties in determining and applying appropriate deduction methods, particularly where businesses undertake both taxable and exempt activities. Concerns were raised regarding the suitability of standard pro rata calculations in reflecting actual use of inputs, as well as the complexity of mixed-use situations and specific business models such as leasing. Some respondents noted a growing reliance on alternative allocation methods to achieve more accurate outcomes.

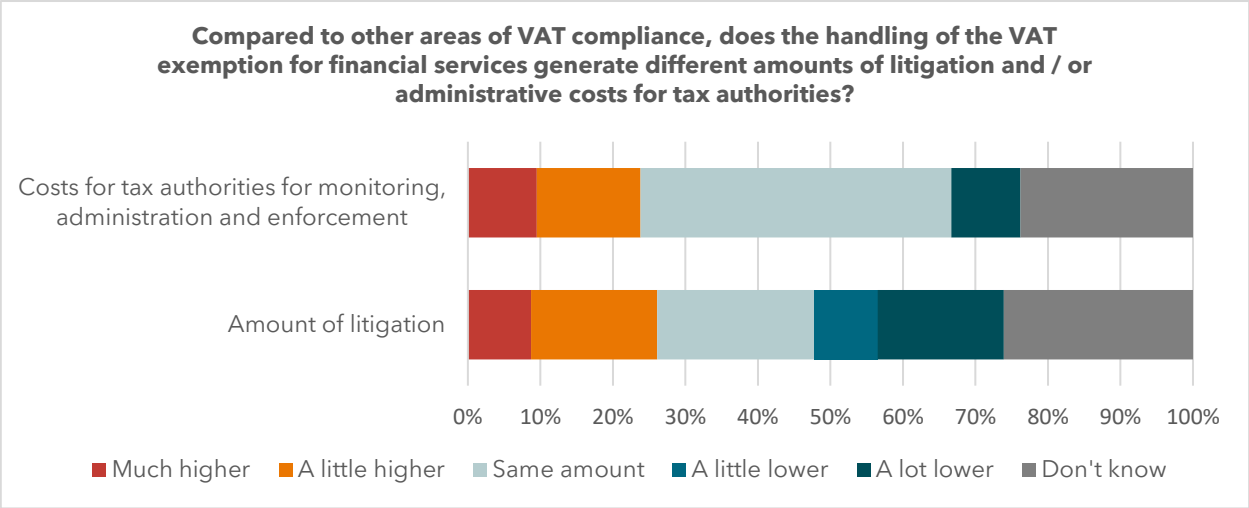
➢ *Litigation, administrative costs and compliance*

Tax authorities were asked to compare the amount of litigation and administrative costs generated by the VAT exemption for financial services against other areas of VAT compliance. Views on litigation were divided, with no dominant response emerging: 4 tax authorities each reported a little higher and 4 lot lower and 5 the same amount, while 2 reported much higher litigation. In opposition, 2 considered litigation a little lower than in other areas of VAT compliance.

On administrative costs, same amount was the most common response 9, while 2 reported much higher costs and 3 indicated a little higher, as illustrated in Figure 8 below. Across both alternatives, a non-negligible share of tax authorities answered 'don't know' (5 on litigation and 6 on administrative costs). Overall, there was a degree of consistency across the two dimensions, with several tax authorities giving aligned responses on both litigation and administrative costs. Those reporting higher costs on one

dimension tended to do the same on the other and vice-versa. Nevertheless, the distribution was slightly more uncertain and variable on litigation than on administrative costs.

Figure 8. Litigation and administrative costs compared to other areas of VAT compliance

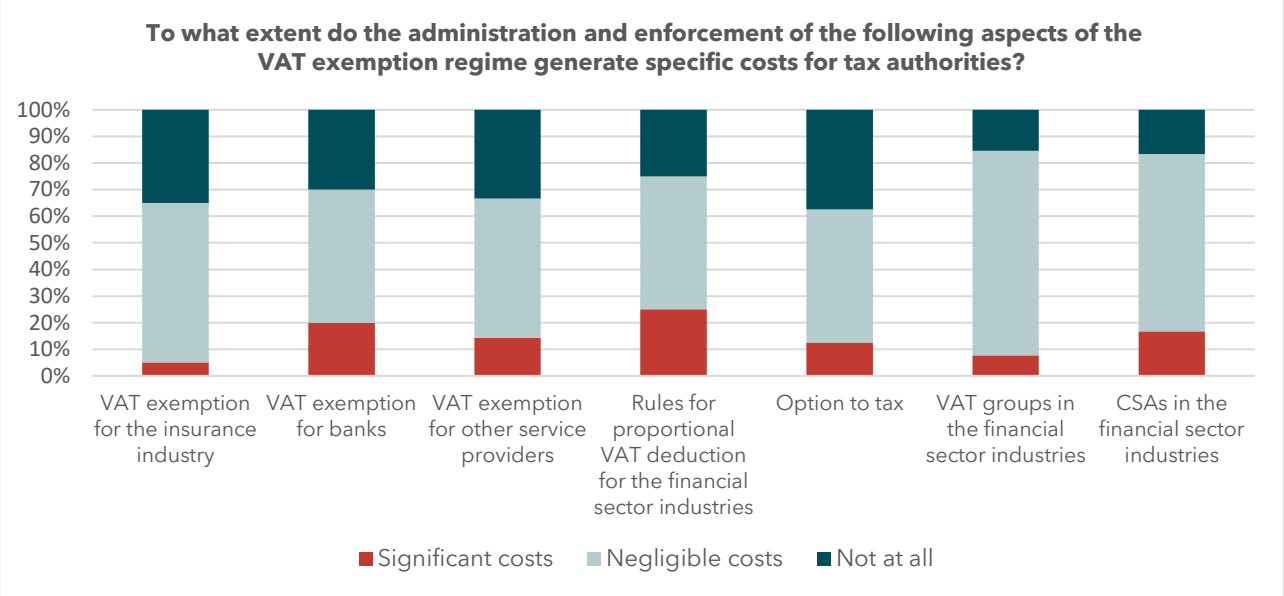


Note: Number of respondents: 23 for litigation; 21 for administrative costs

Regarding the administrative and litigation burdens associated with the VAT exemption, while a small number of tax authorities reported somewhat higher costs, most considered the level of litigation and enforcement effort to be broadly comparable to, or lower than, that associated with other areas of VAT compliance. In terms of problems experienced, these were linked to the complexity of auditing financial institutions, the interpretation of the scope of the exemption, and the application of deduction rules as the main sources of disputes. Several authorities also noted that the increasing complexity of financial products can create legal uncertainty and additional administrative effort. Still, the responses suggest that, although the VAT treatment of financial services can give rise to complex cases in specific circumstances, it is generally not regarded by tax authorities as a major source of litigation or administrative costs compared with other areas of VAT administration.

When asked about the specific areas generating administration and enforcement costs, tax authorities in general shared the view that most aspects of the VAT exemption generated negligible costs or none at all. Proportional deduction rules were the area most frequently associated with significant costs, reported by 5 of 20, followed by banks, where 4 of 20 indicated significant costs. All other aspects of the VAT exemption regime were predominantly rated as generating negligible or no costs: insurance was rated as generating negligible or no costs by 19 of 20 respondents, other service providers by 18 of 21, VAT groups by 12 of 13, the option to tax by 7 of 8, and cost sharing agreements by 5 of 6. Belgium was the only tax authority to report significant costs across all areas.

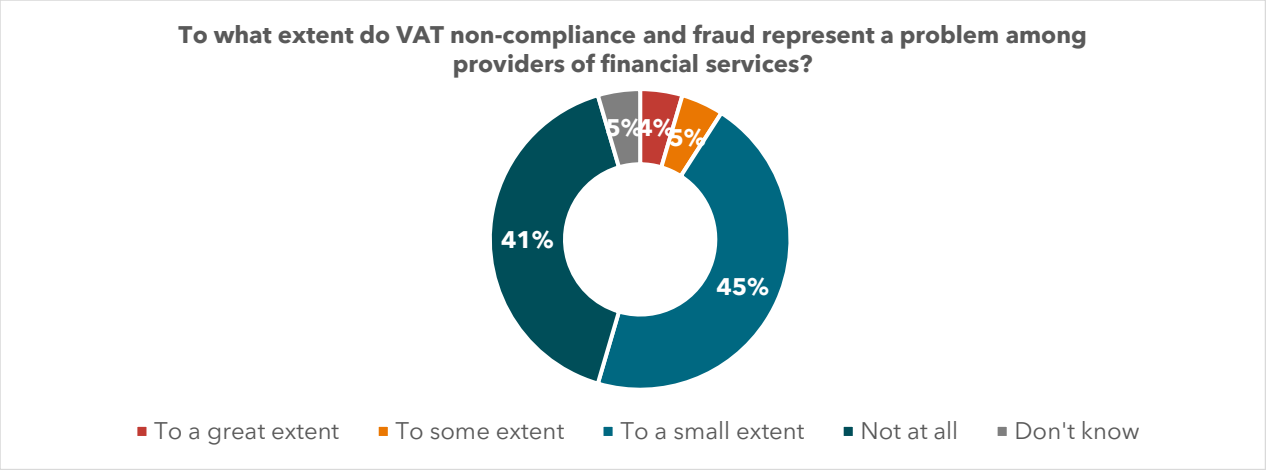
Figure 9. Administration and enforcement costs by aspect of the VAT exemption regime



Note: Number of respondents: 20 for the insurance industry, banks and proportional deduction rules; 21 for other service providers; 13 for VAT groups; 8 for the option to tax; 6 for CSAs

Non-compliance and fraud among providers of financial services were not considered a significant concern by most tax authorities. Almost all indicated it represents a problem either not at all (9 of 22) or only to a small extent (10 of 22).

Figure 10. VAT non-compliance and fraud among financial services providers



Note: Number of respondents: 22

Responses generally suggest that VAT non-compliance and fraud are not perceived as major issues in the financial services sector. Most tax authorities considered such problems to be non-existent or limited in scope, often noting that financial institutions operate within highly regulated environments and are subject to extensive supervisory oversight. Where concerns were identified, they tended to relate less to deliberate fraud and more to the complexity of applying the VAT exemption, including determining the scope of exempt services and the treatment of input VAT deduction. Some respondents highlighted risks linked to interpretation and classification issues, which can create uncertainty and increase the likelihood of errors.

➢ *Other sectoral taxes for the financial sector*

The questionnaire also covered other sectoral taxes currently in force on financial sectors across Member States. As the set of sectoral taxes varies by Member State, respondents were presented with a country-specific list of applicable taxes, reflecting the national tax landscape mapped in Sectoral taxes.

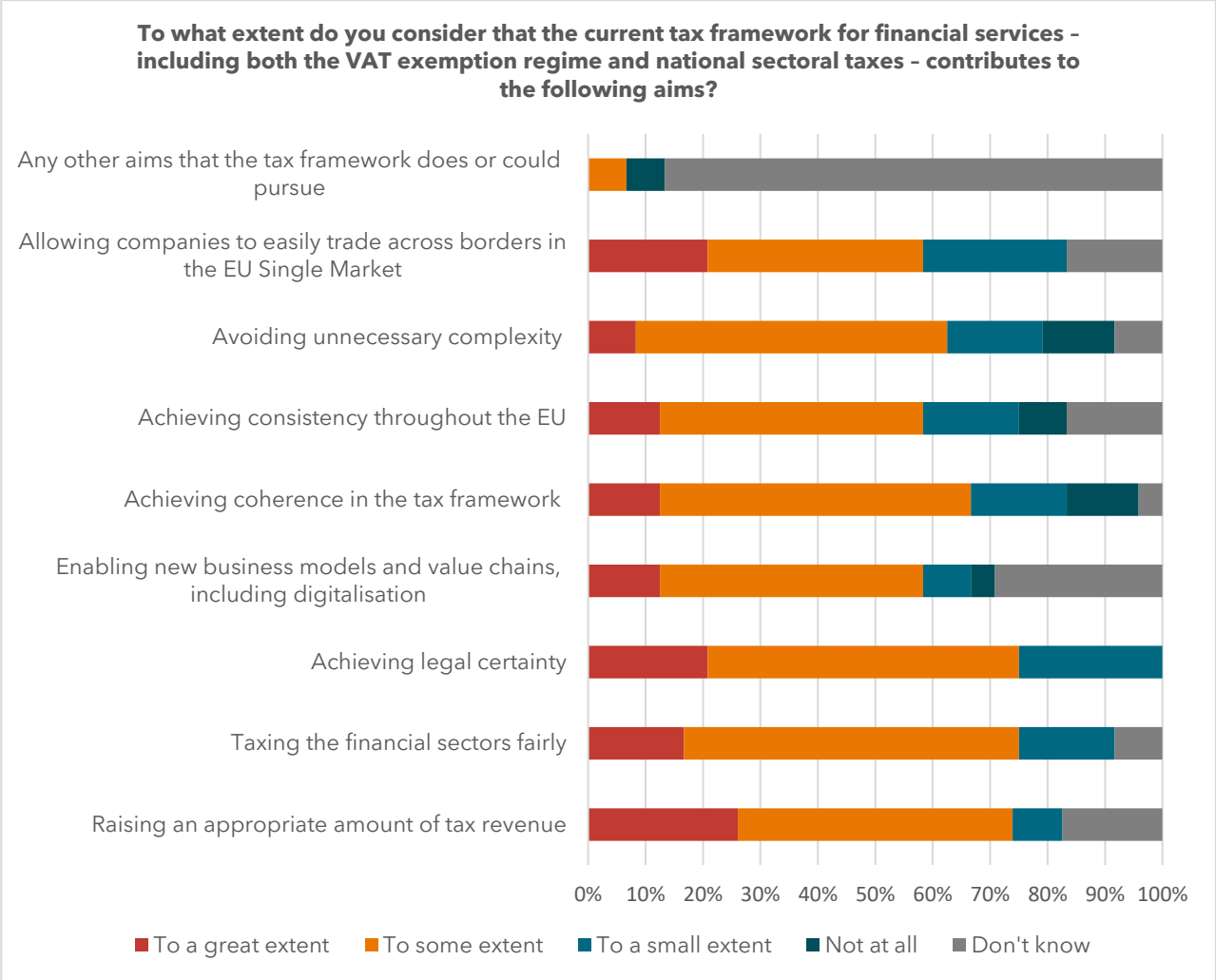
For each tax, respondents were asked to assess the related tax revenues, as well as any implementation challenges associated with the taxes currently in force in the financial sector. In particular, the questionnaire examined whether the administration and enforcement of the sectoral taxes referred to in the previous question generate specific costs for tax authorities, for example due to dedicated personnel, targeted enforcement actions, or awareness-raising campaigns. The analysis of these costs is presented in Volume 1.

➢ *Overall views on the current tax regime for financial services*

Tax authorities were asked to assess the extent to which the current tax framework for financial services contributes to a range of policy aims. Figure 11 below shows that tax authorities generally considered the current framework to contribute to its objectives to some extent across all aims. Raising tax revenue and facilitating cross-border trade in the EU Single Market attracted the most positive assessments, with around one quarter of tax authorities rating revenue raising and just over one fifth rating cross-border trade as contributing to a great extent. On revenue, 6 tax authorities were the most positive. Achieving legal certainty and taxing the financial sector fairly followed closely, with broadly positive responses across most Member States – on legal certainty, 18 of 24 considered the framework to contribute at least to some extent, and none selected "not at all". Taxing the sector fairly showed a similar distribution, with 4 selecting "to a great extent" and 14 "to some extent".

Views were more divided on achieving coherence in the tax framework, achieving consistency throughout the EU and avoiding unnecessary complexity. While "to some extent" remained the most common response for all three aims, each attracted a non-negligible share of "to a small extent" and "not at all" responses. Enabling new business models and value chains, including digitalisation, generated the most uncertain response of all eight aims, with around 7 of respondents selecting "don't know", while 3 tax authorities considered that the framework contributes to this aim to a great extent.

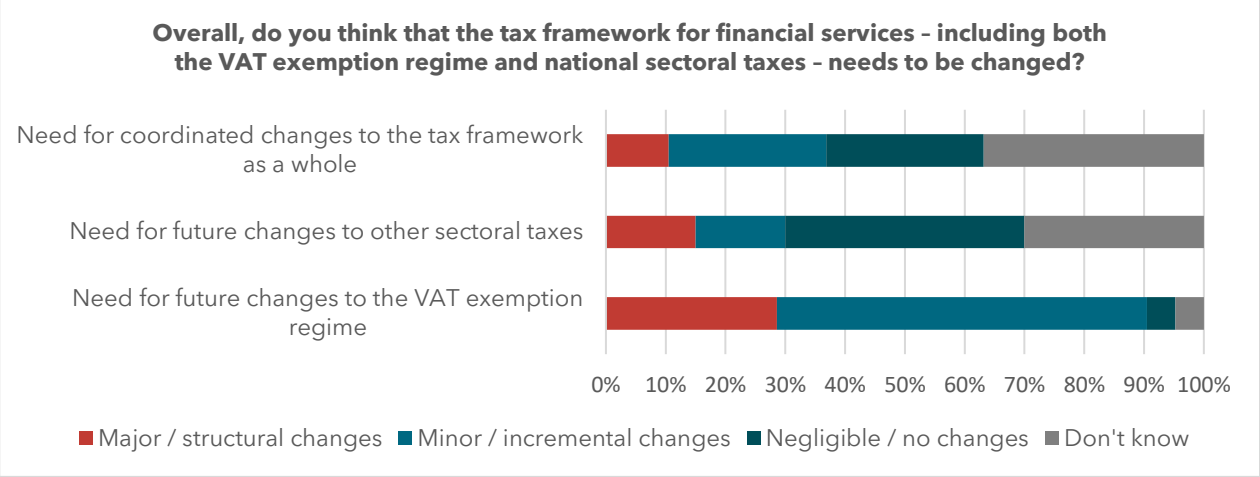
Figure 11: Views on the extent to which the current tax framework contributes to certain aims



Note: Number of respondents: 23 for sub-question on 'Raising an appropriate amount of tax revenue'; 15 for sub-question on' Any other aims; that the tax framework does or could pursue'; 24 for remaining sub-questions.

On the need for future changes, tax authorities were notably cautious. Minor or incremental changes to the VAT exemption regime was by far the most common response, selected by 13 of 21, with only 6 of 21 calling for major or structural changes. On other sectoral taxes, no change was the most common response (8 of 20), though 6 of 20 also replied 'don't know'. On coordinated changes to the overall framework, 7 tax authorities did not know, with the remaining responses spread broadly across the categories (5 for both minor /incremental changes or negligible / no changes and only 2 for major /structural changes).

Figure 12: Views on the need for changes to the tax framework



Note: Number of respondents: 21 for the VAT exemption; 20 for other sectoral taxes; 19 for coordinated changes.

Qualitative evidence suggests that tax authorities view the current tax framework for financial services as functioning reasonably well in certain respects, particularly by providing a well-established basis for taxation and a framework that is familiar to both administrations and taxpayers. However, assessments were generally moderate rather than strongly positive, and many respondents indicated that the framework is less well suited to developments such as digitalisation, new financial products and increasingly cross-border business models. A recurring theme was that the VAT exemption framework, while longstanding and broadly understood, relies on concepts and definitions that have not fully kept pace with changes in the financial sector, leading to interpretative difficulties and legal uncertainty.

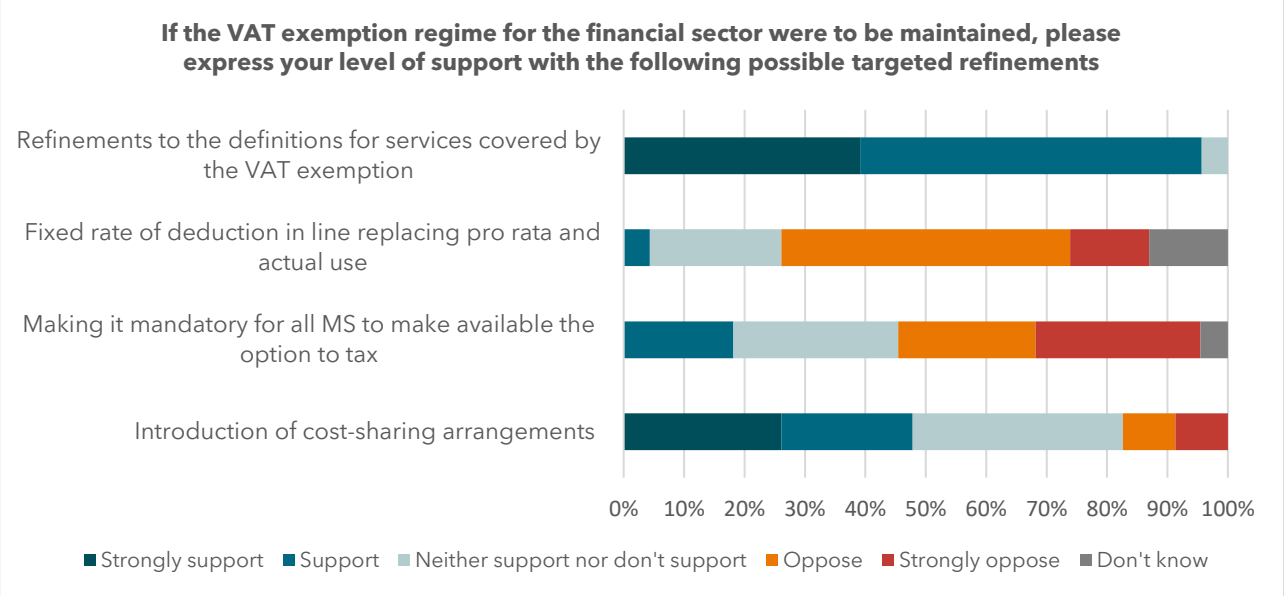
Consequently, many respondents expressed support for some degree of reform, with views tending to favour targeted clarifications and modernisation of the VAT exemption rather than fundamental changes to the overall framework. Responses also highlighted the importance of greater consistency and harmonisation across Member States, particularly regarding the scope of exempt services and the treatment of emerging activities. Views on sectoral taxes were more mixed, with several authorities considering existing arrangements broadly appropriate, while others identified scope for reform at national level.

1.2.2 Possible future changes to the tax framework for financial services

The last section of the questionnaire directed at tax authorities assed the support for certain policy considerations, focusing firstly on target refinements and secondly on structural changes to the tax framework of the financial sector.

Figure 13 focuses on tax authorities' views on more targeted refinements, assuming the VAT exemption regime for the financial sector were to be maintained. Refinements to the definitions for services covered by the VAT exemption were the most widely welcomed option, with 22 of respondents supporting or strongly supporting this approach and virtually no strong opposition. Introduction of cost-sharing arrangements also attracted high levels of support, with just over half of tax authorities (11 of 21) strongly supporting or supporting it. By contrast, a fixed rate of deduction in lieu of input VAT recovery was viewed more sceptically, with around two-thirds of respondents (14 of 21) opposing or strongly opposing. Making cost-sharing arrangements mandatory for all financial institutions received a more divided reaction, with support and neutrality broadly balanced against a similar share (around half) expressing some degree of opposition.

Figure 13: Support for targeted refinements to the VAT exemption regime

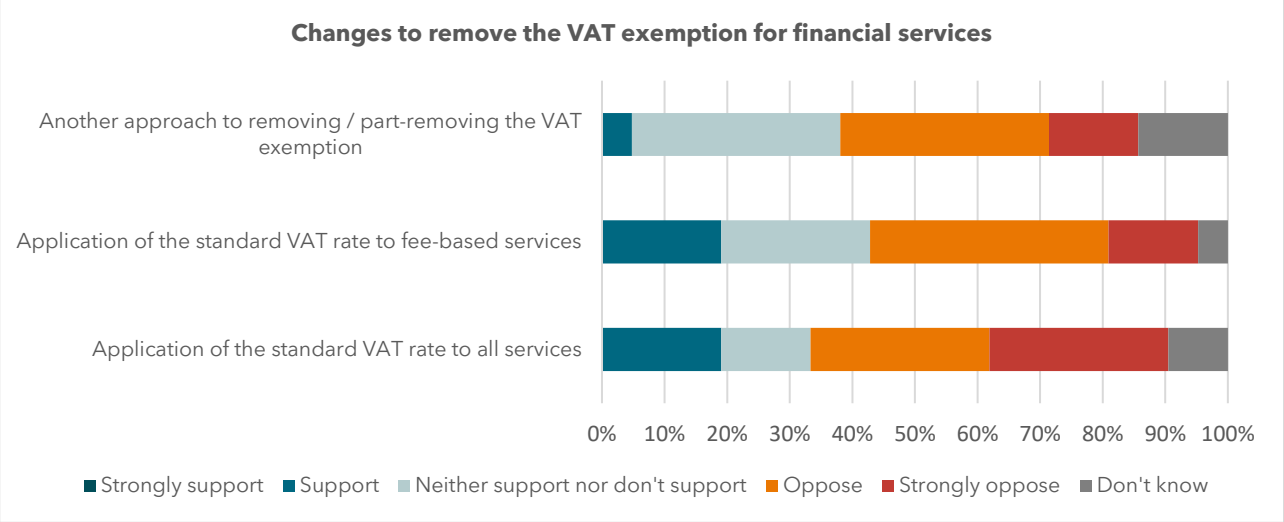


Note: Number of respondents: 23 for introduction of cost-sharing arrangements, fixed rate of deduction in line replacing pro rata and actual use and refinements to the definitions for services covered by the VAT exemption, 22 for Making it mandatory for all MS to make available the option to tax.

Qualitative findings show stronger support for targeted refinements to the existing VAT framework than for more fundamental structural changes. In particular, many tax authorities supported updating and clarifying the definitions of financial services covered by the VAT exemption, frequently pointing to legal uncertainty, inconsistent interpretation across Member States, digitalisation, outsourcing arrangements, payment services, investment funds and emerging activities as areas where the current rules may no longer adequately reflect market realities. Views on the potential re-introduction of cost-sharing arrangements were more mixed, with supporters emphasising their potential to reduce irrecoverable VAT, improve neutrality and facilitate cooperation between entities that cannot form VAT groups, while others raised concerns regarding legal uncertainty, complexity and risks in cross-border situations. Support for a fixed-rate deduction mechanism appeared more limited, with several respondents noting that such an approach would be difficult to design, could distort neutrality and may not appropriately reflect the diversity of business models within the financial sector. Opinions on making the option to tax mandatory across all Member States were also divided, reflecting a balance between the potential benefits of harmonisation and VAT neutrality, on the one hand, and concerns about complexity, tax planning opportunities and national flexibility, on the other.

Turning to **structural changes**, Figures 13 to 15 below present tax authorities' views on different policy considerations. Overall, support was limited for applying the standard VAT rate to all financial services (Figure 12), with around two thirds of respondents either opposing or strongly opposing this option and only 4 out of 21 expressing support. Applying the standard VAT rate only to fee based services attracted a somewhat more balanced distribution of views, with roughly one third supporting and another third opposing this option, while the remaining third were neutral or unsure. Alternative approaches to removing or partially removing the VAT exemption were viewed more favourably, with a higher combined share of support and neutral responses (12 of 21 respondents) and fewer strong oppositions.

Figure 14: Changes to remove the VAT exemption for financial services

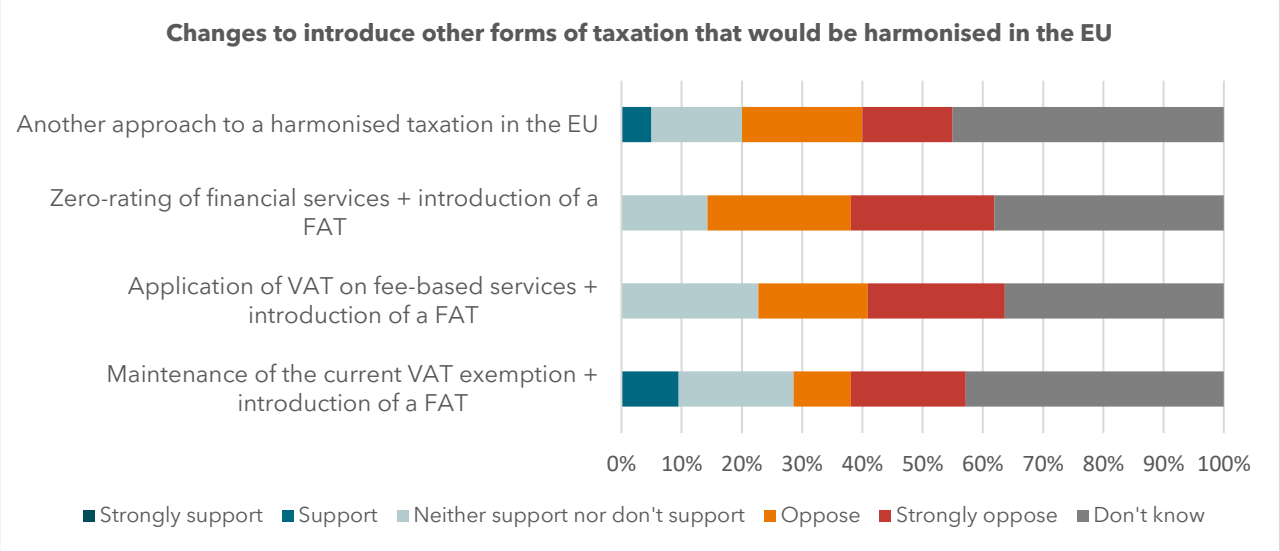


Note: Number of respondents: 21

Qualitative evidence reveals limited support for fundamental changes to the VAT treatment of financial services and a preference for retaining the exemption regime while addressing identified shortcomings through more targeted reforms. Many tax authorities expressed reservations about applying the standard VAT rate to all financial services, citing concerns regarding the determination of the taxable base, potential increases in costs for consumers, administrative complexity and possible impacts on competitiveness. Views were somewhat more balanced regarding the taxation of fee-based financial services, with some respondents recognising that technological developments and changes in business models have made it easier to identify and tax certain explicitly priced activities, although concerns remained regarding scope, implementation and possible distortions. Alternative approaches, such as margin-based taxation, attracted interest from some tax authorities but were generally viewed as requiring substantial further analysis due to their complexity and uncertain effects. Overall, the responses indicate that tax authorities remain cautious about far-reaching reforms to the VAT exemption, reflecting many of the challenges identified in the study, including difficulties in defining the tax base, concerns about consumer impacts and the risk of creating new forms of complexity. Where support for reform exists, it tends to focus on more targeted measures, including the taxation of specific fee-based services and the clarification of existing rules, rather than the wholesale removal of the exemption regime.

Views on **policy considerations to introduce other forms of taxation harmonised at EU level** were generally cautious. All four policy considerations have a relatively high share of "don't know" responses, reaching around one third of replies in several cases. For the combination of maintaining the current VAT exemption and introducing a financial activities tax (FAT), a small minority (2 authorities) expressed support, while 8 opposed or strongly opposed it. Application of VAT on fee-based services together with a FAT, which was one policy consideration explored at the initial stages of the study, showed a similarly muted level of support, with roughly half of respondents either neutral or opposed. Zero-rating of financial services with a FAT, as well as other approaches to harmonised taxation in the EU, also prompted few firm positions for or against, with only a small number of clear supporters.

Figure 15: Changes to introduce other forms of taxation harmonised in the EU

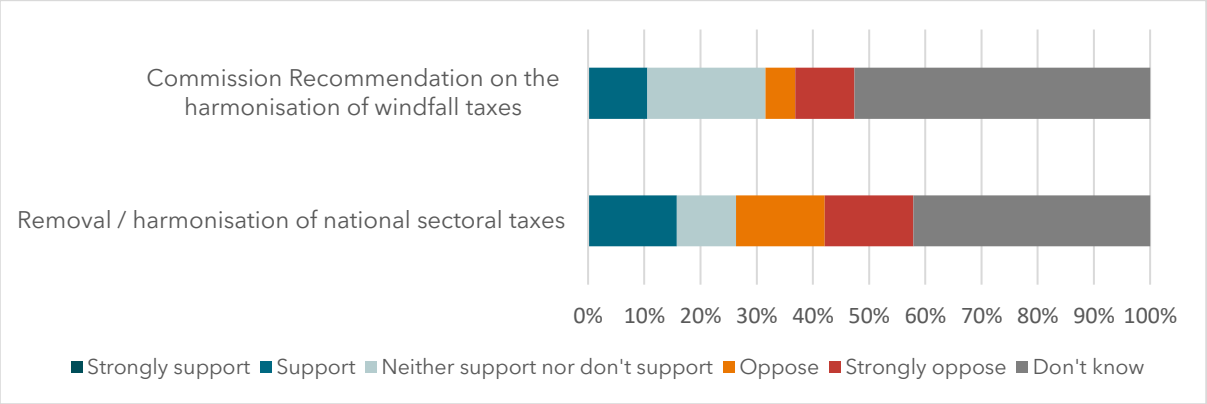


Note: Number of respondents: 20 for maintaining the current VAT exemption plus a FAT; 21 for applying VAT on fee-based services plus a FAT; 21 for zero-rating financial services plus a FAT; and 21 for another approach to a harmonised taxation in the EU.

From qualitative evidence, limited support was showed for combining the existing VAT exemption with additional harmonised sectoral taxes. Many tax authorities either expressed reservations about these approaches or indicated that they lacked sufficient information to form a view. Concerns focused on the risk of increasing complexity, creating additional administrative burdens and failing to address the underlying challenges associated with the VAT exemption itself. Proposals involving a FAT, whether combined with the current exemption, taxation of fee-based services or zero-rating, generally received negative or unfavourable assessments, with respondents highlighting potential impacts on consumers, uncertainty regarding revenue effects and the need for further analysis. Similarly, alternative forms of harmonised taxation attracted little support, with many authorities preferring either to maintain the current framework or to focus on improving the VAT rules rather than introducing additional layers of taxation. Taken together, the responses suggest that tax authorities do not view new harmonised sectoral taxes as a priority area for reform and generally favour addressing existing shortcomings through targeted improvements to the VAT framework.

Support for policy considerations related to **national sectoral and windfall taxes** was also limited, though a large proportion of tax authorities was unable to express a preference. For the removal or harmonisation of national sectoral taxes, only a small group (3 authorities) expressed support, while 3 opposed and another 3 strongly opposed, and more than one third (8 of 19) answered "don't know". A possible Commission Recommendation on the harmonisation of windfall taxes attracted even fewer clear views, with just 2 authorities expressing support, 3 opposing or strongly opposing, and almost half of respondents (9 of 19) indicating "don't know".

Figure 16: Views on removal or harmonisation of national sectoral and windfall taxes



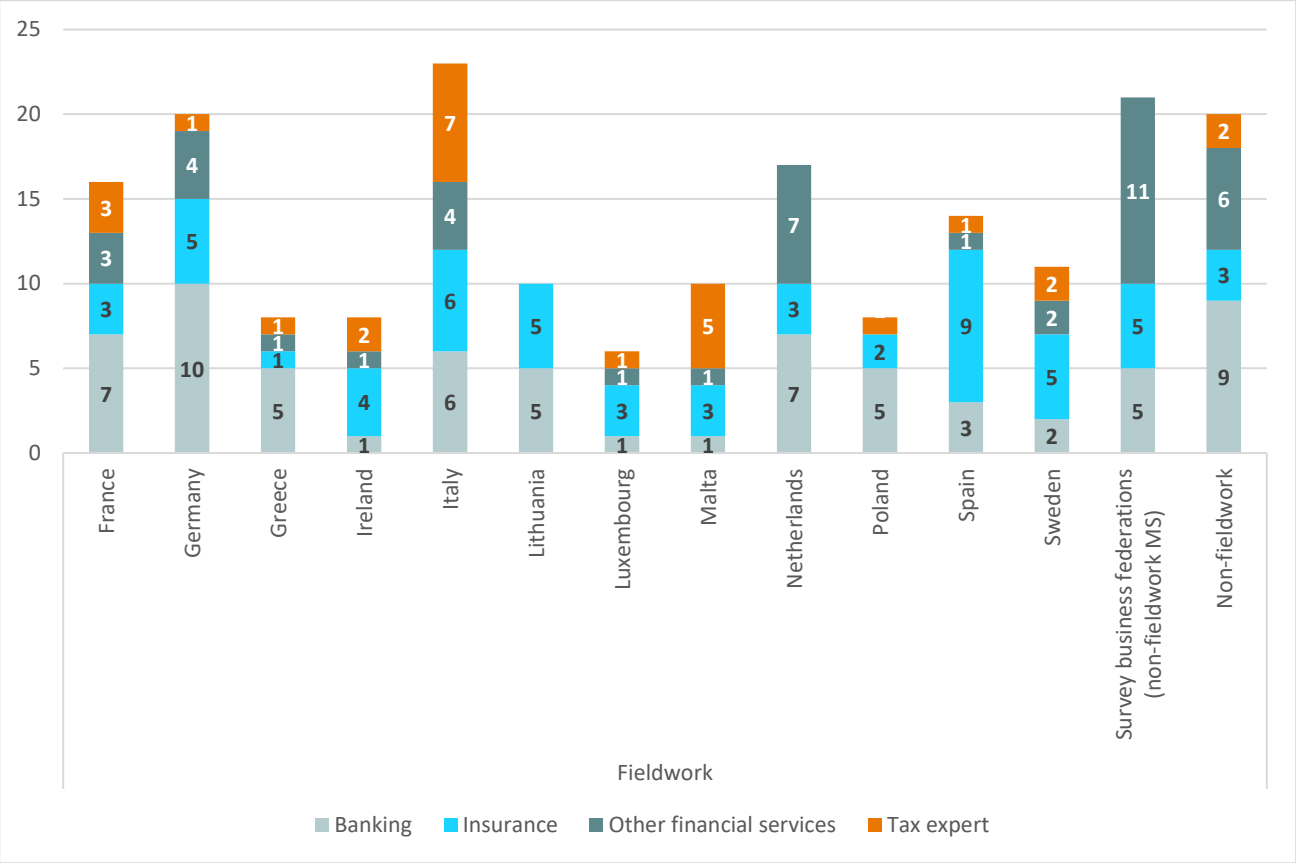
Note: Number of respondents: 19 for both policy considerations.

Many tax authorities expressed reservations about either harmonising or removing existing national sectoral taxes at EU level. indicated uncertainty, or noted that the issue is closely linked to national policy choices and fiscal priorities. Concerns focused on the potential loss of revenue, the difficulty of accommodating differing national circumstances, and the sensitivity of altering taxes that have often been introduced in response to specific domestic economic or policy objectives. Views on a possible Commission Recommendation regarding windfall taxes were similarly cautious, with several respondents either reporting no position or noting that the relevance of such measures depends heavily on national circumstances. While a small number of authorities supported greater coordination or harmonisation, particularly to improve consistency and reduce distortions, overall support was limited. Taken together, the responses suggest that tax authorities generally regard sectoral taxes as an area where national flexibility remains important and where support for EU-level harmonisation is considerably weaker than for targeted improvements to the VAT framework.

1.3 Analysis of private sector responses

As depicted in Figure 17 circa 190 private-sector stakeholders were involved in the consultation process. Banking stakeholders accounted for the largest share of these (69), reflecting the sector's central role within the financial services industry. Strong participation was also obtained from insurance undertakings (59) and other financial services providers (47), ensuring representation of the diverse business models covered by the study. Among the fieldwork countries, Italy, Germany and the Netherlands participated the most in the consultation (with respectively 23, 20 and 17 interactions) while additional evidence was gathered through the survey of business federations and interviews with EU-level and international stakeholders.

Figure 17: Distribution of private sector respondents by country



The points made above about the diversity of the information gathered and sampling are especially important with regard to the interactions with private-sector stakeholders. Specifically, the findings presented should be interpreted as qualitative evidence reflecting stakeholders' experiences, perceptions and views, rather than as statistically representative data. Consequently, the results should be viewed as evidence of the perspectives, experiences and concerns raised by consulted stakeholders, rather than as a statistically representative survey of the financial sector.

While there were over 190 interactions with private sector stakeholders, the number of responses reported in the analysis of closed questions is lower, and the number of responses varies across topics. This is because not all participants contributed in the same way. To give more detail, in several cases, focus groups were organised to optimise stakeholder engagement and the quality of the discussions; in these circumstances, responses were provided on behalf of financial services providers by either European or national business federations. This meant that one response reflected the views of multiple entities. In other instances, respondents chose to focus on the issues most relevant to their activities and expertise, rather than responding to every question. Additionally, certain questions – particularly those relating to specific structural features of the VAT framework, such as VAT grouping, the option to tax and cost-sharing arrangements, were addressed only to stakeholders in Member States where such arrangements are available or relevant. Questions concerning possible future policy changes tended to generate broader qualitative observations rather than structured responses to the closed-ended questions, reflecting the inherently hypothetical nature of these scenarios. Finally, the highly specific and individualised input provided by stakeholders on certain topics did not lend itself to the synopsis report but rather is discussed in a contextualised manner in Volume 1, as appropriate; this also helped to address anonymity concerns.

Taken all together, participation varied across topics, resulting in a lower number of responses reported in the figures than the total number of stakeholder interactions conducted during the study. As with the

analysis of the responses of tax authorities, the number of respondents for each closed question is indicated under the relevant figure, and any percentages reported are calculated on the basis of the respondents to that specific question rather than the overall number of consultation participants.

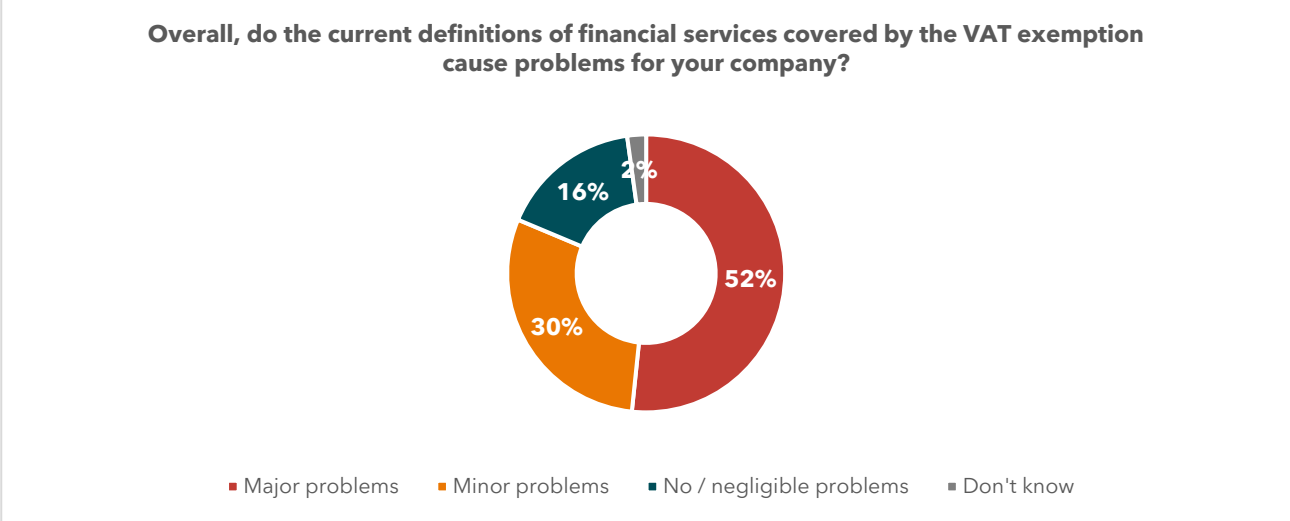
1.3.1 Functioning of the tax framework for financial services

Private sector respondents were asked to provide their views on the functioning of the existing VAT framework for financial services. Response rates varied significantly across questions, as some were only addressed to respondents from Member States where the relevant provision is in place. Questions on the option to tax were put to respondents from 9 Member States where the measure is available, resulting in 29 responses, while questions on VAT groups covered 22 Member States, yielding 65 responses. The broader question on problems with the scope of the VAT exemption, addressed to all respondents, received 91 responses.

➢ Definitions

As shown in Figure 18 below, problems with the current definitions of financial services covered by the VAT exemption were widely reported, with over half of respondents reporting major problems and a further 27 minor problems. Only a small minority indicated no or negligible issues. Experts were proportionally the most critical, with 7 of 9 reporting major problems, while banking associations within business federation respondents were the most negative of the sector groups (11 of 15 reporting major problems, compared to 5 of 14 among insurance associations). Geographically, German and Dutch respondents were the most consistently negative, while Belgian and Maltese respondents were more varied.

Figure 18: Problems with the current definitions



Note: Number of respondents: 91

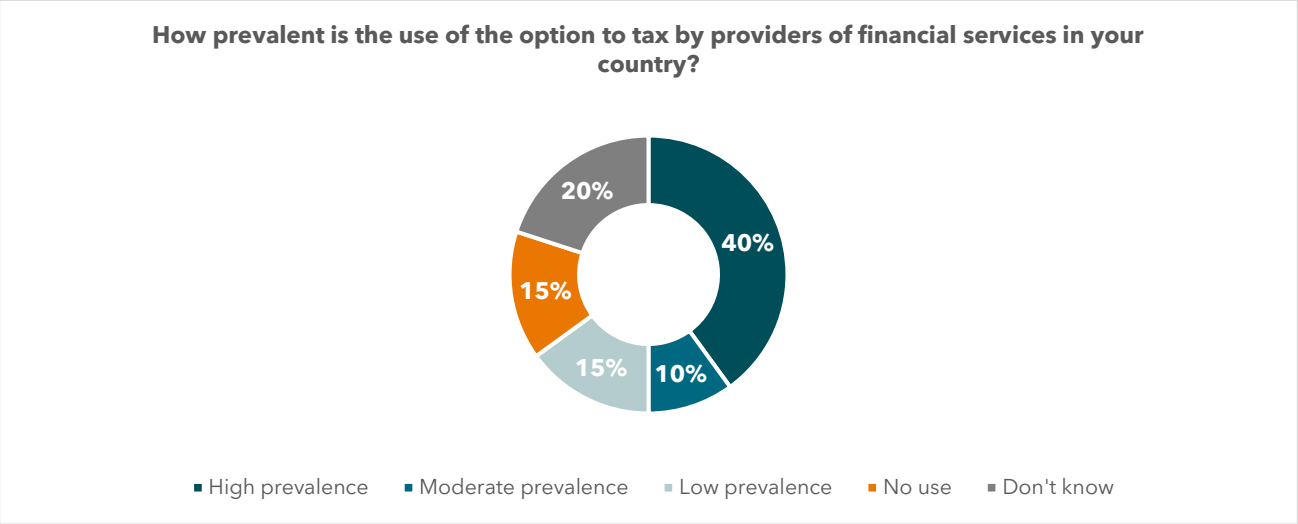
Through qualitative responses stakeholders identified legal uncertainty and complexity as a challenge associated with the VAT exemption for financial services. Concerns focused on the application of the exemption to new products, digital services, outsourcing arrangements and specialised financial activities, as well as divergent interpretations across jurisdictions. While some respondents considered the current framework to function reasonably well, there was broad support for greater clarification, modernisation and harmonisation of the rules to improve certainty and reduce administrative burdens.

➢ Option to tax

Where the option to tax is available, it appears to be actively used, as illustrated by Figure 19. Of the 20 respondents asked about its prevalence, where the option exists, 8 reported high prevalence and a further

2 moderate prevalence, while a quarter indicated low or no use despite availability. Among respondent types, business federation respondents made up the large majority (14 of 20) and were spread across several Member States, while the 6 company respondents were predominantly German.

Figure 19: Prevalence of option to tax

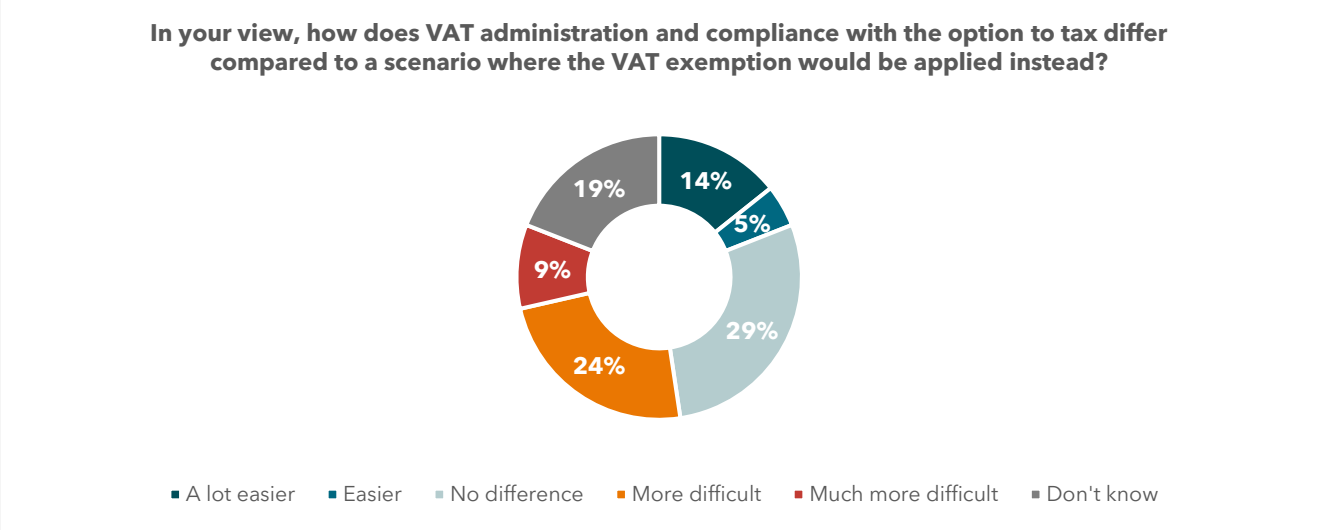


Note: Number of respondents: 20

The consultation responses provided also qualitative insights into stakeholder experiences on the use of the option to tax. Stakeholders reported that is generally limited and varies considerably across Member States, with some reporting low or no uptake. Where available, it is most commonly used in business-to-business transactions, with the objective of improving input VAT recovery and reducing irrecoverable VAT costs. Respondents generally viewed the option to tax as a tool that can improve VAT neutrality and mitigate competitive disadvantages associated with exempt financial services. At the same time, they noted that differing national approaches to the availability and implementation of the option contribute to fragmentation and may affect competitive neutrality within the EU.

VAT administration and compliance under the option to tax was found to be broadly comparable to the exemption by most respondents, though views were mixed. Of the 21 respondents from Member States where the option is available, almost 6 reported no difference, while around a third found it more difficult or a lot more difficult (7 of 21). Only around a fifth found it easier or a lot easier (4 of 21), and 4 were unable to form a view. As shown in Figure 20 below, no single response category dominated, suggesting that the administrative implications of the option to tax vary considerably across Member States and types of institution.

Figure 20: VAT administration and compliance - Option to tax

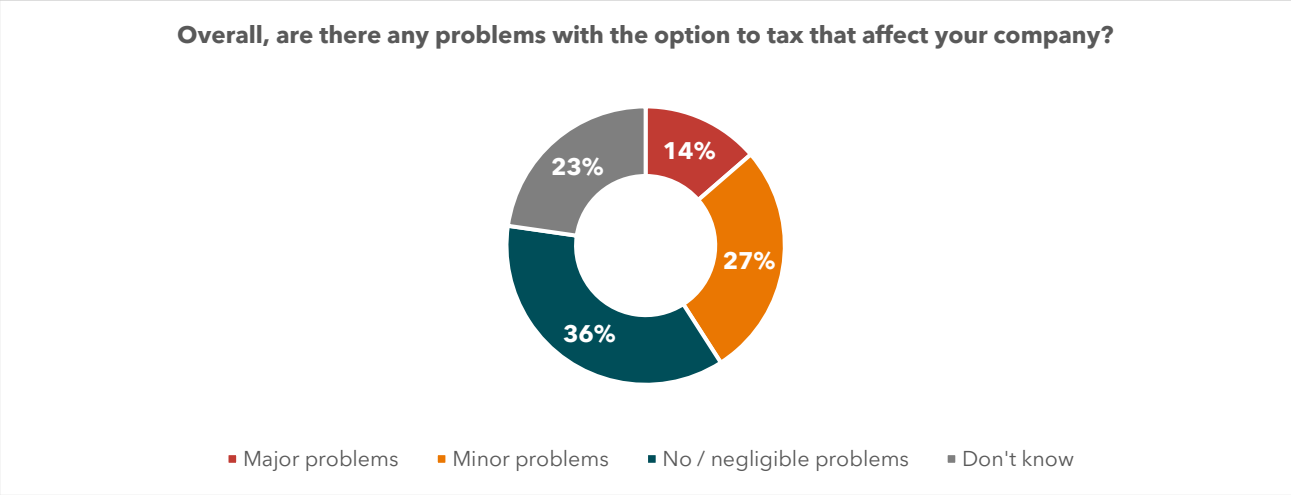


Note: Number of respondents: 21

Companies were the most negative, with 4 of 5 finding the option to tax more difficult or a lot more difficult to administer than the exemption, and only 1 finding it easier. Business federation respondents were more evenly distributed, with 6 of 15 reporting no difference, 4 unable to form a view, and the remaining split between easier and more difficult. German respondents were the most divided, with 5 of 9 finding it more difficult but 3 finding it a lot easier, while Belgian and French respondents mostly finding there is no difference, and Lithuanian respondents leaning towards finding it more difficult.

Overall, problems with the option to tax were found to be limited among the 22 respondents. Over a third indicated no or negligible problems, and 6 reported only minor problems, while just 3 respondents reported major problems. Companies were the most critical, with 2 of 6 reporting major problems, while business federation respondents leaned towards no or negligible problems (6 of 15). Belgian and French respondents were the most positive, with all respondents reporting no or negligible problems or minor problems.

Figure 21: Problems with the option to tax



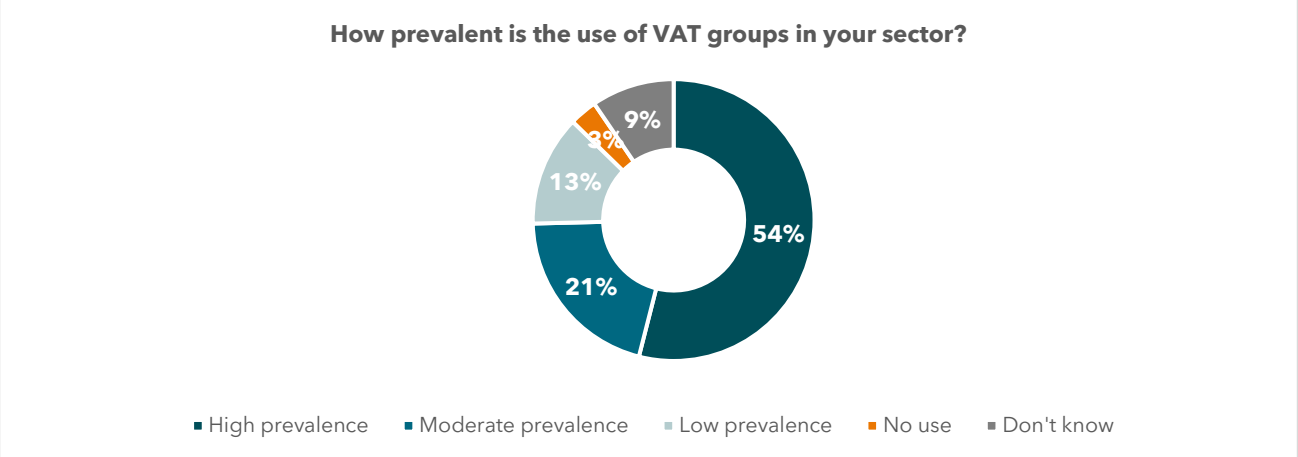
Note: Number of respondents: 22

Taken together, the results on the option to tax suggest that, where available, it sees active use and does not generate significant difficulties in practice. This was also clear from the qualitative insights, where respondents generally indicated that, once implemented, the option to tax does not substantially increase ongoing VAT compliance burdens, particularly for institutions that already operate VAT recovery and apportionment systems. While some stakeholders reported additional administrative requirements, such as invoicing, record-keeping and input VAT allocation, these were often considered manageable and outweighed by the benefits of increased input VAT recovery. Stakeholders also noted that the initial implementation of the option to tax may require significant adaptations to IT systems and internal processes, as well as discussions with tax authorities regarding VAT recovery methodologies. Several respondents highlighted that the option to tax can significantly reduce irrecoverable VAT and improve VAT neutrality, thereby lowering the cost of supplying financial services. However, concerns were raised regarding legal uncertainty, audit scrutiny and the complexity of determining deductible input VAT. Still, respondents who make use of the option to tax generally viewed it as a useful mechanism for mitigating hidden VAT costs, although its effectiveness depends on clear rules and practical implementation.

➢ *VAT groups*

In contrast to the option to tax, VAT groups were reported as widely used across Member States which allow this option (the majority). As shown in Figure 4 below, over half of the 60 respondents reported high prevalence, with a further 13 reporting moderate prevalence. Low prevalence or no use was indicated by around 10, and 6 responded 'Don't know'. Companies were the most consistent group, with 13 out of 14 reporting high prevalence. Business federations also leaned toward high or moderate prevalence, though a higher share of respondents expressed uncertainty. German, Swedish, Dutch and French respondents predominantly reported high prevalence, while Belgian and Maltese respondents were more likely to report moderate or low use.

Figure 22: Prevalence of VAT groups



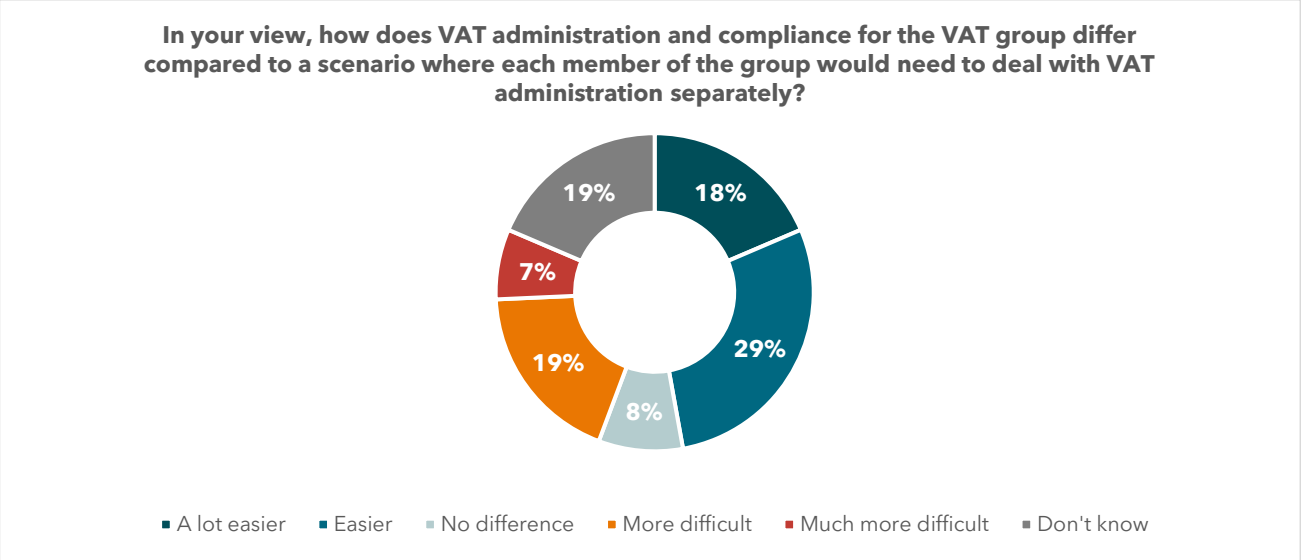
Note: Number of respondents: 65

Qualitative feedback suggests that the main motivation for using VAT grouping is to reduce irrecoverable VAT, particularly on intra-group transactions, while also simplifying compliance and facilitating the organisation of group structures. Stakeholders frequently highlighted the benefits of eliminating VAT on supplies between group members, which can result in significant reductions in non-deductible VAT and lower administrative burdens. Several respondents also noted that VAT grouping can provide greater flexibility in centralising functions and services within a corporate group. The extent of the benefits, however, was reported to depend on the structure of the group, the nature of the services supplied and

national implementation rules. A small number of respondents indicated that VAT grouping had limited impact in their specific circumstances or had been discontinued due to regulatory or organisational considerations. Overall, respondents generally viewed VAT grouping as an important mechanism for mitigating some of the irrecoverable VAT costs associated with the exemption of financial services, particularly in relation to intra-group activities.

On the administrative implications, participation in a VAT group produced a more positive picture than the option to tax, with almost half of the 65 respondents finding it easier or a lot easier compared to individual treatment, and just over a quarter finding it more difficult or a lot more difficult, as shown in Figure 23 below.

Figure 23: VAT administration and compliance – VAT groups



Note: Number of respondents: 65

Companies were the most consistently positive, with 15 of 19 finding VAT compliance easier or a lot easier under a VAT group. Business federation respondents were more divided, with banking associations leaning positive while insurance and asset management associations were predominantly uncertain or negative. Experts were split, with 5 finding it easier and 4 more difficult or a lot more difficult. Swedish respondents were almost uniformly positive, while Belgian respondents were more likely to report difficulty or uncertainty, which may reflect differences in how national VAT group regimes operate in practice.

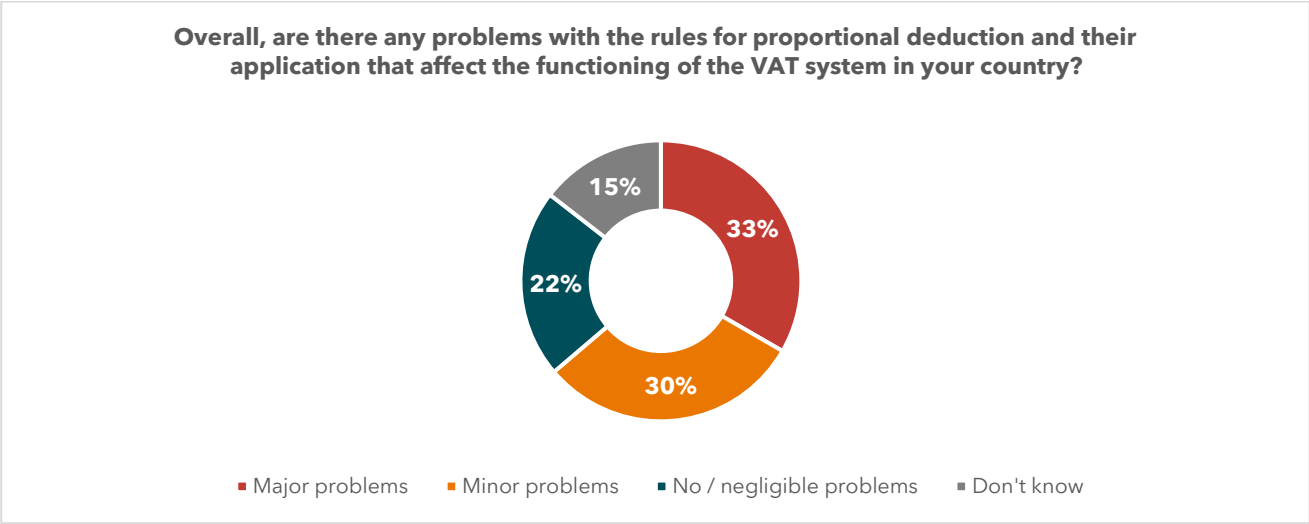
Qualitative responses suggest that VAT grouping is generally perceived as reducing administrative and compliance burdens compared to separate VAT registration of group members. Stakeholders frequently cited benefits such as the submission of a single VAT return, reduced invoicing requirements for intra-group transactions, simplified interactions with tax authorities and lower compliance costs. These advantages were reported to be particularly significant for large groups with numerous entities and extensive internal service flows. However, respondents also highlighted several challenges. The most frequently mentioned concerns related to legal uncertainty surrounding the conditions for forming and maintaining a VAT group, differences in national implementation, and the treatment of cross-border structures following the Skandia and Danske Bank case law. Several stakeholders considered the VAT treatment of transactions between VAT groups and foreign branches to create additional VAT costs, complexity and, in some cases, risks of double taxation. Other concerns included restrictive eligibility requirements, difficulties linked to organisational integration criteria, and limitations on participation by multinational group structures.

In short, VAT groups stand out as a relatively well-regarded tool where available, with a clear majority of company respondents and a positive overall balance among all respondent types finding them easier to administer than individual treatment.

➢ *Proportional deduction*

Turning to the rules on proportional deduction, over a third of the 69 respondents considered them to cause major problems, and 21 minor problems, with only 15 indicating no or negligible problems. Companies were the most critical, with half reporting major problems (11 of 22), while business federation respondents were more evenly distributed across the three substantive categories. 10 were unable to form a view, concentrated almost entirely among business federation respondents. Experts were broadly split, with 3 reporting major problems, 4 minor problems and 3 no or negligible problems. Geographically, Swedish and Belgian respondents were among the most negative, while Maltese and Italian respondents were more likely to report no or negligible problems.

Figure 24: Problems with proportional deduction



Note: Number of respondents: 69

Qualitative input indicates that proportional deduction remains a challenging aspect of the VAT framework for financial services. Stakeholders frequently reported difficulties in determining and applying appropriate allocation methodologies, calculating pro-rata recovery rates, and defending these approaches during tax audits. Several respondents highlighted legal uncertainty arising from differing calculation methods, varying interpretations by tax authorities and recurring disputes regarding the allocation of common costs. While some stakeholders considered the rules manageable where clear methodologies have been agreed with tax authorities, many described proportional deduction as complex, resource-intensive and a significant source of compliance risk.

In relation to compliance costs, respondents generally considered services subject to the VAT exemption to involve higher administrative burdens than fully taxable services, particularly where partial deduction applies. The most frequently cited cost drivers included the determination and monitoring of deductible input VAT, allocation of common expenses, assessment of whether services fall within the scope of the exemption, management of cross-border transactions, and ongoing interactions with tax authorities. Several stakeholders also noted that the combination of low recovery rates and extensive compliance requirements increases both administrative costs and the amount of irrecoverable VAT borne by financial institutions.

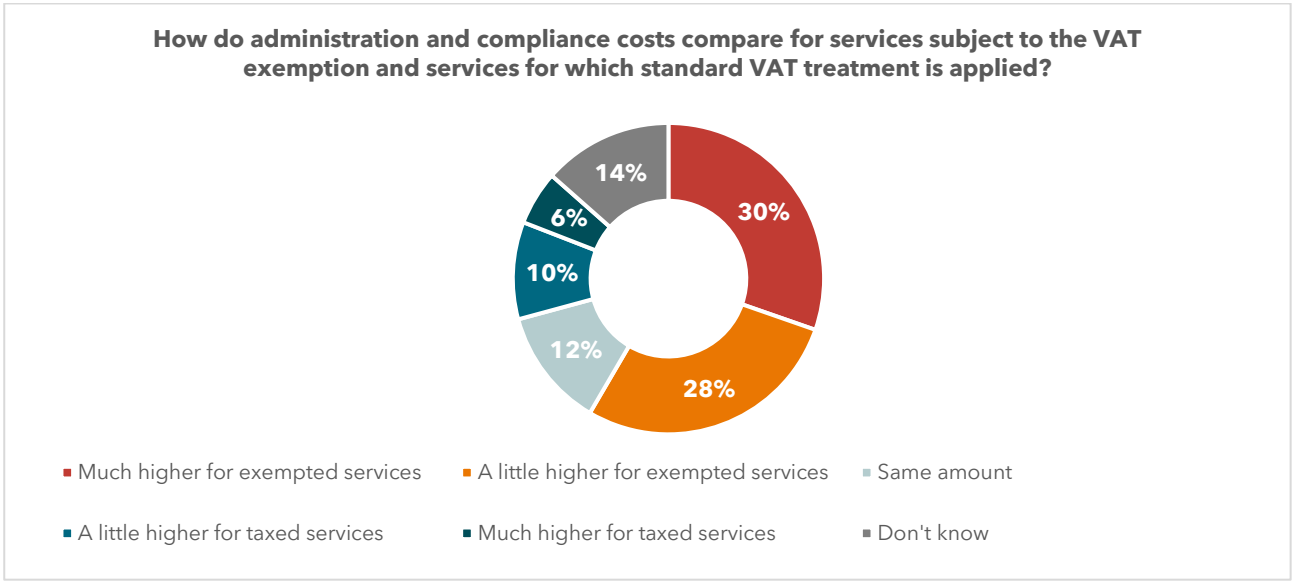
➢ *Administrative costs and compliance*

Respondents were also asked to compare administration and compliance costs for services subject to the VAT exemption against those subject to standard VAT treatment in general almost 50 considered costs

higher for exempted services, with around 27 reporting them much higher and 25 a little higher. As Figure 25 below shows, only 14 considered costs higher for taxed services and 11 reported no difference.

Most experts (8 of 9) considered that the exemption practicalities drives up compliance costs, while companies were more divided, with 6 of 30 reporting costs as higher for taxed services. Within business federation respondents, banking associations leaned most consistently towards exempted services being more costly, while insurance associations were more varied, with several reporting higher costs for taxed services alongside a high rate of uncertainty. Geographically, German and Swedish respondents tended to consider costs higher for exempted services, while Italian and Dutch respondents were more likely to report similar or higher costs for taxed services.

Figure 25: VAT administration and compliance – VAT exemption vs. Standard



Note: Number of respondents: 89

Qualitative input suggests that the level of effort for VAT compliance varies considerably across institutions depending on their size, business model and degree of automation. Several respondents highlighted the need for specialised staff, external advisors and dedicated IT systems to manage VAT obligations effectively.

Taken together, the results from this section point to a broadly shared view that the existing VAT framework for financial services generates administrative costs, particularly around the scope of the exemption and the rules on proportional deduction. VAT groups stand out as relatively well-regarded tool where available, while the option to tax remains largely unfamiliar to many respondents.

➢ *Sectoral taxes*

The questionnaire also covered the challenges associated with other sectoral taxes currently in force across Member States.

As the set of sectoral taxes varies by Member State, respondents were presented with a country-specific list of applicable taxes, reflecting the national tax landscape mapped in Annex 4. These typically comprised insurance premium tax, stamp duty, and financial transaction taxes, supplemented where relevant by additional ones identified during the initial research phase.

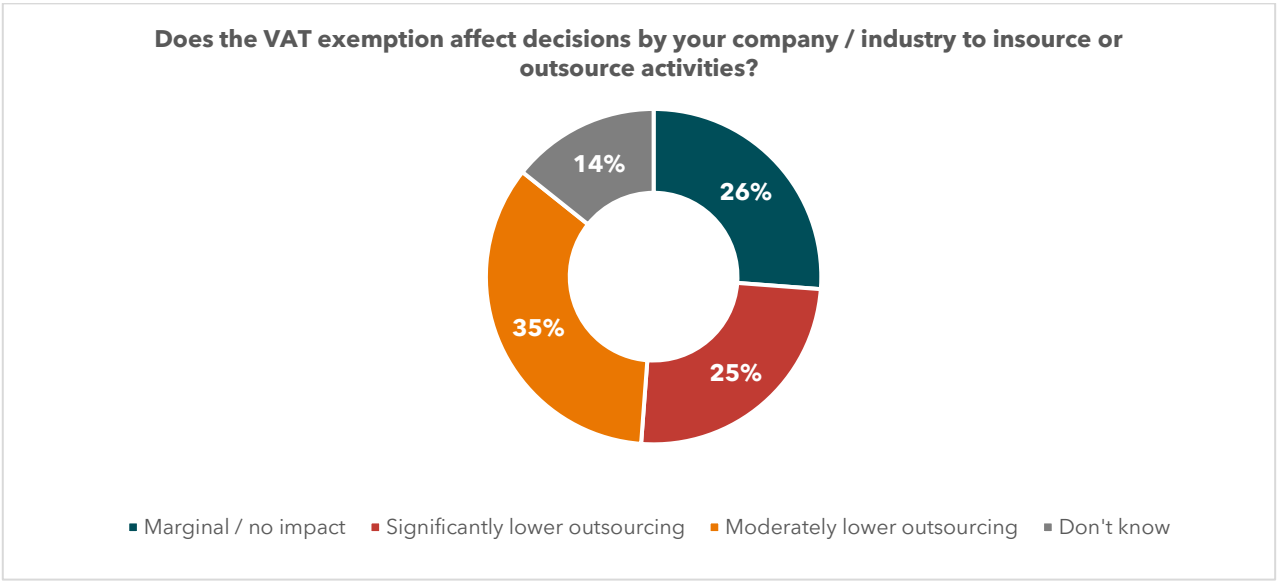
For each tax, respondents were asked to assess the severity of any implementation problems along four dimensions: major problems, minor problems, negligible or no problems, and don't know, covering issues such as legal certainty, administrative costs, enforcement, fraud, and non-compliance. Those identifying a

tax as creating major problems were further invited to elaborate on their assessment and describe any broader implications. From the qualitative findings, compliance with sectoral taxes was generally viewed as involving lower administrative costs, although some stakeholders noted that specific taxes, particularly insurance premium taxes and certain financial sector levies, can still generate material compliance burdens. A number of respondents indicated that sectoral taxes are often more straightforward to administer because the rules are clearer and the tax base easier to determine. The analysis of these replies is further elaborated in Volume 1.

➢ *Overall views on the current tax regime for financial services*

Respondents were asked whether the VAT exemption affects decisions to insource or outsource activities. As shown in Figure 26 below, the majority of respondents indicated that the exemption reduces outsourcing to some degree, with moderately lower outsourcing the most common response (29 of 84), followed by significantly lower outsourcing (21). A quarter of respondents reported marginal or no impact, and 12 did not know. Business federation respondents were the most concentrated in the lower outsourcing categories, while companies were more evenly distributed and experts recorded the highest rate of uncertainty.

Figure 26: Impact of the VAT exemption on outsourcing decisions

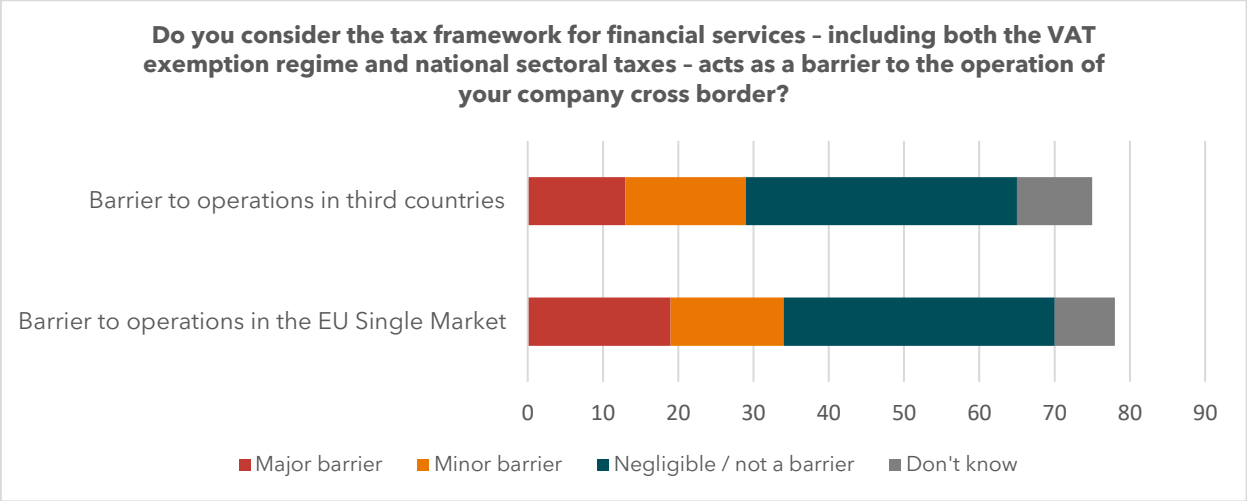


Note: Number of respondents: 84

The impact on outsourcing was felt most strongly among Swedish respondents, of whom most reported significantly lower outsourcing, while Italian and French respondents were more likely to report marginal or no impact. Within business federation respondents, banking associations leaned most consistently towards lower outsourcing, while insurance associations were more divided and asset management associations were predominantly in the moderately lower category.

The questionnaire further explored whether the tax framework as a whole acts as a barrier to cross-border operations, distinguishing between the EU Single Market and third countries. As shown in Figure 27 below, around half of respondents considered it a negligible or no barrier on both dimensions. That said, a notable minority (roughly one in four) considered it a major barrier to Single Market operations, a somewhat higher share than for third countries.

Figure 27: Tax framework as a barrier to cross-border operations

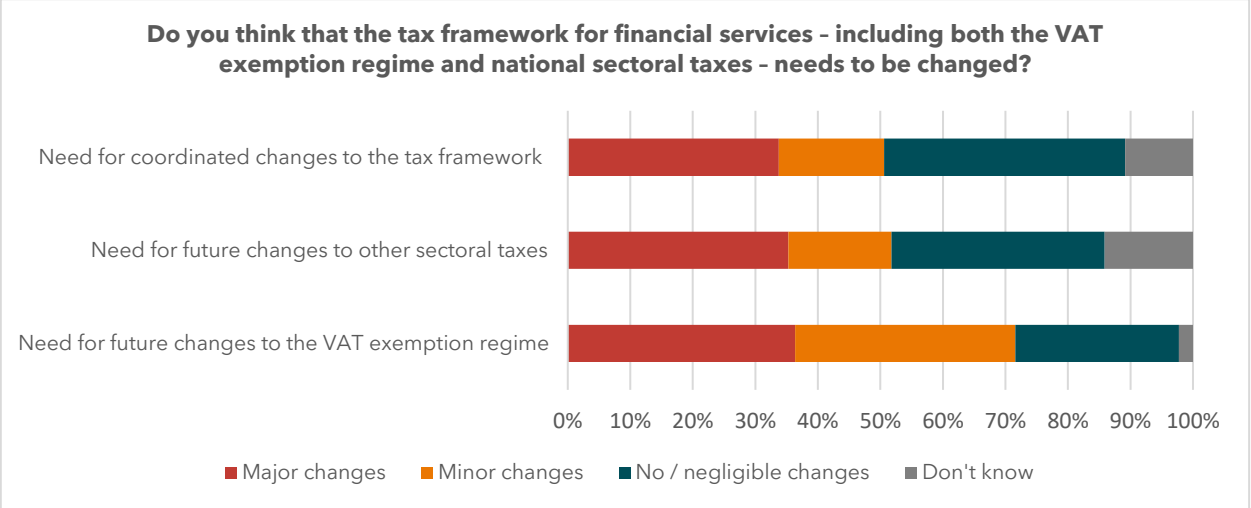


Note: Number of respondents: 78 for barrier to operations in the EU Single Market; 75 for barrier to operations in third countries.

Greek respondents stood out as the most likely to consider the tax framework a major barrier to Single Market operations, while Belgian respondents were at the other end of the spectrum, with most viewing it as negligible. Among business federation respondents, banking associations recorded the highest proportion of major barrier responses, while asset management associations were the most likely to consider the framework negligible.

Finally, respondents were asked to assess the need for future changes across three dimensions: the VAT exemption, other sectoral taxes, and the need for coordinated changes (Figure 28). Views were broadly distributed in each case, with no single response category dominating. On the VAT exemption, major and minor changes attracted roughly equal support (circa 30 respondents each) while on other sectoral taxes the call for changes was less pronounced, with higher proportions of respondents supporting "no / negligible changes" and a higher rate of "don't know" replies. On coordinated changes, no or negligible changes edged ahead of major changes as the most common response.

Figure 28: Overall views on the need for changes to the tax framework



Note: Number of respondents: 88 for need for future changes to the VAT exemption regime; 85 for need for future changes to other sectoral taxes; 83 for need for coordinated changes to the tax framework.

Experts were the most supportive of major changes to the VAT exemption, with half selecting that option, and within business federations the response reflected sector-specific interests: banking associations were the most consistently in favour of change across all three dimensions (8 of 14 calling for major changes to the VAT exemption), insurance associations were more resistant on sectoral taxes, and asset management associations were largely in the no or negligible changes category (5 of 8). Geographically, German respondents were the most vocal on the need for reform, with 12 of 18 calling for major changes to the VAT exemption regime, while Greek and Maltese respondents were more cautious, leaning predominantly towards minor or no change.

The qualitative input was consistent with the findings of the closed ended questions, suggesting that the current tax framework influences business decisions and operational structures in the financial sector, although the extent of the impact varies. Many respondents indicated that the VAT exemption can discourage outsourcing, particularly for support functions, IT services, payment processing, claims handling and other purchased services, because irrecoverable VAT increases the cost of external provision relative to in-house delivery. Several stakeholders highlighted that these effects are particularly relevant in cross-border operating models and may influence group structures, centralisation decisions and the organisation of shared services.

Views on the extent to which the tax framework acts as a barrier to cross-border operations were mixed. While some respondents considered the overall framework manageable, some pointed to legal uncertainty, divergent national interpretations, differences in VAT grouping rules, and the implications of the Skandia and Danske Bank case law as sources of complexity and additional costs within the Single Market. In some cases, stakeholders also identified national sectoral taxes, particularly bank levies and insurance premium taxes, as creating competitive distortions and barriers to cross-border activity.

Regarding future reforms, most respondents supported at least some changes to the current framework. The most common suggestions were to modernise and clarify the scope of the VAT exemption, improve legal certainty and harmonisation across Member States, address issues relating to VAT grouping and cross-border transactions, and review the interaction between the VAT exemption and national sectoral taxes. While views differed on the extent of reform required, there was broad support for measures that would reduce complexity, improve neutrality and facilitate the operation of financial institutions within the Single Market.

1.3.2 Policy considerations

The questionnaire presented private sector respondents with the same policy considerations as tax authorities, covering targeted refinements to the existing VAT exemption regime and more significant structural reform scenarios.

- ***Target refinements to the VAT exemption regime***

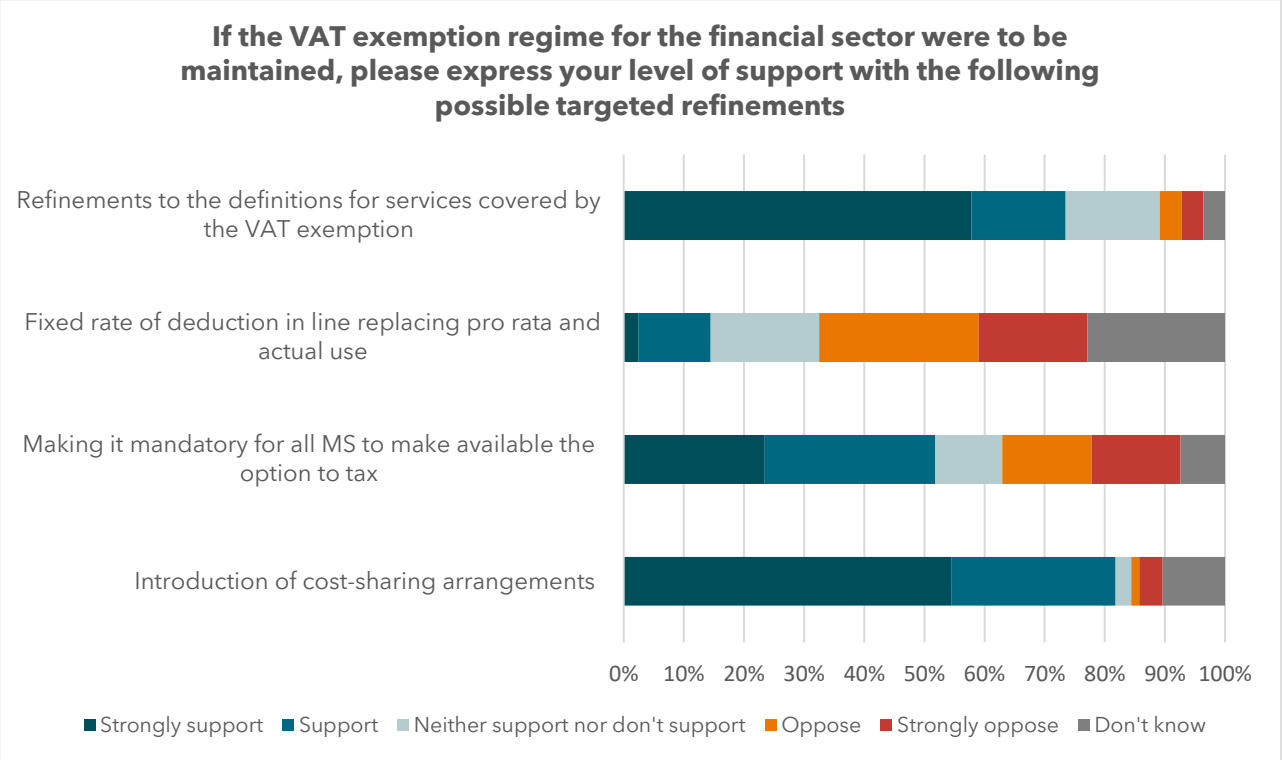
Private sector respondents were first asked to assess the same four targeted refinements put to tax authorities.

As shown in Figure 29 below, refinements to the definitions of services covered by the VAT exemption and the introduction of cost-sharing arrangements stand clearly apart from the other two policy considerations, each commanding strong support. Refinements to the definitions recorded the highest number of strong support responses of any option, with almost 48 of 83 respondents strongly supporting the measure, while the combined support was chosen by 61 respondents, with opposition limited to just 6 respondents and virtually no uncertainty, as only 3 did not know. Cost-sharing arrangements followed a similar pattern, with over half of respondents strongly supporting (42 of 77) and 21 in support. Opposition was again negligible, with only 4 respondents opposing or strongly opposing across both categories.

The picture differs for the remaining two policy considerations. Making the option to tax mandatory for all Member States attracted moderate support overall, with just over half of respondents (42 of 81) combining strong support and support, but the distribution was more diverse than the first two policy considerations, with almost a third (24 respondents) opposing or strongly opposing and 9 neutral. It is the consideration that generated the most heterogenous responses.

Replacing the pro rata and actual use methodology with a fixed rate of deduction was the most contentious proposal and the only one where the balance of opinion tipped negative. Almost half of respondents opposed or strongly opposed the measure (37 of 83), the largest share of negative responses of any option in this section. Only 12 respondents expressed any form of support, 19 registered no opinion, the highest "don't know" rate of any option, suggesting that resistance is compounded by genuine uncertainty about the practical implications of altering the existing recovery methodology.

Figure 29: Support for Targeted Refinements to the VAT Exemption Regime



Note: Number of respondents: 77 for the introduction of cost-sharing arrangements; 81 for making the option to tax mandatory for all Member States; 83 for replacing pro rata and actual use methods with a fixed rate of deduction; 83 for refinements to the definitions of services covered by the VAT exemption.

The strongest consensus across types of respondents concerned refinements to the definitions and cost-sharing arrangements. Companies were particularly supportive of the former, with 17 of 22 strongly supporting and no opposition recorded, while business federation respondents were the most enthusiastic on the latter, with 28 of 45 strongly supporting. Both measures attracted broadly positive responses from experts as well, although a small minority of business federation respondents opposed the refinement of the definitions.

Making the option to tax mandatory was the most contested refinement and the point of greatest divergence between groups. Business federation respondents were moderately positive on balance, but companies were almost evenly split across all five positions. The views of experts also varied, with 5 respondents expressing support and 5 expressing opposition. .

The fixed deduction rate was the only refinement where opinion tipped clearly negative across all three groups. Business federation respondents were the most critical, with almost half (25 of 51) opposing or strongly opposing, and a further 15 answered "don't know", the highest rate of any sub-group across all policy considerations. Companies and experts leaned similarly negative, though with less intensity.

The **qualitative input** shows support for targeted reforms aimed at improving the functioning of the current VAT exemption regime rather than fundamentally altering its structure. The strongest support was observed for measures to modernise and clarify the definitions of exempt financial services. Respondents frequently highlighted that existing definitions have not kept pace with developments in financial markets, digitalisation, outsourcing arrangements and new business models. Particular emphasis was placed on the need for greater clarity regarding payment services, custody and securities administration services, intermediary and insurance-related services, fintech activities and outsourced functions closely linked to exempt financial services.

Many stakeholders also supported the introduction or reintroduction of cost-sharing arrangements, particularly where these could facilitate cross-border cooperation and reduce irrecoverable VAT on internal support services. Several respondents nevertheless indicated that broader solutions, such as cross-border VAT grouping, may provide more effective relief from hidden VAT and better support cross-border business models.

Compared to the mixed feedback in the closed-ended questions, the qualitative input on making the option to tax available in all Member States was relatively positive, showing those with detailed knowledge of the provision were more favourable. Many respondents considered that a more harmonised approach could improve VAT neutrality, reduce irrecoverable VAT in business-to-business transactions and address some of the distortions arising from the current patchwork of national rules. That said, some stakeholders expressed concerns and stressed the potential risks of in consistent implementation across Member States and the potential administrative costs of differing VAT treatment between different types of transactions and customers.

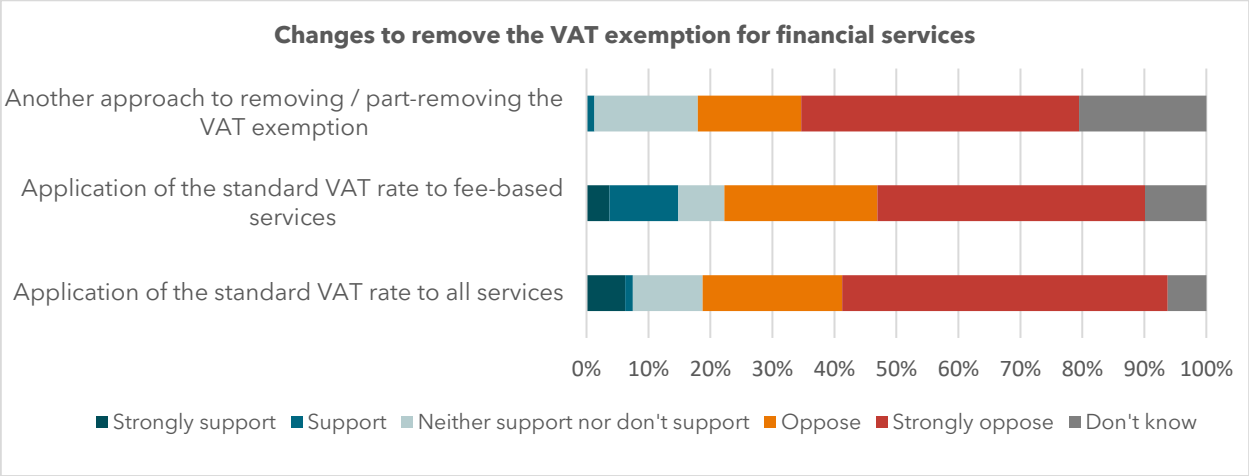
By contrast, proposals to replace existing deduction methods with a mandatory fixed rate of deduction received limited support. Many respondents argued that fixed rates would not adequately reflect the diversity of business models across the financial sector and could create distortions between operators. While some stakeholders considered that an optional fixed-rate regime could serve as a useful simplification measure or safe harbour, there was little support for a mandatory approach. Overall, respondents favoured targeted reforms that would improve legal certainty, reduce fragmentation between Member States and address sources of irrecoverable VAT while preserving the basic structure of the existing exemption regime.

➢ *Significant structural changes to the tax framework for the financial sector*

The questionnaire then addressed the more significant structural reform scenarios. Overall, unlike the targeted refinements, where most policy considerations attracted net positive responses, the structural reform scenarios produced opposition as the dominant response across almost all policy considerations. Support was limited for most scenarios, with the harmonisation-focused policy considerations recording the highest positive responses out of all proposed measures.

Respondents were first asked about scenarios involving the removal or part-removal of the VAT exemption. All three policy considerations recorded high rejection rates. Full application of the standard VAT rate to all financial services saw three quarters of respondents in opposition (60 of 80), over half of whom did so strongly. Application to fee-based services only had comparable results (55 of 81) in combined opposition, though 12 respondents expressed some form of support. Another approach to partly removing the exemption attracted 48 respondents in combined opposition alongside 16 "don't know".

Figure 30: Support for Changes to Remove the VAT Exemption for Financial Services



Note: Number of respondents: 80 for the application of the standard VAT rate to all financial services; 81 for the application of the standard VAT rate to fee-based services only; 78 for another approach to removing or part-removing the VAT exemption.

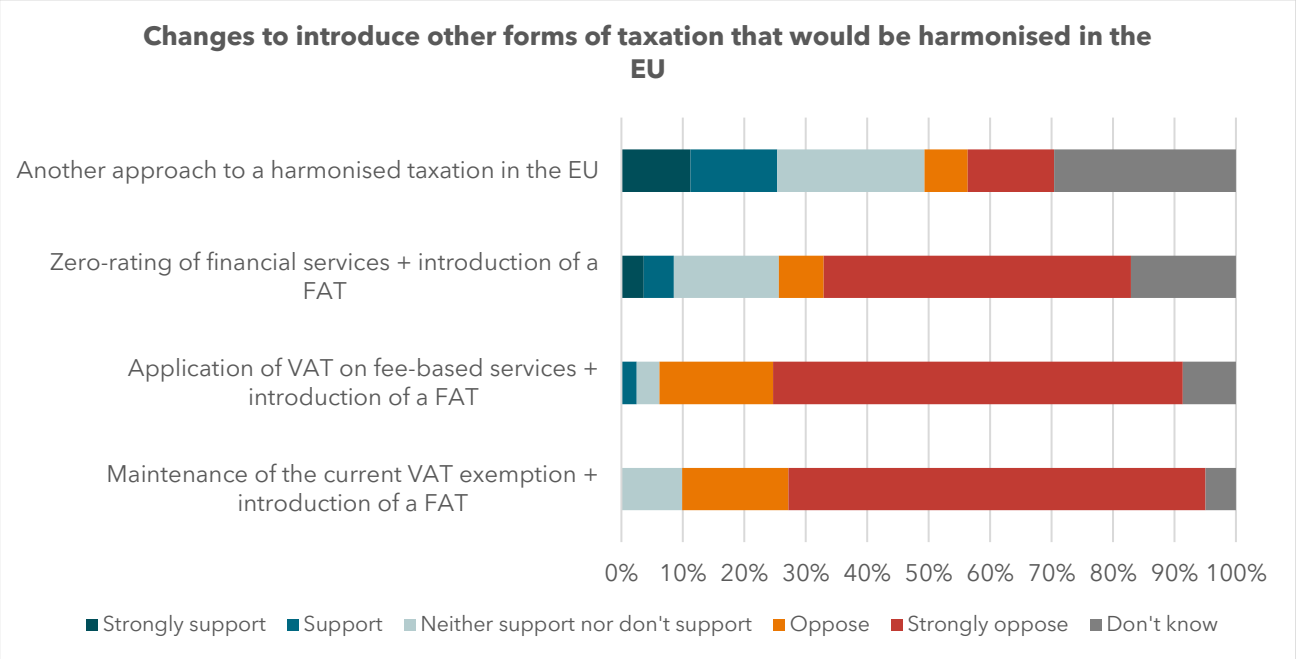
Companies and business federations respondents were closely aligned in their rejection across all three policy considerations. Policy considerations, with business federations respondents in several cases recording higher rates of strong opposition: on the full application of the standard VAT rate, 29 of 48 of business federations strongly opposed compared to 11 of 22 of companies. Experts recorded more varied responses and showed greater support for structural change than the other two groups.

The qualitative support was consistent with these views, showing limited support for reforms that would remove, wholly or partially, the VAT exemption for financial services. The application of the standard VAT rate to all financial services received particularly strong opposition. Respondents frequently argued that such an approach would increase the cost of financial services for consumers and businesses, especially for customers without full VAT recovery rights. Similar concerns were raised regarding proposals to apply VAT only to fee-based financial services. Stakeholders highlighted practical difficulties in distinguishing between fees, margins and interest-based remuneration, as well as concerns regarding legal complexity, compliance costs and the risk of inconsistent application across different financial products.

In the second group of policy considerations, respondents were asked to consider the introduction of new forms of taxation to be harmonised at EU level, in some cases alongside changes to the existing VAT treatment (Figure 31). Responses across this group were overall negative, with rejection rates representing the highest across all proposed policy considerations.

Out of the five policy considerations under this group, all three FAT- scenarios recorded major opposition. Both the maintenance of the current VAT exemption paired with a FAT and the application of VAT on fee-based services combined with a FAT on net interest margin saw the vast majority of respondents opposing or strongly opposing (69 of 81), with neither option attracting a single strongly supportive response. Zero-rating of financial services combined with a FAT followed a similar pattern, 47 in combined opposition and 14 who don't know. Another approach to a harmonised EU taxation framework was the exception and the only structural option overall where combined support exceeded combined opposition, 18 of 71 against 15, with over half of respondents either neutral or uncertain.

Figure 31: Support for Changes to Introduce Other Forms of Harmonised Taxation in the EU



Note: Number of respondents: 81 for the maintenance of the current VAT exemption combined with the introduction of a FAT; 81 for the application of VAT on fee-based services combined with the introduction of a FAT on net interest margin; 82 for the zero-rating of financial services combined with the introduction of a FAT; 71 for another approach to a harmonised taxation framework in the EU.

The FAT- scenarios illustrate the divergence between respondent types: 18 of 22 of companies strongly opposed the maintenance of the exemption paired with a FAT, while 33 of 50 of business federations respondents did the same. Experts were again the most open, recording more varied responses across all four policy considerations in this group. Geographically, opposition to the FAT- scenarios was near-universal across all national groups.

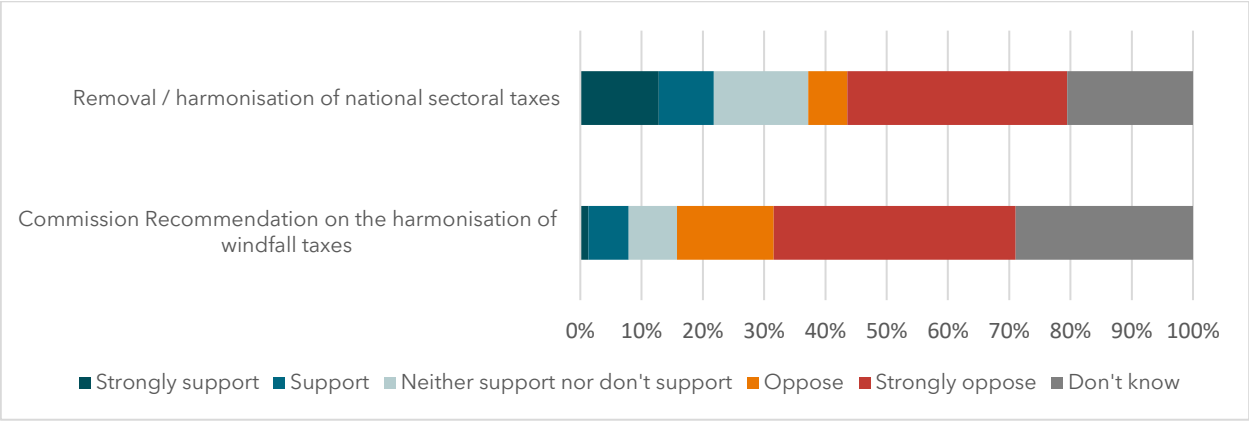
Finally, the remaining two final policy considerations, received mostly negative feedback. On the removal or harmonisation of national sectoral taxes, combined support was low (17 out of 78), while combined opposition was considerably higher (33 out of 78). The remaining respondents were either neutral or answered "don't know."

By respondent type, companies were notably divided, with 4 of 21 strongly supporting but also 7 strongly opposing. Business federations respondents leaned more negative overall, with 19 of 47 strongly opposing against 5 strongly supporting. Experts showed the most balanced view, with 3 of 10 supporting or strongly supporting and no respondent opposing the measure.

The option relating to the Commission Recommendation on the harmonisation of windfall taxes the highest absolute number of "don't know" responses of any option across both questions, with 22 respondents unable to form a position. Among those who did express a view, opposition outweighed support, with 42

opposing or strongly opposing against 6 in combined support. The pattern across respondent types broadly mirrored that of the national sectoral taxes option, with business federations respondents the most opposed and experts the most supportive, with no respondent in that category indicating opposition to the measure.

Figure 32: Support for the harmonisation of windfall taxes or for the removal/harmonisation of national sectoral taxes



Note: Number of respondents: 78 for the removal or harmonisation of national sectoral taxes; 76 for the Commission Recommendation on the harmonisation of windfall taxes.

The qualitative input was mixed regarding proposals aimed at increasing harmonisation of taxation at EU level. Compared to reforms that would remove the VAT exemption, stakeholders were generally more receptive to measures that would reduce fragmentation and promote a more consistent tax framework across Member States. In particular, respondents supported greater harmonisation or removal of national sectoral taxes, especially where these taxes were perceived as increasing compliance costs or contributing to an uneven playing field within the Single Market.

Support for broader forms of harmonised taxation, including EU-level approaches involving a Financial Activities Tax, was more conditional. While some stakeholders viewed harmonisation as a means of reducing fragmentation and improving neutrality, support was often linked to the simultaneous removal of existing national sectoral taxes, the likelihood of which was generally viewed with scepticism. Other respondents expressed concerns regarding feasibility, implementation complexity and the potential for additional tax burdens. Similarly, views on the use of a Commission Recommendation to encourage harmonisation of windfall taxes were mixed, with several stakeholders questioning the effectiveness of a non-binding instrument and emphasising the need for further analysis before pursuing such measures.

More generally, respondents tended to support harmonisation measures where these would simplify the tax framework, reduce fragmentation and improve legal certainty. However, there was limited appetite for introducing entirely new forms of taxation unless accompanied by corresponding reductions in existing sectoral taxes and clear evidence that such reforms would improve the functioning of the Single Market and the competitiveness of the financial sector, and that required coordination between EU and national levels would occur.

2. Analytical methods

This annex presents the technical information on the methodology followed, for the assessment of the potential policy considerations. In particular, it covers:

- The tax incidence: pass through and elasticity
- The partial equilibrium model
- Methodology for the macro-econometric analysis

2.1 Tax incidence: pass-through and elasticity

The **'incidence' of taxation refers to who actually bears the burden of a tax**. This concept is distinct from who physically remits tax revenue to the tax authority and depends primarily on the interplay between elasticities of demand and supply, profit margins and market structures. For the study, tax incidence and 'pass-through' (a determinant of tax incidence required as Tasks 2b and 2c of the study, defined as the extent to which any cost changes are passed onwards to customers, as opposed to being absorbed by producers, are key parameters needed to estimate the impact of the taxes currently in place and the likely impacts of potential future changes. This section lays out the approach used for calculating these parameters, and presents the results obtained. The parameters will then be put to use for the models foreseen for the next stage of the analysis.

By way of background, according to **economic theory**, the extent to which companies pass the tax burden on to consumers depends on their profit margins and the price elasticities of demand and supply. In perfectly competitive markets, market forces compel companies, in the long run, to pass the entire burden on to consumers. In market with higher margins, companies have some pricing power, and may end up absorbing some of the tax burden in their margins. Demand elasticity also plays a role, when demand is highly elastic, producers (financial institutions in this case) are less likely to pass a large share of the tax burden on to customers, since the resultant price increases would lead to a substantial loss of business and profits. In other words, the 'pass-through' of the tax to customers is very limited. Conversely, in price-insensitive (i.e. inelastic) markets, providers are more likely to use their pricing power to shift the tax burden onto consumers, resulting in a relatively high pass-through.

Time dynamics also play a role. Pass-through for direct taxes may be limited in the short term due to contractual lock-ins or other factors preventing sudden price increases on specific services, but may increase over time as contracts are renegotiated and pricing structures adjusted. The nature of a tax, in terms of whether it applies to e.g., profits, balance sheets, or transactions, also may affect its incidence. Taxes that are easier to associate with specific services, such as transaction taxes like VAT, may be more readily passed on to clients. By contrast, direct taxes such as corporate income tax or payroll-related charges are levied on profits, income, or labour costs, so their incidence is less mechanically linked to the final consumer price and may instead be absorbed through lower margins, wages, investment returns, or employment adjustments.

The empirical literature on the pass through of taxes in the financial sector is relatively scarce, which is due in part to issues of measurement around the volume and unit price of services provided. Of the three main categories of financial services defined for the study (banking, insurance and other financial services), **banking services show the most developed empirical literature** on the pass-through of taxation. This literature, unsurprisingly, finds that banks shift large proportions of the burdens of corporate income taxes' (CIT) and other levies to customers. For example, Demirgüç-

Kunt and Huizinga (1999)[4] and Albertazzi and Gambacorta (2010)[5] document that banks pass on a significant share their CIT burden, especially in less competitive environments where customers face high switching costs (see Table 2).

National experiences with sectoral taxes reinforce the finding of significant but incomplete pass-through. For example, the introduction of a bank levy in Hungary in 2010 resulted in higher interest rates on loans, as shown by Capelle-Blancard and Havrylchyk (2017)[6]. Poland's 2016 bank tax produced limited evidence of increased loan rates but a clear rise in non-interest charges and mortgage spreads (i.e., the difference between official central bank rates and rates for consumer mortgages), according to Karpowicz et al. (2024)[7].

Evidence from broader cross-country analyses is more mixed. While Chiorazzo and Milani[8] (2011), using bank-level data for certain European countries for the period 1990–2005, found that 50% of banking taxes are passed on in the short run, rising to 80% over time, Capelle-Blancard and Havrylchyk (2013)[9] observed no consistent tax pass-through using EU-wide data. This is possibly due to variation in tax structures, market conditions, and product complexity. The diversity of findings suggests that while pass-through mechanisms exist, they are context-dependent and sensitive to specificities of competition, regulation, and product transparency.

For its part, academic literature on tax incidence in insurance and other financial services (particularly investment and asset management) is scarce and does not provide numerical estimates of pass-through coefficients that would be beneficial for this study. Among the likely reasons are the difficulty of price measurement, few tax events, heterogeneity of these services and the diversity of institutions that provide them.

Table 2. Summary of relevant pass-through estimates

Citation	Scope	Data	Method	Results – pass-through
Demirgüç-Kunt, A., & Huizinga, H. (1999)	Corporate income tax pass-through in banking	80 countries, 1988–1995	Panel regression on bank-level data	Up to 90% of CIT burden passed to customers; higher in less competitive markets
Albertazzi, U., & Gambacorta, L. (2010)	CIT pass-through in banks	Banks from major industrialized countries, 1991–2004	Bank-level panel regressions	Large share of CIT burden passed on; stronger in less competitive markets
Capelle-Blancard, G., &	Effect of Hungarian bank levy	Hungary, post-2010	Event study and	HUF mortgages: +1.08 pp, FX mortgages: +0.57 pp, new loans & corporate loans: little effect.

[4] Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: Some international evidence. World Bank Economic Review, 13(2), 379–408. https://doi.org/10.1093/wber/13.2.379

[5] Albertazzi, U., & Gambacorta, L. (2010). Bank profitability and taxation. Journal of Banking & Finance, 34(11), 2801–2810. https://doi.org/10.1016/j.jbankfin.2010.06.003

[6] Capelle-Blancard, G., & Havrylchyk, O. (2017). The impact of the Polish and Hungarian bank taxes on banks and the real economy. International Economics, 149, 53–70. https://doi.org/10.1016/j.inteco.2016.10.001

[7] Karpowicz, A., Czerniak, A., Dany-Knieriem, J., & Vereecke, R. (2024). Bank taxes and lending behaviour: Evidence from the Polish bank levy. IMF Working Paper WP/24/143.

[8] Chiorazzo, V., & Milani, C. (2011). The impact of taxation on bank profits: Evidence from EU banks. Journal of Banking & Finance, 35(12), 3202–3212. https://doi.org/10.1016/j.jbankfin.2011.05.012

[9] Capelle-Blancard, G., & Havrylchyk, O. (2013). The incidence of bank regulations and taxes. CEPII Working Paper No. 2013-21.

Citation	Scope	Data	Method	Results – pass-through
Havrylchyk, O. (2017)			regression analysis	
Karpowicz, I., et al. (2024)	Effect of Polish bank tax	Poland, post-2016	Empirical analysis of bank pricing	Non-interest charges increased by ~15%; mortgage spreads up by ~0.2–0.3 percentage points
Chiorazzo, V., & Milani, C. (2011)	Banking taxes pass-through	Bank-level data, 1990–2005	Panel regression	50% in short run, up to 80% over time
Capelle-Blancard, G., & Havrylchyk, O. (2013)	EU banking tax pass-through	EU-wide data	Cross-country empirical analysis	No consistent numerical estimate; effects highly heterogeneous across EU countries

Broader literature on tax pass-through in different contexts provides useful backdrop. For VAT, Benedek et al[10] show that VAT pass-through varies sharply depending on the type of reform, the breadth of the items affected, and the type of goods involved. Standard-rate VAT changes exhibit near-full (≈100%) pass-through, often with anticipation effects and occasional over-shifting, while reduced-rate changes show only partial pass-through (≈30%), and reclassifications of items across VAT categories show essentially zero price response (i.e., 0% pass-through). Pass-through also rises with the breadth of the reform—when a larger share of the consumption basket is affected—though only up to a point, with diminishing returns for very broad reforms. Despite some differences in the estimates of the pass-through for tax hikes and cuts, the authors do not find statistically significant evidence for that asymmetrical pass-through rate stemming from downward nominal rigidities. Finally, there is meaningful heterogeneity across goods: durable goods tend to show higher and faster pass-through than nondurables.

The empirical literature for EU markets consistently finds that most corporate income tax (CIT) burdens are absorbed by companies rather than being shifted to consumers through higher prices. In competitive EU product markets – particularly retail, manufacturing, and tradable-goods sectors– firms face strong cross-border pressures that limit their ability to raise output prices following tax increases. Evidence from firm- and sector-level studies such as Benedek et al. (2016)[11], Devereux, Liu and Loretz (2014)[12], and Onji and Naito (2018)[13] shows that, across a wide range of EU industries, CIT rate changes do not systematically translate into higher final consumer prices. These papers collectively highlight that in open or highly competitive sectors, pass-through to prices is typically close to zero because firms adjust profit margins, investment, or other cost components instead of altering consumer prices.

By contrast, empirical work focusing on non-tradable, regulated, or concentrated EU sectors documents substantially higher degrees of CIT pass-through. Studies of highly regulated industries—including utilities, telecommunications, and energy distribution—find that firms facing inelastic demand or fixed pricing rules are more able to incorporate corporate tax changes into tariff

[10] Benedek, D., de Mooij, R. A., Keen, M., & Wingender, P. (2015). Estimating VAT pass-through. IMF Working Paper No. 15/214.

[11] *Ibidem*

[12] Devereux, M. P., Liu, L., & Loretz, S. (2014). The elasticity of corporate taxable income: New evidence from UK tax records. American Economic Journal: Economic Policy, 6(2), 19–53.

[13] Onji, K., & Naito, H. (2018). Who bears the burden of the corporate income tax? A multinational firm perspective. Journal of Public Economics, 160, 10–26.

adjustments. For example, Fuest and Siegloch (2018)[14] show that increases in local business taxes in Germany result in measurable price increases in local service markets, particularly in utilities and construction services. Complementing this, Carbonnier and Redondo (2014)[15] provide evidence from France that corporate surtaxes are passed through to consumer prices in concentrated industries but not in competitive retail markets. Sector-specific EU studies reinforce this pattern[16].

Taken together, this body of evidence supports the conclusion that in the EU, CIT pass-through is low in competitive and tradable sectors but can range from 20–60% in regulated, concentrated, or non-tradable sectors where pricing power is greater. These findings imply that the pass-through of a VAT on financial services, a highly regulated sector with substantial barriers to entry, would likely be non-negligible—given the broad base of services affected and the size of the reform—but incomplete, because financial services behave more like non-durable, non-tradable services. At the same time, since financial markets are not perfectly competitive but also not fully insulated from competitive pressures, the literature suggests that pass-through would likely remain above 50%, consistent with observed patterns in other regulated or semi-regulated service sectors.

2.1.1 Scope of the analysis and functional form of the model

Given the ambiguity and context-dependence of the available evidence on tax pass-through, the study team undertook its own empirical analysis to better understand the incidence of taxation in financial services in the EU. The approach described in this section examines how the prices of financial services respond to changes in both the effective and statutory tax rates.

To measure the impact of the tax burden on prices, it is essential to gather data that reliably captures the variation in a selected price indicator both **over time** and **across Member States**. The former dimension is needed to observe the dynamic effects of tax changes, while the latter is used to control for the influence of other price determinants (i.e. through establishing a control group in the form of fixed-effects panel data econometric specifications).

Ideally, the price proxy should be aligned in scope with the tax base associated with each type of tax under consideration. For example, for taxes affecting banks, the indicator should measure the prices of all services provided by banks, such as interest rates charged on various financial products (mortgages and other personal or corporate loans) as well as fees and commissions. This ensures accuracy even if tax changes lead to shifts in the composition of income sources.

Because of the differing characteristics of the financial subsectors covered, and because harmonised indicators are not available for all of them, we used **different types of price proxies** tailored to banking, insurance, and asset management. In other words, we used different dependent variables from different data sources for each subsector. This implies that a single pooled model (with country × time × sector as the units of observation) is not feasible. Instead, we estimate separate econometric specifications—one for each subsector—whose specific characteristics (time period, granularity, etc.) depend on data availability.

The functional form used regresses period-to-period changes in the price proxy of the corresponding service or sector on changes in the natural logarithm of *(1 + tax rate)*. For models

[14] Fuest, C., & Siegloch, S. (2018). Do higher corporate taxes reduce wages? Micro evidence from Germany. American Economic Review, 108(2), 393–418

[15] Carbonnier, C., & Redondo, A. (2014). How do firms adjust prices to changes in corporate taxes? Evidence from the French corporate surtax. Paris School of Economics Working Paper.

[16] Abrardi, L., & Cambini, C. (2015). Electricity prices and corporate taxation: Evidence from EU energy markets. Energy Economics, 49, 708–721; Holmøy, E., & Strøm, B. (2011). Tax shifting in the Nordic electricity market. Energy Policy, 39, 420–428.; Iozzi, A., & Valletti, T. (2014). Competition and pass-through in regulated industries: The case of European telecoms. Telecommunications Policy, 38(4), 360–374.

using effective tax rates relative to turnover, the estimated parameter γ can be interpreted as a pass-through ratio.

The starting point is the identity:

$$P^{\text{gross}} = P^{\text{net}} \times (1 + t),$$

where t denotes the (effective or statutory) tax rate. Using this notation, the pass-through ratio $\gamma$is defined as:

$$\gamma = \frac{\Delta P^{\text{gross}} / P^{\text{gross}}}{\Delta t/(1+t)}.$$

An equivalent log-difference formulation is:

$$\Delta \ln\ P^{\text{gross}} = \gamma\, \Delta \ln\,(1 + t).$$

For this reason, for each price proxy and type of financial services in question, the empirical model takes the following form:

$$\Delta \ln(P_{ct}) = \gamma \Delta \ln(1 + \tau_{ct}) + \Gamma X_{ct} + \theta_c + \varphi_t + \varepsilon_{ct}$$

where:

- P_{ct} is a proxy of price in country *c* and year *t*.
- τ_{ct} is effective tax rate in country c and year *t*. We test both taxes on production and CIT effective rates.
- γ is a coefficient capturing the dynamic response of turnover to changes in the effective tax rate (combined effect of **pass-through** and change in demand/supply).
- X_{ct} is a vector control variables, such as nominal GDP, interest rates, inflation, or financial market indicators.
- θ_c are country fixed effects, which serve as controls for time-invariant differences across countries and sectors.
- φ_t are year fixed effects, which serve as controls for global or EU-wide macroeconomic shocks.
- ε_{ct} is an error term representing unobserved factors, measurement errors, or random shocks affecting changes in turnover value.

Due to an inability to control for unobserved heterogeneity across countries and time, the baseline approach uses country- and time-fixed effects. Despite this, additional control variables also need to be included to control for country- and time-specific effects other than tax determinants of financial services prices. More, specifically, to control for this we use the consumer price index (to control for economy-wide demand and supply-side price determinants), GDP growth (as a proxy) and central bank interest rates. However, for specifications based on statutory CIT rates, whose temporal variation is strongly synchronised across countries, a model with random time effects is likely more suitable. Time fixed effects would absorb the common timing of CIT reforms, thereby capturing the tax-rate changes themselves and preventing proper identification of their impact.

To ensure a robust empirical analysis, the dataset must include not only a sufficient number of total observations but, crucially, a meaningful number of tax events – that is, periods in which statutory tax rates actually change or new taxes are introduced or withdrawn. Effective tax rates may fluctuate over time for reasons unrelated to statutory reforms, such as changes in the composition of output,

profitability, or other economic factors. However, identifying pass-through requires observing genuine statutory tax changes, rather than movements that simply reflect noise in the constructed indicators.

To assess whether small fluctuations—rather than substantive tax events—drive the estimated coefficients, we run two sets of regressions in parallel. The first estimates the parameter γ using the full variation in effective tax rates. The second uses alternative specifications that include an interaction variable and focus exclusively on changes exceeding a defined threshold, thereby capturing only periods that qualify as tax events.

To test robustness and analyse the dynamic effects of changes in the tax burden, we included lead and lag terms for changes in the relevant tax rates. However, due to the limited number of tax events, a full-fledged analysis of the dynamic adjustment path following tax changes was not feasible.

2.1.2 Measurement of prices

To provide accurate proxies of prices for the measurement of pass-through, the team gathered six different variables, summarised in Table 3. Four of these relate to the banking sector: interest rates on new mortgages, consumer loans, and corporate loans (sourced from the ECB), as well as fees paid to the banking sector. For the insurance sector, we used the harmonised consumer price index (HICP), and for asset management we relied on fund fees reported by ESMA.

For banking services and asset management, the team decided to depart from Eurostat's HICP. Unlike markets for goods, the quantity or volume of banking and auxiliary services cannot be directly observed. Measuring the prices of financial services is inherently difficult because many financial products do not have a single, observable "price." Instead, the cost of a service is often embedded in interest margins, fees, commissions, or risk premia, which vary across products, institutions, and customer types. Moreover, financial services frequently involve bundled offerings, where several services are provided together, making it difficult to isolate the price of each component. Differences in contract terms, risk profiles, and market structures across countries further complicate comparability. Finally, data on fees and margins are often not harmonised across Member States, and some elements—such as cross-subsidization—cannot be directly observed. These characteristics make it challenging to construct a single, consistent price indicator for the sector; therefore, the team decided to analyse different price components separately.

Of the price proxies gathered, the EBA-reported data on banking fees covered only three annual periods and did not include all EU Member States, allowing the effects of VAT changes to be observed in just two periods. The number of countries and the time span covered by fund-fee data were also relatively limited, creating additional challenges for impact measurement. Due to the small number of observations, the equations regressing bank fees were discarded.

Table 3. Price proxies and indexes gathered for the analysis

Variable	Source	CPA/NACE	Comment
Interest rate on loans house purchase (new business)	ECB	64	503 observations*, interest income accounts for approximately 58% of banking sector's turnover**
Interest rate on consumption loans (new business)	ECB	64	490 observations*, interest income accounts for approximately 58% of banking sector's turnover**

Interest rate on loans for corporations (new business)	ECB	64	498 observations*, interest income accounts for approximately 58% of banking sector's turnover**
Banks fees	EBA	64	Only three years (61 observations*), meaning two year-over-year changes available, **fees and commissions account for approximately 27% of banking sector's turnover
HICP for insurance	Eurostat	65	671 observations*, vast majority of sector's turnover covered
Fund fees for UCITS	ESMA	66	130 observations*, vast majority of sector's turnover covered

*Note: * - non-missing values in the 2000-2023 period reflecting both coverage across time and Member States.** EBA 2024*

2.1.3 Core independent variable – tax rates

To measure the impact of the tax burden on prices, we examine three types of tax instruments separately: **taxes on products**, **corporate income tax (CIT)**, and **other (non-CIT) taxes on production**. Since complete revenue data by instrument, sector of economic activity and period are not available for all Member States, such information cannot be used to calculate effective tax rates directly for more disaggregated tax categories (such as bank levies or insurance premium taxes).

Information on taxes on products attributed to CPA 64, 65 and 66 is obtained from Eurostat's national accounts and divided by the output of the corresponding groups of services. This category captures VAT (including non-deductible VAT) and insurance premium taxes. Because CIT revenue by sector of economic activity is not available, we impute its value by multiplying a proxy for companies' taxable profit—gross operating surplus (GOS)—by the statutory CIT rate. Unfortunately, particularly in periods strongly affected by corporate losses or immediately thereafter, GOS may diverge substantially from the actual taxable base. For this reason, we also test models using simple statutory rates in addition to the effective rates derived from the GOS proxy, which are likely to be inaccurate in such periods.

Finally, we calculate the effective burden of other taxes on production, which captures direct surcharges directly attributed to NACE 64, 65 and 66 (see Table 4).

Table 4. Independent variables – price proxies

Variable	Source	CPA/NACE	Comment
Effective rates on taxes on products	Eurostat	Calculated per groups of products and services (CPA-specific)	
Effective rate on other taxes on production	Eurostat	Calculated per sector of economic activity (NACE-specific)	
CIT statutory rate	TEDB	The same rate for all sectors and group of products and services	

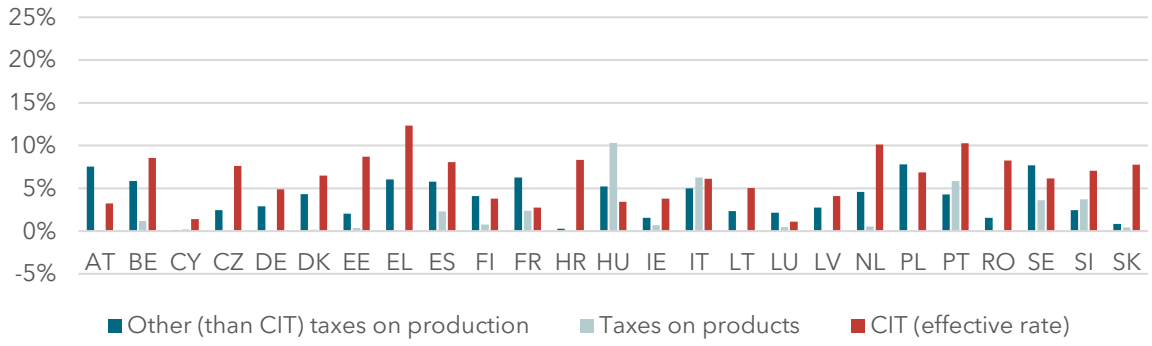
CIT effective rate	Own elaboration based on TEDB and Eurostat	Calculated per sector of economic activity (NACE-specific)	Calculated using gross operating surplus as a proxy of tax base

Overall, we have more than 1,000 observations for each type of calculated effective tax rate. The average effective rate for taxes on products (including VAT, insurance premium taxes, financial transaction levies, etc.) was 3.6% across periods, countries and sectors. The estimated average effective CIT rate was approximately 5.2%, while other taxes on production (including certain income-related taxes and welfare contributions classified as production taxes) averaged 1.9%.

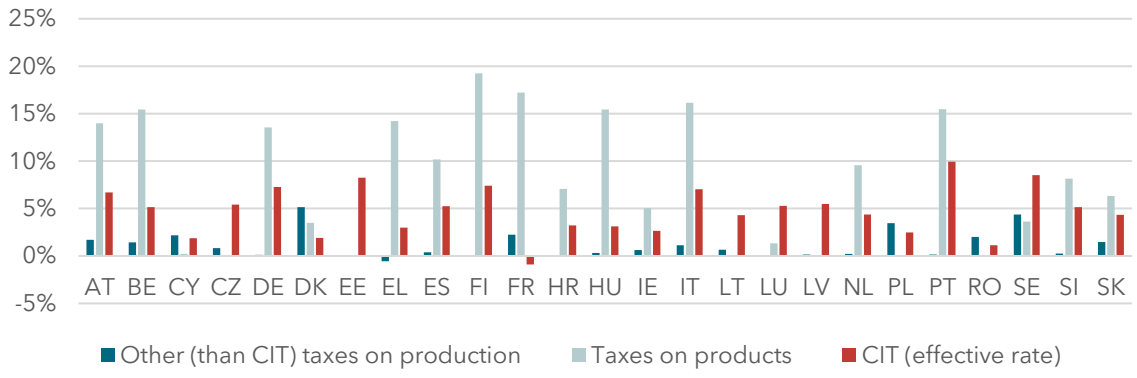
However, the relative importance and variability of these tax categories vary substantially across subsectors and subgroups of services. In the banking sector and services, taxes on products play a comparatively minor role but their levels differ significantly in time and across Member States. In the insurance sector, taxes on products, compared to other instruments, constitute the largest component of the tax burden on average but the variability of this burden across time was relatively small. In asset management, both taxes on products and other taxes on production represent relatively small burdens overall, although cross-country variation in these rates is comparatively high (see Figure 33).

Figure 33. Variation of effective rates by Member State and group of tax instruments (2021)

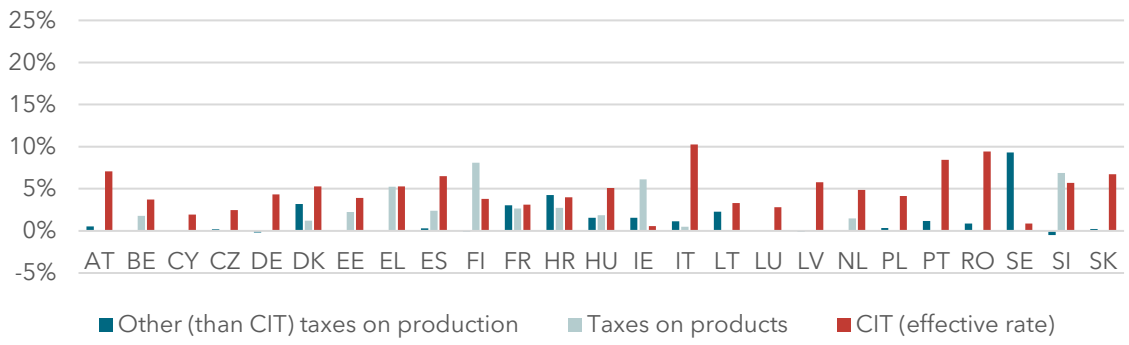
(a) Banking services/subsector



(b) Insurance services/subsector



(c) Auxiliary financial services/subsector



Source: Authors' own elaboration based on Eurostat.
Note: 2021 was selected as the reference year, as it is the most up-to-date year for which the necessary data are available for the vast majority of Member States.

2.1.4 Results

In total, five different price proxies were used (three for the banking sector, one for insurance, and one for asset management). For each proxy, changes in four tax-rate measures were tested. Each specification was alternatively estimated using random-effects and fixed-effects models, using interactions with a "large tax event" dummy, and—besides contemporaneous models—also using specifications with leads and lags.

This section presents the retained results grouped by subsector. Altogether, the study team analysed 240 specifications but only 23 of them are reported in Table 5 and Table 6. All models that appeared mis-specified, or in which the estimated tax effects were not robust—due to lack of statistical significance together with unstable coefficients across similar specifications—were discarded.

Overall, two sets of equations produced robust results. First, specifications regressing interest-rate proxies for banking services on effective "taxes on products" rates showed consistent relationships. Second, the impact of the CIT rate on insurance prices appeared robust. The problems with the specifications for the asset-management sector were likely related to the small number of fee observations and the limited variation in taxes on these services.

For insurance, the measurement of the impact of taxes other than CIT was likely unsuccessful due to the relatively small number of tax events, the stickiness of prices, and the fact that insurance pricing is highly dependent on changing risk profiles and does not necessarily follow straightforward dynamic patterns. Although these issues were partly controlled for using fixed effects, by testing leads and lags, and the symmetry of the pass-through, they may still explain the estimation problems.

For banking, regressions of "taxes on products to output" on interest-rate proxies (for the CPA 64 category) yielded statistically significant results across all three interest-rate categories. The national-accounts measurement of taxes on products is not ideal—due to the complexity of accounting for implicit VAT—but appears to capture major tax events. The largest identifiable events include the introduction of the financial transaction levy in Hungary (2013), the financial services tax in Slovenia (2012) and the repeal of the bank tax in Finland in 2015 (for CPA 65, "taxes on products to output" also capture insurance premium taxes).

The impact of taxes is strongest for interest rates on consumption and corporate loans, and less pronounced for mortgages. Models assuming contemporaneous effects (no leads or lags) were overall the best specified based on R-squared values and coefficient significance.

The estimated pass-through (based on all observations) ranged from 12% to 38%. For large tax changes, the estimated effect was higher, between 31% and 83% (see Table 5). The estimated pass-through for taxes on products in banking services remained remarkably stable across specifications, providing a useful robustness check.

For insurance services, the coefficient on the statutory CIT rate is statistically significant in the specifications with random time effects, both when estimated on the full set of statutory changes (Table 6) and when using contemporaneous or lead effects. The magnitude of the coefficient (0.7 in Equation 1) implies an approximate 20% pass-through, using the ratio of mean statutory and effective CIT rates and mean profitability across time and countries. To test the robustness of this result, we also estimated the model using the effective CIT rate instead of the statutory rate (Equation 11), which produced the same conclusion. Importantly, this effect is not observed when fixed effects are used. This might be caused by a relatively high correlation of statutory rate hikes across countries, thus the fixed effects could pick-up some of the effect associated with parallel hikes in tax burden in more than one country.

For all model specifications, we also tested whether pass-through was symmetric by allowing the coefficients on positive and negative changes in tax rates to differ. In no case was the difference statistically significant. However, in many specifications, the coefficient on negative tax-rate changes was not statistically significant, likely reflecting the relatively small number of observations for such changes.

Table 5. Selected specifications for banking services/sector – effective tax rate (to output), taxes on products

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent variable	IR on loans for house purchase	IR on loans for consumption	IR on corporate loans	IR on loans for house purchase	IR on loans for consumption	IR on corporate loans	IR on loans for house purchase	IR on loans for consumption	IR on corporate loans	IR on loans for house purchase	IR on loans for consumption	IR on corporate loans
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N
Country FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Type of event included	large events	large events	large events	all	all	all	large events	large events	large events	large events	large events	large events
Dynamic effect	current	current	current	current	current	current	lead impact	lead impact	lead impact	current	current	current
Effective tax rate (t) x large event dummy	0.309***	0.833***	0.790***							0.288***	0.791***	0.758***
	(0.055)	(0.154)	(0.083)							(0.065)	(0.150)	(0.097)
Effective tax rate (t)				0.125***	0.378***	0.355***						
				(0.037)	(0.101)	(0.059)						
Effective tax rate (t+1) x large event dummy							0.040	0.788***	0.144*			
							(0.052)	(0.166)	(0.075)			
GDP growth	0.003	0.012	-0.006	0.003	0.014	-0.007	-0.018**	0.033	-0.014	0.004	0.011	0.005
	(0.008)	(0.022)	(0.013)	(0.009)	(0.022)	(0.014)	(0.007)	(0.023)	(0.011)	(0.006)	(0.014)	(0.009)
HICP	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.000	0.001***	0.001***	0.001***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Central bank's IR										0.001***	0.001*	0.001*
										(0.000)	(0.001)	(0.001)
Constant	0.003	0.003	-0.009*	0.003	0.002	-0.010*	0.003	0.003	-0.009**	-0.003***	-0.004***	-0.003***
	(0.003)	(0.008)	(0.004)	(0.003)	(0.008)	(0.005)	(0.003)	(0.008)	(0.004)	(0.000)	(0.001)	(0.000)

Observations	233	234	229	233	234	229	224	226	221	233	234	229
R-squared	0.674	0.313	0.659	0.641	0.26	0.575	0.592	0.263	0.588	0.492	0.245	0.484
Number of Geo_Sector	25	24	25	25	24	25	25	24	25	25	24	25

Standard errors in parentheses

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

Note: "Y" stands for "yes", "N" stands for "no"

Table 6. Selected specifications for insurance services/sector – standard CIT rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dependent variable	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)	HICP (insurance services)
Time FE	N	N	N	N	N	Y	Y	Y	Y	Y	N
Country FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Type of event included	all	large events	all	large events	all	all	large events	all	large events	all	all
Dynamic effect	current	current	lead impact	lead impact	lagged impact	current	current	lead impact	lead impact	lagged impact	current
Standard CIT rate (t)	0.700***					0.190					
	(0.157)					(0.125)					
Standard CIT rate (t) x large event dummy		0.271					0.278				
		(0.451)					(0.349)				
Standard CIT rate (t+1)			0.778***					0.249**			
			(0.157)					(0.125)			
Standard CIT rate (t+1) x large event dummy				0.169					0.163		
				(0.452)					(0.349)		
Standard CIT rate (t-1)					0.573***					0.123	
					(0.155)					(0.124)	
Effective CIT rate (t)											0.173**
											(0.075)
GDP growth	-0.189***	-0.200***	-0.215***	-0.229***	-0.186***	-0.196**	-0.190**	-0.227***	-0.224***	-0.199***	-0.059*
	(0.067)	(0.068)	(0.067)	(0.068)	(0.066)	(0.076)	(0.077)	(0.076)	(0.077)	(0.077)	(0.032)
HICP	0.001	0.001	0.001	0.001	0.001	-0.006***	-0.006***	-0.007***	-0.007***	-0.006***	0.004***

	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Cental bank's IR	-0.010***	-0.011***	-0.012***	-0.013***	-0.007***						-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)						(0.001)
Constant	1.531***	1.530***	1.527***	1.527***	1.528***	1.454***	1.452***	1.446***	1.443***	1.463***	1.531***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	(0.002)
Observations	233	234	229	233	234	229	224	226	221	233	324
R-squared	0.674	0.313	0.659	0.641	0.26	0.575	0.592	0.263	0.588	0.492	0.388
Number of Geo_Sector	25	24	25	25	24	25	25	24	25	25	27

Standard errors in parentheses

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

Note: "Y" stands for "yes", "N" stands for "no"

2.1.5 Regressing output rather than prices: robustness check

In addition to verifying robustness by testing alternative specifications—using different price proxies, dynamic structures, combinations of random versus fixed effects, and various tax-burden measures—we also estimate the impact of taxes **on total output rather than on prices**. This provides an additional robustness check, given the uncertainty surrounding whether the available price proxies fully and accurately capture actual prices. Moreover, this empirical approach allows us to estimate the combined effect of tax pass-through and demand elasticity. For this purpose, we rely on annual output data from Eurostat's national accounts.

Similar to the analysis of changes in prices, the effective tax rate included in the econometric equations is calculated as the ratio of actual tax revenue to turnover in the relevant segment. We incorporate both product-specific taxes (linked to CPA product groups) and production-based taxes (linked to NACE sector codes) in single equation, to maximise degrees of freedom in the panel data.[17] In other words, including a range of different types of taxes increases the number of observed tax introductions or rate changes is the objective of this analysis. Based on the same objective, NACE/CPA divisions 64 (Financial services), 65 (Insurance and pension funding), and 66 (Auxiliary financial services) are analysed in a single equation.

To model the impact of changes on (gross) output of the financial subsectors, the model specification takes exactly the same form as for the models regressing prices. More precisely:

$$\Delta \ln(y_{ict}) = \gamma \Delta \ln(1 + \tau_{ict}) + \Gamma X_{ict} + \theta_{ic} + \varphi_t + \varepsilon_{ict}$$

where:

- y_{ict} is annual turnover for financial service category (or subsector[18]) *i* in country *c* and year *t*.
- τ_{ict} is effective tax rate on financial service category i in country c and year t. This includes taxes both on products and on production).
- γ is coefficients capturing the dynamic response of turnover to changes in the effective tax rate (combined effect of pass-through and change in demand/supply).
- X_{ict} is a vector control variables, such as nominal GDP, interest rates, inflation, or financial market indicators.
- θ_{ic} are country and sector fixed effects, which serve as controls for time-invariant differences across countries and sectors.
- φ_t are year fixed effects, which serve as controls for global or EU-wide macroeconomic shocks.

ε_{ict} is an error term representing unobserved factors, measurement errors, or random shocks affecting changes in turnover value.

As discussed in previous subsections, one issue that could make the results hard to interpret is volatility in tax revenue, which can fluctuate due to timing effects or cyclical shifts unrelated to tax policy. To address this, we limit the analysis to periods and cases in which there is a clearly observable increase in the effective tax burden – specifically, instances where the effective tax rate rises by at least 3, 4, or 5 percentage points. The threshold helps isolate meaningful policy shifts from statistical noise. It also helps to isolate the reverse causality – regressivity of income taxes with respect to turnover.[19] The amended equation incorporating the differentiation between negligible and substantive shifts in effective tax rates is as follows:

$$\Delta \ln(y_{ict}) = \gamma \Delta \ln(1 + \tau_{ict}) + dummy_{ict}\gamma' \Delta \ln(1 + \tau_{ict}) + \Gamma X_{ict} + \theta_{ic} + \varphi_t + \varepsilon_{ict}$$

[17] Eurostat, NAIO_10_CP16.

[18] It depends on the tax instruments in question. Taxes on products are levied per unit of a good or service produced or transacted and are therefore linked to specific products or groups of products, whereas other taxes on production are linked to the production activity itself and relate to sectors of economic activity rather than to individual products.

[19] i.e. assuming unchanged profits, an upward shift in turnover decreases the CIT-burden-to-turnover ratio, making it regressive.

where $dummy_{ict}$ takes the value of one if the effective rates increased by more than 3, 4 or 5 percentage points depending on the specification. In this specification the combined effect of larger shifts in effective prices on gross supply equals the sum of two coefficients γ and γ'.

Overall, across the time span and sectors covered (640 observations), we observe seven instances with a year-over-year hike of over 5 percentage points (specification (1), 28 instances with a hike of over 4 pp (specification (2), and 36 instances with a hike of over 3 pp (specification (3); see detailed figures in Table 7. Nearly all of these observations correspond to the introduction of sectoral taxes. The number of observations for changes above 3 and 4 percentage points is sufficient to estimate pass-through. However, the limited number restricts the depth of the analysis in terms of studying dynamic effects or incorporating subsector-specific impacts. This means that we are only able to estimate the average pass-through effect, without differentiating made between NACE/CPA 64, 65 and 66. The number of observations with changes above 5 pp is also too low to allow for more precise estimations of the pass-through coefficient.

To ensure the robustness of the estimated pass-through against endogeneity[20], we avoided interpreting the impact of small shifts resulting from fluctuations in tax base structure and tested three different thresholds for this measurement. Nevertheless, potential issues may also arise from measurement errors. One such issue involves shifts in the reported value of financial services that are not driven by actual market transactions but rather by methodological changes, such as differences in the treatment of Financial Intermediation Services Indirectly Measured (FISIM).[21] To address this, we eliminated outliers, specifically, the top and bottom 5% of shifts, both positive and negative.

After testing a broad range of control variables, three variables in the baseline specification are retained: (i) the real GDP growth rate, (ii) the rate of change of the Harmonised Index of Consumer Prices (HICP), and (iii) the long-term interest rate (measured as the average monthly interest rate on 10-year bonds).[22] However, since none of these variables is statistically significant at the 1% to 10% levels, their meaning as coefficients in the model cannot be interpreted (Table 7).

Table 7. Regression results on combined effects of pass-through and shifts in demand

	(1) 5pp as threshold	(2) 4pp as threshold	(3) 3pp as threshold
HICPyoychange	0.59	0.58	0.54
	(0.66)	(0.66)	(0.66)
GDP	0.18	0.18	0.17
	(0.29)	(0.29)	(0.29)
Longterminterestrateforconv	-0.37	-0.42	-0.43
	(0.78)	(0.78)	(0.78)
d_tax	**-2.07*** **	**-2.07*** **	**-2.33*** **

[20] Endogeneity in an econometric model occurs when an explanatory variable is correlated with the error term, violating the assumption of exogeneity. This can arise due to omitted variables, measurement error, or reverse causality, leading to biased and inconsistent estimates. Small shifts in effective rates are caused to a large extent by fluctuations in the tax base structure (e.g., profitability rate) related to growth in the market rather than the statutory tax rates.

[21] The concept of FISIM is used in the national accounts to estimate the value of financial services provided by banks and other financial intermediaries that are not directly charged for, such as those embedded in interest rate margins.

[22] The inclusion of the market interest rate may introduce endogeneity due to simultaneity. However, the interest rate is not statistically significant in the current specification. An alternative approach of using central bank policy rates—undifferentiated across euro-area Member States—was not pursued due to collinearity with the fixed effects. However, alternative specifications using other interest rate measures as explanatory variables are also being considered and will be presented in the second interim report.

	(0.45)	**(0.45)**	**(0.49)**
significant_change_d_tax	**2.44*** **	**2.41*** **	**2.67*** **
	(0.77)	**(0.76)**	**(0.79)**
Constant	0.03	0.04	0.03
	(0.03)	(0.03)	(0.03)
Observations	606	606	606
R-squared	0.07	0.07	0.07
Number of obs2	77	77	77

Standard errors in parentheses

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

Source: own elaboration. Note: in specification (1) 5pp. shift was used as a threshold, in specification (2) and (3), 4 pp. and 3 pp. changes were used a threshold, respectively.

As reported in Table 7, the estimated impact of significant shifts in effective tax rates on gross turnover ranges (minimally) from 0.34 to 0.37[23], significant at 1%, depending on the threshold used to isolate significant shifts from small changes and statistical noise. This effect is highly significant (in statistical terms) and robust across the three specifications (i.e. versions of the model) tested, despite significant differences in the observed price hikes captured by different specifications. In specification (1) 5pp. shift was used as a threshold, in specification (2) and (3), 4 pp. and 3 pp. changes were used a threshold, respectively.

These estimates imply that a 5-percentage point increase in the effective tax rate on financial services leads to a 1.7–1.9% increase in the gross value of financial services. This increase reflects the interplay between a rise in the purchasers' unit price of services (e.g., interest rates, commissions) and a decrease in the volume of services demanded by consumers due to higher prices. The obtained results are in line with the literature estimating the impact of the change in interest rate on the demand for credit in the EU markets (see e.g., Ferrari and Loseto, 2023[24]).

In summary, the results indicate that the pass-through of taxes is incomplete or that the change in prices in response to a change in the tax burden is largely offset by a shift in demand. Although the effects of pass-through vs elasticity cannot be isolated due to the lack of direct observations on service volumes, the estimated combined effect is in line appears to back up the results obtained econometric modelling of prices.

2.1.6 Conclusion

The measurement of tax pass-through to consumer prices in services is inherently challenging due to the heterogeneity of service types across countries, the limited number of historical tax changes that can be observed, and the difficulties associated with accurately capturing service prices.

Consequently, the empirical literature remains scarce, with virtually no evidence available for insurance and asset-management services and only context-specific findings for banking services. Nonetheless, broader research on the pass-through of different tax instruments offers valuable insights, and the study team's own analysis – drawing on multiple methods, alternative price proxies, and varied approaches to tax-burden measurement – provides an important contribution, even though fully robust estimates could not be obtained for all tax instruments and service categories.

[23] Calculated as the sum of the coefficients for *d_tax* variable and the interaction variable of *significant_change_d_tax* (e.g. -2.07+2.44 = 0.37 in specification (1))

[24] Ferrari, A., & Loseto, M. (2023). Liquidity constraints and demand for maturity: The case of mortgages. ECB Working Paper No. 2859. https://doi.org/10.2866/292047

The combined evidence indicates that pass-through of taxes on products, such as VAT, is likely to be incomplete in the case of a broad and significant reform of non-tradable services; in particular, an increase of more than three percentage points in the effective tax rate would be expected to pass-through to prices in 70-80% of situations. This result is consistent with econometric specifications linking interest rates to effective product tax rates as well as findings in the wider pass-through literature. In contrast, both the existing literature and the study's own estimates suggest that income and production taxes – such as CIT – exhibit substantially lower pass-through, with plausible values ranging from about 20% to at most 50%.

Because the analysis concerns the long-term impact, when pass-through is expected to be higher, the baseline estimates in the economic modelling adopt the consensus assumption of an 80 percent pass-through rate. Under these assumptions, the econometric analysis linking changes in the effective tax burden to the value of traded services implies an elasticity of around –0.5 for an 80 percent pass-through (consistent with the mean pass-through across tax instruments suggested by both the analysis itself and the broader literature).

Given the uncertainty surrounding the assumed tax incidence parameter values and the context-dependent nature of such numerical assumptions, additional parameter sets need to be tested. Therefore, alongside the baseline results, the sensitivity analysis includes low-pass-through variants under higher and lower elasticity assumptions. Under the scenario of moderate pass-through and substantially higher elasticity of -1, compared with all others, the gross value of services provided would remain unchanged (Table 8).

Table 8. Proposed pass-through and elasticity ratios

	Pass-through (taxes on products)	Elasticity	Approximate combined effect (gross value of services provided)*
Core scenario	0.8	-0.5	+0.4
Ratios for sensitivity analysis			
Low pass-through and moderate elasticity	0.6	-0.5	+0.3
Moderate pass-through and low elasticity	0.7	-0.2	+0.56
Moderate pass-through and high elasticity	0.7	-1	0

**Percent increase in price in response to one percentage point increase in effective tax rate.*

2.2 Partial equilibrium model

2.2.1 Introduction

This section discusses the construction of the Partial Equilibrium Model (PEM), designed specifically to estimate the impact of changes in tax systems' parameters in the financial sector on revenue from VAT and other sectoral taxes. The main objective of the proposed tool is to model the tax burden in a detailed manner at different stages of the value chain, while accounting for key economic effects (such as the income and substitution impacts resulting from changes in consumer and producer prices) and accounting for the interdependence between different sectoral taxes. Importantly, the model needs to allow for the simulation of counterfactual changes in the VAT rules and for the imposition and withdrawal of taxes on turnover, value-added and profits.

Partial equilibrium models enable precise modelling of tax rules and the relevant economic effects on specific sectors, without the need to standardise model equations across entire economies and different markets. Their main limitation is that they do not allow the estimation of secondary and multiplier effects of potential interventions. For this reason, the findings from the partial equilibrium model are complemented by those generated by the NEMESIS general equilibrium model.

The PEM is static meaning it captures only cumulative long-term effects rather than short-term adjustments or transitional effects. This omits adjustment lags in pass-through (e.g., firms may not immediately adjust prices after a tax change). Overestimates or underestimates immediate revenue effects and behavioural responses (e.g., demand elasticity may vary in the short vs. long run).

In essence, the constructed partial equilibrium model produces estimates based on two relationships: (i) the relationship between supply and demand, and (ii) the relationship between the price received by the provider and the price paid by the consumer (which differ due to VAT and sectoral taxes imposed). The basic form of the model, describing the baseline scenario, which corresponds to the status quo, was calibrated using Eurostat national information on the tax base (for the reference year 2023) and figures from VAT returns for the NACE 64–66 sectors. In other words, the model parameters use values derived from the VAT analysis, with minor adjustments necessary to ensure internal consistency when combining data from different sources that are not fully consistent with one another.

Compared with the VAT analysis and the VTTL model, which do not take into account the impact of the tax burden on market values (i.e. equilibrium), the model includes additional tax incidence and economic response parameters, which are the price elasticity of demand and the pass-through rate.

Because the partial equilibrium model has no time dimension, the reported impact corresponds to the cumulative impact over time. It is also important to note that, compared with the version of the model used for the 2021 study, which only examined changes to VAT and insurance premium taxes (IPTs), the version developed for this study encompasses additional sectoral taxes imposed on profits and turnover, allowing it to cover all relevant policy considerations. It also includes intra- and extra-EU trade, which was not modelled in the previous version.

2.2.2 Structure of the model and tax incidence

The proposed model consists of two blocks: the price equations and the economic response module.

The price equations block reflects the direct and implicit VAT burden and therefore accounts for sectoral taxes and different types of VAT treatment. These differ depending on whether services are taxable or exempt (i.e. do not grant the right to deduct input VAT) and on whether they are supplied to domestic households, domestic companies (including the particularly relevant case, from a modelling perspective, of financial services used within the financial sector), or sold intra-EU or extra-EU.

Thus, the equations encompass, among other elements: the average VAT rate on the sector's output; the VAT burden on intermediate inputs and final goods/services delivered along the value-added chain; the proportion of intermediate use in the sector's turnover; the proportion of deductible input VAT; the ratio of the value of taxable inputs to total intermediate inputs; and the share of taxable output.

To account for the changes in quantities resulting from price changes, the relationship between the changes in quantities and prices can be expressed with the elasticity of demand ε:

$$\varepsilon = \frac{\%\ \text{change in quantity}}{\%\ \text{change in price}} = \frac{(q\prime - q)/q}{(p\prime - p)/p} \quad (1)$$

Where the changes in prices and quantities are denoted by $p' - p$ and $q' - q$.

Using this relationship (and, in particular, deriving $q' = q[1 + \varepsilon(p' - p)/p]$), the new expenditures (x') after the changes can be expressed as:

$$x' = x\left[1 + \frac{p\prime - p}{p}\left(1 + \varepsilon\frac{p\prime}{p}\right)\right] \quad (2)$$

To include the possibility of different pass-through values in the model, we simply need one additional parameter, ρ, which would reflect the extent to which the envisaged difference in prices $p' - p$ is finally realised. By imposing the final realised difference as a $\rho(p' - p)$ it can be seen that $\rho = 1$ would reflect a situation with full pass-through; instead, $\rho = 0$ would be the case of no pass-through (prices do not change

as a result of the tax). Any other pass-through situation could be reflected by allowing a different parameter for ρ (which will fall between 0 and 1 except in very specific circumstances, e.g., monopolies).

From the equation above and some further simplifications, the new expenditures after accounting for pass-through can be written as:

$$x' = x\left[1 - \left(1 - \frac{p'}{p}\right)\left(1 + \varepsilon\rho\frac{p'}{p}\right)\right] \quad (3)$$

2.2.3 Price equations

The price equations model the VAT burden at all stages of the value-added chain, depending on the tax rules applicable to the financial sector. The resulting VAT revenue should not be attributed to the financial sector without reservation, as it reflects both the consumption and the production of financial services. Unlike the VAT analysis, the objective of the model is not to attribute VAT revenue to a particular sector, but rather to simulate changes in that revenue under different policy scenarios. For this reason, the consumption-, value-added-, and production-based approaches to VAT revenue were aligned within the model framework, while ensuring that individual components are not double counted.

Overall, the price block includes three equations for each subsector and Member State. The first equation describes the tax burden and the resulting producer and consumer prices for **services supplied to domestic households**. The second equation captures these variables for services supplied by **domestic financial service providers, to other businesses**, while applying the necessary adjustments for intra-EU and extra-EU trade. The third component, described in more detail below, accounts for the **non-deductible VAT incurred by the financial sector in relation to taxable financial services**, thereby completing the overall picture of the VAT burden within the model framework.

Against this backdrop, the **equation for consumers** becomes:

$$p_h = p^* + \tau_i(1-\theta)\alpha\gamma p^* + p^*\theta\tau_o + p^*\tau_s \quad (3)$$

$\tau_i(1-\theta)\alpha\gamma p^*$ stands for irrecoverable VAT on inputs, where α is the proportion of intermediate use in sector's turnover, θ is the proportion of deductible input VAT[25], γ is the value of taxable inputs divided by total intermediate inputs and τ_i is the average VAT rate on sector's intermediate inputs p^* is "pure" net price of the service excluding also non-deductible VAT.

$p^*\theta\tau_o$ – output VAT liability, where θ is the share of taxable output and τ_o is the average VAT rate applicable to output (for non-exempt part).

$p^*\tau_s$ – is the sectoral taxes liability attributed to household final consumption, where τ_s is the effective rate of sectoral taxes (in relation to output).

In the counterfactual case of all services sold domestically, the equation for VAT payments in the value added chain of **services offered to business** must account, for four groups services, whose share in the overall VAT payments depends on two parameters, i.e. deduction rate for business (φ) and proportion of taxable output (θ). Table 1 summarizes respective payments and their shares in all these cases.

[25] For illustrative purposes, the model assumes that the proportion of deductible output equals the proportion of taxable output.

Table 9. VAT payments array in PEM model

	θ	$1-\theta$
φ	$p^*\tau_{po} + p^*\tau_s$	$p^*\tau_{po}(1+\tau_i\alpha\gamma) + p^*\tau_s$
$1-\varphi$	$p^*\tau_o + p^*\tau_s$	$\tau_i\alpha\gamma p^* + p^*\tau_s$

The share of $1-\varphi$ of services is provided to exempt business. For these services, the VAT payments are equivalent to the sale to consumers-households (see equation (1)). In addition, the fraction of θ of the services will generate the output VAT equal to $p^*\tau_o$, whereas $1-\theta$ of those services will generate irrecoverable input VAT proportional to the tax rate on intermediate inputs, percent of taxable intermediate inputs and the share of intermediate inputs in turnover ($\tau_i\alpha\gamma p^*$). In all cases, the sectoral taxes liability anchored to supply remains the same.

The situation looks different when the services are sold to businesses that will be able to deduct input VAT (in φ share). In such case, VAT liable at the final stage are equivalent to the purchaser's price of service multiplied by the rate applicable to the output offered to final consumers. If the services are taxable, VAT payments are equal to $p^*(1+\tau_{po})$, where τ_{po} in the VAT rate applicable to final goods offered by the purchaser of financial services. However, the fraction $(1-\theta)$ of services will generate irrecoverable VAT on financial sectors inputs included in the purchaser's price and, as a results will be "double-taxed". This is the case as the price of financial services includes irrecoverable VAT, which are implicitly subject to VAT when goods or services are offered to final users. If the financial services were delivered to taxable business able to deduct VAT on inputs, the equation would take the form:

$$p_{b2} = p^*(1+\tau_{po})(1+\tau_i(1-\theta)\alpha\gamma) + p^*\tau_s \quad (4)$$

The final equation for business, in the counterfactual situation of only domestic sales, is the weighted average of the (3) and (4) and could be written as:

$$p_b = \varphi p^*(1+\tau_{po})(1+\tau_i(1-\theta)\alpha\gamma) + (1-\varphi)(p^* + \tau_i(1-\theta)\alpha\gamma p^* + p^*\theta\tau_o) + p^*\tau_s \quad (5)$$

The final step of adapting the model for businesses requires distinguishing between intra-EU supplies of services and supplies to third countries. In the case of exempt financial services supplied within the EU, the place of supply (for B2B transactions) is the Member State of the customer under the reverse charge mechanism, and such services remain exempt without the right to deduct input VAT. However, where these services are supplied to customers outside the EU, they are treated as exempt with the right to deduct, allowing recovery of input VAT incurred on related costs. Denoting the share of intra-EU supplies as β_{intra} and the exports to third countries as β_{extra} , equation (5) could be rewritten as:

$$p_b = \varphi p^*(1+\tau_{po}(1-\beta_{intra}-\beta_{extra}))(1+\tau_i(1-\theta)\alpha\gamma) + (1-\varphi)(p^* + (\tau_i(1-\theta)\alpha\gamma p^* + p^*\theta\tau_o)(1-\beta_{extra})) + p^*\tau_s \quad (6)$$

The equation above holds for all services provided to businesses other than domestic financial service providers. If the same equation were applied to services provided to domestic banks, insurance companies, and other financial institutions, it would lead to double counting of certain liability components. For taxable services, the equation—applied to services provided to both households and businesses (excluding the financial sector)—already accounts for the liability attributable to the full value of services, including the contribution of financial services used as intermediate inputs. Therefore, the

equation for services provided to domestic households should reflect only the hidden VAT. For these services, the equation takes the following form:

$$p_{FS} = p^*(1 + \tau_i \alpha \gamma p^*) + p^* \tau_s \quad (7)$$

2.2.4 Policy simulation

The above-described framework and block of equations can be used to model different policy considerations. When these entail changes in the share of services provided to exempt businesses, share of output that is VAT exempt, and the amount of VAT deduction allowed for businesses, they will be denoted with a prime mark as: $(1-\gamma')$, θ', φ'. These parameters will, in turn, define a new pre-VAT multiplier m'. The framework of analysis can also be generalised to allow changes in the VAT rate, which would be denoted accordingly τ'. Finally, sensitivity analysis is possible by simulating changes in the pass-through rate ρ'.

With these new expressions, it is easy to denote the expenditure on sales and government revenue before and after different policy interventions, for both consumers and businesses. These are summarised in Table 10. It is useful to note that where the formulae were expressed as p'/p these can now be written in terms of m'/m.

Table 10. Summary of model and metrics (original and simulated change)

	Consumers	Businesses
Original situation		
Expenditure (sales)	x_h	x_b
Pre-VAT multiplier	$m_h = 1 + \tau_i(1-\theta)\alpha\gamma + \theta\tau_o + \tau_s$	$m_b = \varphi(1 + \tau_{po}(1 - \beta_{intra} - \beta_{extra}))(1 + \tau_i(1-\theta)\alpha\gamma) + (1-\varphi)(1 + (\tau_i(1-\theta)\alpha\gamma + \theta\tau_o)(1 - \beta_{extra})) + \tau_s$
Government revenues	$g_h = \frac{m_h - 1}{m_h} x_h$	$g_b = \frac{m_b - 1}{m_b} x_b$
Simulated change		
Expenditure (sales)	$x'_h = x_h \left[1 - \left(1 - \frac{m'_h}{m_h}\right)\left(1 + \varepsilon_h \rho_h \frac{m'_h}{m_h}\right)\right]$	$x'_b = x_b \left[1 - \left(1 - \frac{m'_b}{m_b}\right)\left(1 + \varepsilon_b \rho_b \frac{m'_b}{m_b}\right)\right]$
Pre-VAT multiplier	$m'_h = 1 + \tau_i'(1-\theta')\alpha'\gamma' + \theta'\tau'_o + \tau_s'$	$m'_b = \varphi'(1 + \tau_{po}(1 - \beta_{intra} - \beta_{extra}))(1 + \tau'_i(1-\theta')\alpha'\gamma') + (1-\varphi')(1 + (\tau'''_i(1-\theta')\alpha'\gamma' + \theta'\tau'_o)(1 - \beta_{extra})) + \tau'_s$
Government revenues	$g'_h = \frac{m'_h - 1}{m'_h} x'_h$	$g'_b = \frac{m'_b - 1}{m'_b} x'_b$

2.2.5 Adaptation of the model to data

The PEM uses the same supply and use tables (SUTs) as those employed in the VAT liability analysis to derive information on the tax base. The data derivation algorithm was tailored to reflect the availability of information across different Member States. It draws on nine Eurostat data sources and applies a series of intra- and extrapolation procedures to produce up-to-date, accurate, complete, and granular data.

In addition to the tax base, the model includes several parameters sourced from responses to the questionnaires completed by tax administrations (i.e. based on tax return data), or calculated by triangulating these sources with various elements of the SUTs. In addition, pass-though and elasticity parameters will be derived using own econometric analysis supported by the literature review. The exact data sources are detailed in Table 11 below. The values of parameters, which are solely based on the publicly available sources are shown in Annex 3.

Table 11. Sources of parameter values

Parameters	Description	Sources
τ_i	Weighted average VAT rate on sector's intermediate inputs	Triangulation of submissions from Member State administrations and SUTs.
τ_o	Weighted average VAT rate on sector's intermediate inputs	
τ_{po}	Weighted average VAT rate applicable to final goods offered by the purchaser of financial services	
τ	Average tax rates for different components of the tax base	
φ	Share of services provided to non-exempt businesses	
γ	Ratio - value of taxable inputs divided by total intermediate inputs	
β_{intra}	Ratio of intra-EU supplies to intermediate use	SUTs
β_{extra}	Ratio of exports (extra-EU) to intermediate use	
τ_s	Effective rate for sectoral taxes (in relation to output)	Taxes in Europe Database, Eurostat National Tax Lists, targeted consultation – for revenue figures, SUTs – for output values
ε	Elasticity of demand	Own econometric analysis
ρ	Pass-through	

Box 1. Accounting for sectoral taxes on insurance

To properly model the impact of changes to the tax treatment of the insurance sector and insurance services, the model should be parameterised to reflect the difference between the national accounts convention for recording insurance supply and gross premiums, which constitute the primary tax base for IPTs.

In the System of National Accounts (SNA) / ESA 2010, the output (supply) of insurance services is not equal to total premiums. Instead, it is measured as the service charge implicit in insurance:

$$\textit{insurance output} = \textit{premiums earned} + \textit{premium supplements} - \textit{claims due}$$

where:

- *premiums earned* are premiums relating to the accounting period,
- *premium supplements* are investment income attributed to policyholders, and
- *claims due* represent expected claims.

This measure reflects the actual service margin of insurers, rather than the full premium volume, although it is closely correlated with it. For this reason, for taxes where the gross premium constitutes the tax base, it was necessary to calculate effective tax rates relative to national accounts output. This may result in higher effective rates than statutory rates, as the latter are applied to a broader tax base. Any alternative treatment would lead to an underestimation of the revenue impact of IPTs.

2.2.6 Representation of the financial market in NEMESIS

The methodology for endogenizing interest rates in the NEMESIS model is structured around six layers: (1) monetary policy rate, (2) natural interest rate, (3) German bond rate, (4) long-term government bond rates for other countries, (5) commercial rate spread, and (6) the introduction of specific risk premia.

➢ The formation of interest rates in NEMESIS

In the first instance, modelling the financial system and determining the interest rates in the model called for an in-depth literature review on the determinants of interest rates in the Eurozone and an examination of how existing macroeconomic models represent the financial system. In addition, all parameters were econometrically re-estimated, ensuring that their values remained within the average range found in the literature. The modelling retained includes six main layers:

- **Monetary policy rate**: This involves modelling the ECB policy rate (ECB Deposit facility Rate for the Euro Area- ECBDFR) using a Taylor rule.
- **Natural interest rate – *Capital productivity***: The (real) natural interest rate is the one consistent with potential GDP growth. Its projection is exogenous and, according to studies such as those from the ECB, is estimated at around 0.5% to 1% in the long term. The natural rate is declining due to global structural trends such as the ageing of population. In the model, it is allowed to vary with the evolution of the return on capital.
- **German bond rate (Bund) – *Speed of adjustment to the monetary policy rate***: The German bond rate is the risk-free rate that influences short- to medium-term interest rate developments in other countries. It is itself dependent on the yield of US Treasury bonds.
- **Long-term government bond rates for other countries**: These rates share the same long-term determinants as the German Bund. However, in the short to medium term, the German rate influences the other countries' rates, replacing the role played by the yield of US treasury bonds in the formation Germany's interest rates.
- **Commercial rate spread:** This corresponds to the minimum risk premium paid by private investors compared to the Germany's 10-year Bund yield.

- **Introduction of specific risk premia**: This step was first implemented to take into account the impact of physical risks on interest rates, for DG CLIMA, but it is adapted as well for measuring the impacts of transition risks. It is addressed last, under the assumption that all new corporate and household investments in the analysed scenarios are financed 50% through debt.

The combination of these six main layers provides an **explicit representation of the financial market into the model**, that spans from the policy rate set by the ECB to the long-term rates (10-year) at which the government, businesses and households borrow[26]. It entailed making explicit assumptions about the monetary policy of the ECB and the feedback loops between inflation, and nominal and real interest rates.

➢ *Modelling of the ECB policy rate by a Taylor rule*

The first layer involved introducing a 'Taylor rule' (i.e., a formula prescribing how central banks should set interest rates) to describe the ECB's arbitrage between its inflation and economic growth targets. Since the ECB's mandate is primarily focused on controlling inflation, we implemented a non-linear Taylor rule for the ECB. According to this rule, the ECB responds strongly when inflation exceeds its long-term target of 2%, while it only reacts to a decline in Eurozone (EZ) economic growth below its potential level (1.3%) if inflation is well below 2%[27] .

For instance, if both inflation and GDP growth are initially at their long-term targets, the ECB will respond to an x% increase in inflation by raising the policy rate by 2.8 * x%. However, if the initial inflation rate is at 1%, the response will be a more moderate 1.55 * x%. Conversely, if inflation and GDP growth are at their targets, a decline of x% in EZ GDP growth will lead to a 1 * x% reduction in the policy rate. The response becomes stronger when inflation is lower: if inflation is initially at 1%, the policy rate will decrease by 2 * x%, and if inflation is at 0%, the decrease will be 4 * x%.

The policy rate used in the model is the ECB Deposit facility Rate for the Euro Area (ECBDFR). Non-EU Member States are assumed to adjust their policy rates in alignment with the ECB rate, while the United Kingdom follows its own policy rule.

The corresponding analytical expressions are as follows:

ECB intervention rate

$$i_t^{BCE} = \gamma^{BCE} \cdot i_{t-1}^{BCE} + (1 - \gamma^{BCE}) \cdot \left[r_t^{EQ} + \pi^T + \tau_{\pi,t} \cdot (\pi_t^C - \pi^T) + \tau_{y,t} \cdot ygap_{t-1}\right] + \mu_t$$

Where:

- i_t^{BCE}, ECB intervention rate;
- r_t^{EQ}, the natural real interest rate or ECB real rate target;
- π^T, the ECB's inflation target (i.e. 2%);
- π_t^C, observed inflation;
- $ygap_{t-1}$, the output gap in logarithms;
- μ_t, an error term (for estimates).

Whereas the output gap is characterised as:

$$ygap_t = \left(ln(Y_t^C) - ln(Y_t^P)\right)$$

[26] The modelling of interest rates assumes that short-term policy rates are transmitted proportionally, with a delay, to long-term rates. The calibration of these mechanisms is based on econometric estimates and a review of the literature. For the sake of simplicity, we assumed that all economic agents (firms, households, and the government) borrow at the long-term rate.

[27] We have used the logistic modelling proposed in Castro, V. (2011). Are Central Banks following a linear or nonlinear (augmented) Taylor rule? The Warwick Economics Research Paper Series (TWERPS), No. 872. University of Warwick, Department of Economics.

And:

- Y_t^C, the real GDP of the Euro area;
- Y_t^P, the potential GDP of the Euro area.

At the parameter level, we have: $\gamma^{BCE} = 0.376$, and $1 - \gamma^{BCE}$ =0.624, representing the short-term adjustment speed of the ECB interest rate in case of deviation of inflation or GDP from their target levels. The coefficients $\tau_{\pi,t}$ and $\tau_{y,t}$, which measure the central bank's response to the deviation of inflation from its target and GDP from its potential level, respectively, are time-varying.

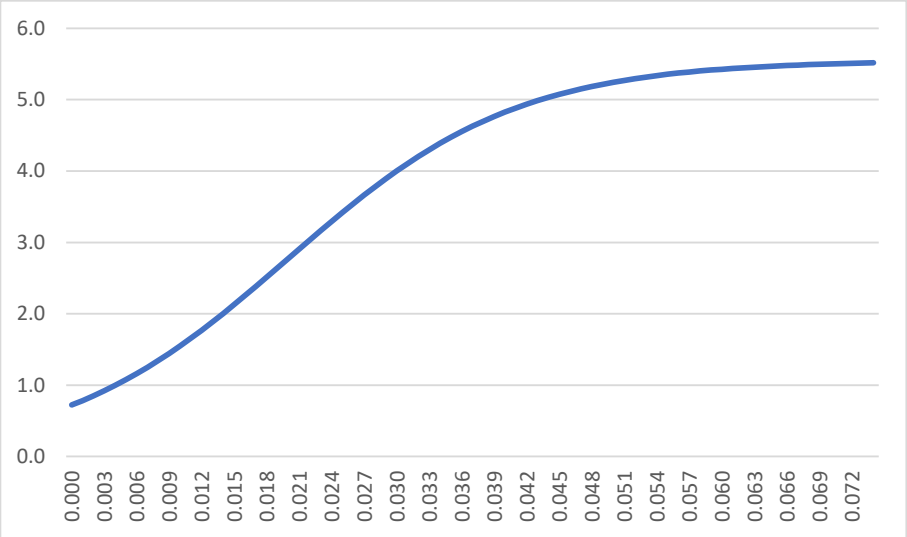
We have $\tau_{\pi,t} = \tau_\pi \cdot G_t^\pi$, with $\tau_\pi = 2.774$ and $G_t^\pi = 2 * \left[1 + e^{\{\eta \cdot (\pi_t^C - \pi^T)\}}\right]^{-1} - \eta = -95$–, a logistic function.

Thus, when inflation is initially at its target level, i.e., 2% by assumption: G_t^π=1, and $\tau_{\pi,t} = \tau_\pi = 2.774$. When inflation is initially at 1%, $G_t^\pi = 0{,}56$ and $\tau_{\pi,t} = 1.55$. Conversely, when inflation is initially 1 percentage point above its target level, i.e., $\pi_t^C = 0{,}03$, $G_t^\pi = 1{,}44$ and $\tau_{\pi,t} = 3.99$.

As announced, the ECB responds more strongly when inflation is above its 2% target, and less strongly when inflation is initially below the 2% target.

The following figure shows the general shape of the function G_t^π as a function of the inflation rate on the x-axis.

Figure 34. Evolution of the coefficient $\tau_{\pi,t}$ as a function of the initial inflation level



We then have for $\tau_{y,t}$

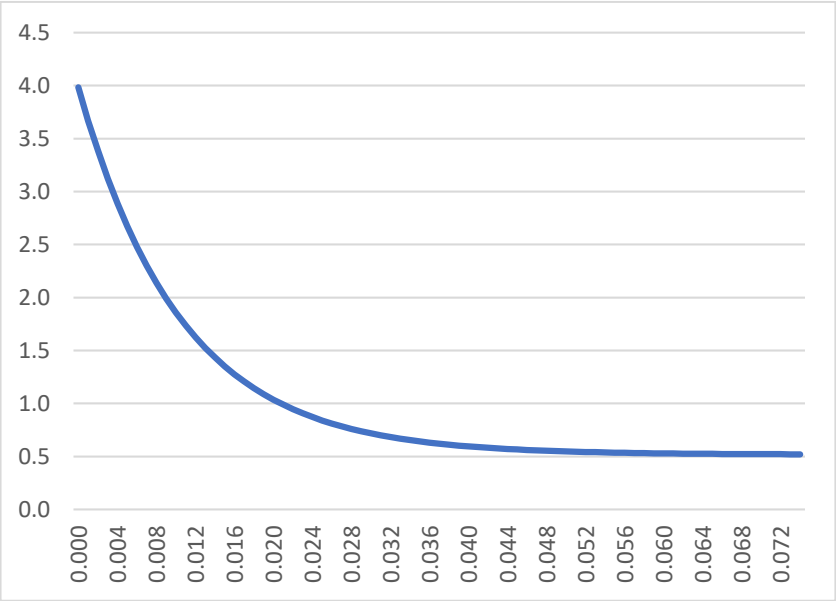
$$\tau_{y,t} = \tau_y \cdot G_t^y$$

with $\tau_y = 1.991$;

$$G_t^y = \frac{0.26}{G_t^\pi}.$$

As mentioned, the ECB only actively reacts to a decline in activity relative to its potential level when inflation is initially stabilized well below 2%. The coefficient $\tau_{y,t}$equals 1.991 when inflation is initially around 1%, 4 when inflation is initially at 0%, and approximately 1 when inflation is at its long-term target of 2%.

Figure 35. Evolution of the coefficient $\tau_{y,t}$ as a function of the initial inflation level



➢ *Natural interest rate*

The representation of the natural interest starts from an exogenous projection with a convergence towards 0.5% or 1%, based on the idea that the "natural" interest rate may evolve according to the productivity of capital in the Euro area, i.e., its rate of return:

$$r_t^{EQ} = r_t^{EQ,b} + \left(\rho_t^{ss} - \rho_t^{ss,b}\right)$$

With:

- $r_t^{EQ,b}$, the natural interest rate projected in the baseline scenario;
- $\rho_t^{ss,b}$,, the steady-state return on capital (in the Euro area) projected in the baseline scenario;
- ρ_t^{ss}, the steady-state return on capital in the scenario under analysis.

We also have:

$$\rho_t^{ss} = \gamma^{\rho} \cdot \rho_{t-1}^{ss} + (1 - \gamma^{\rho}) \cdot \rho_t$$

where ρ_t is the growth rate of the return on capital in the Euro area measured in the scenario for year t.

We impose in the baseline scenario that $\rho_t^{ss} = \rho_t^{ss,b}$, $\forall\, t$

Moreover, if $\gamma^{\rho} = 0.09$, the average adjustment speed of ρ_t^{ss}towards ρ_t is approximately 10 years.

As with the natural interest rate, we assume that potential GDP may evolve according to the long-term productivity of capital in the analysed scenarios. Thus, we have:

$$Y_t^P = Y_t^{P,b} + \left(\rho_t^{ss} - \rho_t^{ss,b}\right)$$

Where $Y_t^{P,b}$, is the level of potential GDP projected in the baseline scenario.

➢ *German Bund Yield*

We have based our modelling of Germany 10-years Bund yield, based on the work of Orr et al. (1995)[28]. It distinguishes between long-term fundamental factors and short-term factors, using an ECM (Error Correction Model) framework. The paper follows the five following ideas:

- Idea 1: Long-term interest rates are the price that *ex-ante* equilibrates saving and investment, while incorporating the anticipated influence of future developments.
- Idea 2: Financial integration tends to cause convergence of long-term rates.
- Idea 3: Increasing debt makes it more difficult to raise taxes and inflation.
- Idea 4: The current account deficit is an indication of the imbalance between saving and investment.
- Idea 5: Long-term rates are strongly influenced by the evolution of short-term monetary policy rates.

Long-term equation:

$$r^{G}_{de,t} = \delta_{de,t} + \delta_1 \cdot r^{BCE}_{t} + \delta_2 \cdot gd_{de,t} + \delta_3 \cdot \overline{ca}_{de,t} + \delta_4 \cdot \left(\bar{\pi}_{de,t} - \pi^{e}_{de,t}\right) + \varepsilon_{de,t}$$

Where :

- $r^{G}_{de,t}$, the real yield on 10-year German government bonds;
- $\delta_{de,t}$ a variable representing the influence of national factors not accounted in our case;
- r^{BCE}_{t}, the ECB monetary policy rate expressed in real terms, i.e., the nominal rate minus current Eurozone inflation: $r^{BCE}_{t} = i^{BCE}_{t} - \pi^{C}_{t}$
- $gd_{de,t}$ is the German government deficit as a percentage of GDP (an indicator of the exogenous influence of the net saving trend):
- $\overline{ca}_{de,t}$, the German current account balance as a percentage of GDP (measured as a 5-year average):
- $\bar{\pi}_{de,t}$ is the 10-year average of past inflation:
- $\pi^{e}_{de,t}$ is the inflation expectation, depending on current and past inflation (ECM modelling):
- $\varepsilon_{de,t}$, an error term.

For the coefficients, we have: δ_1 : 1 ; δ_2 : 0.15 ; δ_3 : -0.15 ; δ_4 : 0.34.

Short-term equation:

$$\Delta r_{de,t} = \gamma_1 \cdot \Delta r_{de,t-1} + \gamma_2 \cdot \Delta r^{BCE}_{t} + \gamma_3 \cdot \Delta r_{us,t} + \gamma_4 \cdot \Delta\left(\bar{\pi}_{de,t} - \pi^{e}_{de,t}\right) + \lambda^{r} \cdot \left(\hat{\varepsilon}_{de,t-1}\right) + \hat{\eta}_{de,t}$$

With,

- $\Delta r_{de,t-1}$, the past change in the German bond yield;
- Δr^{BCE}_{t}, the change in the ECB policy rate;
- Δr^{US}_{t}, the change in the US Treasury bond yield;
- $\Delta\left(\bar{\pi}_{de,t} - \pi^{e}_{de,t}\right)$, the change in inflation expectations;
- $\hat{\varepsilon}_{de,t-1}$, the lagged error term from the long-term equation

[28] Orr, A., M. Edey, and M. Kennedy (1995), *"The Determinants of Real Long-Term Interest Rates: 17 Country Pooled-Time-Series Evidence"*, OECD Economics Department Working Papers, No. 155, OECD Publishing, Paris, https://doi.org/10.1787/375710201525. It was adapted to the eurozone and econometrically estimated using quarterly data.

The values of the coefficients are as follows: γ_1= 0.2 ; γ_2= 0.3 ; γ_3= 0.5 ; γ_4= 0.25 ; λ^r= 0.32.

➢ *Rate of 10-year government bonds*

Long-term equation:

The equation is as for Germany, where the subscript *de* is replaced by the country index i. All countries are assumed to follow the same equation, including those outside the Euro area.

$$r_{i,t}^{G} = \delta_{i,t} + \delta_1 \cdot r_t^{BCE} + \delta_2 \cdot gd_{i,t} + \delta_3 \cdot \overline{ca}_{i,t} + \delta_4 \cdot (\bar{\pi}_{it} - \pi_{it}^{e}) + \varepsilon_{i,t}$$

Government bond rates vary across countries based on several factors: inflation expectations (with an elasticity of +0.34), changes in the current account balance as a percentage of GDP (elasticity of -0.15), and fluctuations in the public deficit/surplus as a percentage of GDP (elasticity of +0.15).

Short-term equation:

Same equation as for Germany, except that the influence of the US rate through coefficient γ_3 has been replaced by the influence of the German rate.

$$\Delta r_{i,t} = \gamma_1 \cdot \Delta r_{i,t-1} + \gamma_2 \cdot \Delta r_t^{BCE} + \gamma_3 \cdot \Delta r_{de,t} + \gamma_4 \cdot \Delta(\bar{\pi}_{i,t} - \pi_{i,t}^{e}) + \lambda^r \cdot (\hat{\varepsilon}_{i,t-1}) + \hat{\eta}_{i,t}$$

➢ *Commercial rate spread*

The reference commercial rate influences borrowing costs for households and the corporate sector. It is modelled based on the econometric estimation of the spread between the 10-year corporate rate and the risk-free rate, which is represented by the Bund rate.

We have:

$$\Delta ln(spread_t) = \delta_1 \cdot \Delta^2 ln(Y_t) + \delta_2 \cdot \Delta^2 ln(Y_{t-1}) + \lambda^s \cdot \left(\delta_3 + ln(spread_{t-1}) + \delta_4 \cdot \Delta ln(Y_{t-1})\right),$$

Where:

$spread_{us,t}$, is the difference between the yield on AAA-rated 10-year corporate bonds and the 10-year US Treasury bond yield;

$Y_{us,t}$, is the real GDP of the United States.

The estimated coefficients are as follows: δ_1 : -6.096 ; δ_2 : -1.97; λ^s : -0.1952 ; δ_3 : -1.23 ; δ_4 : 5.7.

Thus, the long-term spread is given by:

$$spread_t = 1.22 - 5.7 \cdot \Delta ln(Y_t)$$

This estimation follows an error correction model. In the long term, the reference rate is fully indexed to the Bund rate, and an increase of x% in GDP growth reduces the spread by -0.057 * x%[29]

[29] The model includes a detailed representation of each individual EU27 country, as well as the UK, Norway, Switzerland, and Iceland, all interacting with the rest of the world through external trade. The Bank of England (BoE) follows its own monetary policy rule, while non-eurozone EU27 countries are assumed to adjust their short-term policy rates in line with those of the ECB.

➢ ***Default risk and specific risk premia for households and firms***

Households and firms across different economic sectors in the model have specific risk premia that are proportional to their default risk. These mechanisms are adapted from the work of the ECB[30] and were applied in a recent study on climate risks for DG CLIMA (Attström et al., 2025)[31].

For **households**, the proportion of loans at risk of default (Credit Quality Deterioration, or CQD) is influenced by several factors: the real growth rate of real estate prices (elasticity of -0.110), the reference commercial real rate (elasticity of 0.023), the real growth of household debt (elasticity of 0.037), and the real growth of discretionary income (elasticity of -0.031).

We have:

$$CQD_c = \beta_0 + \beta_1.interest\ rate_t^c + \beta_2.residential\ real\ estate\ price_t^c + \beta_3.\log(Total\ debt_t^c) + \beta_4.\log(Discretionary\ income_t^c$$

The risk premium (HRP) is itself a linear function of the variation of the proportion of loans at risk:

$$HRP_{c,h} = \alpha_1.\Delta CQD_{c,h}$$

For firms, the probability of default (DP) is positively correlated with the leverage ratio (elasticity between 0.03 and 0.04) and negatively correlated with the rate of return on capital (elasticity between -0.08 and -0.014).

We have:

$$DP_{c,s} = \beta_{0,c} + \beta_{1,c}.leverage_t^c + \beta_{2,c}.profitability_t^c \text{ (logistic form)}$$

The risk premium (RP) is itself a linear function of the variation of the default probability of the firms:

$$CRP_{c,s} = \alpha_2.\Delta PD_{c,s}$$

2.2.7 The baseline scenario used for the study

The baseline scenario of the model used for the study, incorporates the most recent economic and policy developments up to autumn 2025.

The evolution of socio-economic drivers strictly reproduces the information available in the reference EC socio-economic projections (see Table 12). For population related data, the projections by Member State as based on EUROPOP 2023 data included in the 2024's Ageing Report[32]. Medium- and long-term GDP growth projections are drawn from the 2024's Ageing Report and supplemented with the ECFIN Autumn 2025 economic forecast[33]. All these indicators were projected at Member State levels. NEMESIS supplement the official projections for the indicators not provided. The adjustment of the external trade balance surplus and stocks variations are used to adjust the GDP growth rate in every individual EU-27 country on official GDP and/or GDP potential projections.

[30] Emambakhsh, T., Fuchs, M., Kördel, S., Kouratzoglou, C., Lelli, C., Pizzeghello, R., Salleo, C. and M. Spaggiari, 2023, The Road to Paris: stress testing the transition towards a net-zero economy, European Central Bank Occasional Paper n°328.
https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op328~2c44ee718e.en.pdf?7793485730460e4e0b4e170237eb7429

[31] Attström, K., Caspani, M., Boitier, B., Le Mouël, P., Zagamé, P., Tröltzsch, J., & Tarpey, J. (2025). *Macro-economic / top-down assessment of climate impacts on the EU economy : Final report*. European Commission, Directorate General for Climate Action. https://data.europa.eu/doi/10.2834/7043074

[32] European Commission (2021). The 2024 Ageing Report - Economic & Budgetary Projections for the EU Member States (2022-2070), Institutional paper n°279. doi:10.2765/022983

[33] European Commission, (2025). European Economic Forecast - Autumn 2025, Institutional paper n°318. doi: 10.2765/2173364

Table 12. Sources retained for the evolution of the socio-economic drivers in the baseline scenario of NEMESIS

Ageing report 2024	2026-2027	2028-2040
Macroeconomic assumptions		
Potential GDP (growth rate)		X
Employment (growth rate)		X
Labor input: hours worked (growth rate)		X
Harmonized index of consumer prices (growth rate)		X
Nominal interest rate		X
Labor force assumptions		
Population (million)	X	X
Working-age population (growth rate)	X	X
Employment		X
Unemployment rate		X
DG ECFIN Autumn 2025 forecast		
GDP and GDP components		
Public Consumption (growth rate)	X	NEMESIS
Gross fixed capital formation (growth rate)	X	NEMESIS
Exports (growth rate)	X	NEMESIS
Imports (growth rate)	X	NEMESIS
Trade balance	X	NEMESIS
Inventories (growth rate)	X	NEMESIS
Labor Market		
Compensation of employees	X	
Unemployment rate	X	
Employment	X	
Labor Market	X	
Prices and deflators		
GDP deflator (growth rate)	X	NEMESIS
Harmonized index of consumer prices (growth rate)	X	

Source: Based on own elaboration and European Commission (2024), (2025)

Regarding the ECB's monetary policy, the Eurozone's GDP growth target is set at 1.3%, with an inflation target of 2%. The historical data on interest rates were retrieved from ECB website data browser in mid-February 2026 for the ECB policy rate (ECBDFR), government and commercial 10-year rates. The policy ECB rate was kept constant to 2% between 2026 and 2040 while the 10-years government and commercial rates were indexed on the projections available in the 2024's Ageing Report for the 10-year nominal interest rate.

2.2.8 The modelling of financial and insurance services in NEMESIS

This section details how the supply, demand, trade and taxation of insurance and financial services are modelled in the NEMESIS model, focusing on the most important aspects.

➢ The data used

In the standard version of NEMESIS, the NACE sectors "K64: Financial service activities", "K65: Insurance, reinsurance and pension funding, except compulsory social security", "K66: Activities auxiliary to financial

services and insurance activities", and "L68: Real estate activities" are grouped into a single sector. For the purpose of this study, they were disaggregated into four distinct sectors using data from the **FIGARO** database (for demand breakdowns) and **EUROSTAT** (for production factors).

On the **demand side**, the Global Multiregional Input-Output and Use Tables from FIGARO distinguish five sources of demand:

1. Firms' intermediate consumption
2. Households' final consumption
3. Investment
4. Government final consumption
5. Exports

A key strength of FIGARO is its ability to trace the **geographical origin** of suppliers for each demand category, allowing bilateral trade flows for services to be identified across all uses. These were regrouped is five possible origins:

- National production
- Other EU-27 countries
- United Kingdom
- Switzerland
- Rest of the World (RoW)

Similarly, national production of services is broken down by the same five possible destination markets. This structure allows the model to assess the consequences of potential reactions from third countries with highly developed and export-oriented financial sectors (e.g., Switzerland and the UK), depending on the policy considerations analysed.

All data on production and product demand have furthermore been reprocessed to harmonise the taxation basis between the NEMESIS model and the Partial Equilibrium Model (PEM) used in the study. It ensures that the changes in taxation impact government revenues and products price in a similar way in NEMESIS and in the PEM.

On the **supply side**, Eurostat data were used for production, value added, intermediate consumption, investment, total employment, and wages and salaries. These are available for all EU27 countries and the UK up to 2023. All data, both on supply and demand, are extrapolated using trend indices generated by the NEMESIS model.

➢ *Production of services*

For each of the four service sectors' output, *Y*, is modelled with two-level CES (Constant Elasticity of Substitution) function:

- At the **first level**, production combines total intermediate consumption, *M,* with a compound input, *KL,* made up of capital and labour.
- At the **second level**, the compound input *KL* is itself a CES function of capital *K* and labour *L*.

The substitution elasticities (between *M* and *KL*, and between *K* and *L*) are set to **0.3**, the standard value used for sector 28: "Bank, Finance, Insurance, and Real Estate" in the base version of NEMESIS.

➢ *Demand for services*

In a given country c, for a sector-service j, at time t, demand, $DEMQ_{cjt}$ is decomposed into five components:

$$DEMQ_{cjt} = CONSQ_{cjt} + GOVCQ_{cjt} + DMATQ_{cjt} + DINVQ_{cjt} + EXPTOTQ_{cjt}$$

With:

- $CONSQ_{cjt}$: Final demand by households
- $GOVCQ_{cjt}$: Final demand by government
- $DMATQ_{cjt}$: Intermediate demand by firms
- $DINVQ_{cjt}$: Investment
- $EXPTOTQ_{cjt}$: Exports

1. **Household Demand,** $CONSQ_{cjt}$:

$$\ln(CONSQ_{cjt}) = \ln(INCRIDSP_{ct}) + \varepsilon_{phj}.\ln(P_{cjt} - PCONS_{ct})$$

Where:

$INCRDISP_{ct}$: real households' real disposable income in country c

P_{cjt}: market price of the sector-service j in country c

$PCONS_{ct}$: Price index of households' final consumption in country c

ε_{PHj}, price elasticity of households' demand for service j (from literature, with sensitivity analysis)

2. **Firms' Demand**

   a. **Firms' Demand (excluding sectors K64, K65, K66):** $DMATQ_{cijt}$:

$$\ln(DMATQ_{cijt}) = \ln(PRODQ_{cit}) + \varepsilon_{pfj}.ln(P_{cjt} - PHT_{cit})$$

Where:

$PRODQ_{cit}$: real production of sector *i in country c*

$PHT_{cit,}$: unit production cost of sector *i in country c*

$\varepsilon_{pfj,}$: price elasticity of firms' demand for service *j*

   b. **Firms' Demand by Financial Sectors (K64, K65, K66):** $\boldsymbol{DMATQ_{cijt}, i = K64, K65\ and\ K66}$):

Same functional form as above:

$$\ln(DMATQ_{cijt}) = \ln(PRODQ_{cit}) + \varepsilon_{pfj}.ln(P_{cjt} - PHT_{cit})$$

   c. **Aggregate Intermediate Demand by Firms:** $DMATQ_{cjt}$

$$DMATQ_{cjt} = \sum_{i=1}^{33} DMATQ_{cijt}$$

This is the total demand across all 33 production sectors in NEMESIS for service j in country c.

3. **Demand of Services for Investment:**

$$DINVQ_{cjt}$$

$$ln(DINVQ_{cjt}) = ln(DINVQ_{ct})$$

With:

$DINVQ_{ct}$: the total real investment *in country c*

This is the demand for service j in country c related to its GFCF.

4. **Exports**

   a. **Total Exports:** $EXPTOT_{cjt}$

$$EXPTOT_{cjt} = EXPEU27_{cjt} + EXPUK_{cjt} + EXPSW_{cjt} + EXPROW_{cjt}$$

   b. **Exports by Destination:** $EXPf_{cjt}, \mathrm{f} = \mathrm{EU27, UK, SW \text{ and } ROW}$

$$ln(EXPf_{cjt}) = \lambda_x . \left(\ln\left(DEMQ_{fjt}\right) + \varepsilon_{xj} . \ln\left(P_{cjt} - P_{fjt}\right)\right) + (1 - \lambda_x) . \ln\left(EXPf_{cjt-1}\right)$$

Where:

$DEMQ_{fjt}, \mathrm{f} = \mathrm{EU27, UK, SW, ROW}$, is an index of domestic demand in region f for the service j

λ_x: partial adjustment parameter

ε_{xj}: export price elasticity (from literature)

5. **Imports:** $IMPTOTQ_{cjt}$

Symmetric to exports:

$$IMPTOTQ_{cjt} = IMPEU27_{cjt} + IMPUK_{cjt} + IMPSW_{cjt} + IMPROW_{cjt}$$

$$\ln\left(IMPf_{cjt}\right) = \lambda_m . \left(\ln\left(ADDDEMQ_{jt}\right) + \varepsilon_{mj} . ln\left(P_{fjt} - P_{cjt}\right)\right) + (1 - \lambda_m) . \ln\left(IMPf_{cjt-1}\right)$$

Note: For intra-EU27 trade, imports of services are rescaled during simulation to match exports for consistency. Also, imports/exports in NEMESIS aggregate household and business flows.

6. **Demand Addressed to National Producers:** $ADDDEM_{cjt}$

$ADDDEMQ_{cjt} = \sum_d d_{cjt} + EXPTOTQ_{cjt} - IMPTOTQ_{cjt}$, with $d = CONSQ, DMATQ, GOVCQ \text{ and } \mathrm{DINVQ}$

Production is assumed to adjust fully to demand at each time t.

- Production price: $\boldsymbol{PHT_{cjt}}$

$$\ln\left(PHT_{cjt}\right) = \ln\left(CST_j\right) + \lambda_{ph} . ln\left(TCOST_{cjt}/PRODQ_{cjt}\right) + \left(1 - \lambda_{ph}\right) . \ln\left(PHT_{cjt-1}\right)$$

With:

$\lambda_{ph} = 0.75$,

$PRODQ_{cjt}$: production

$TCOST_{cjt} = \omega_{Kcjt} + \omega_{Lcjt} + \omega_{Mcjt}$: the total production cost that sums, respectively, the capital, labour and intermediate consumption costs.

CST_j a proxy of the markup rate τ_j

- ***Tax revenue calculation***

The variation in tax revenues calculated for the different policy considerations takes into account.

- The loss of government revenues resulting from reduced 'hidden' VAT and other tax reductions and the gains resulting from increasing existing taxes or raising new ones. The impact of inter-sectoral transactions among K64–K66 is also explicitly modelled.
- For VAT rates changes, impact on tax revenues of the VAT exemptions existing outside the financial sector was explicitly modelled.

➢ *Introduction of the Pass-On Rate*

Concerning the impact of the removal of the exemptions on financial services calculated by NEMESIS, the main issue is to what extent it will modify the price paid by consumers (B2C) and businesses (B2B).Two aspects are considered in NEMESIS: (1) the **pass-on rate of VAT in the price charged on financial services** (output side) and (2) **the repercussion of the production cost change resulting from the possibility to deduct the VAT paid on the inputs, the modification of existing taxes (IPTs and other taxes) or the introduction of new ones (FAT), which may affect production price** (input side):

On the output side, the VAT impacts mainly the B2C segment *i.e.* principally households, as in most economic activities, businesses can deduce the VAT. The impact is proportional to the assumption retained on the pass-on rate.

On the input side, the possibility for the K64, K65 and K66 sectors to deduct the VAT paid on inputs reduces the production cost of insurance and financial services in proportion of the assumption retained on the pass-on rate. The same occurs for all other taxation changes (IPT, FAT, other taxes such as payroll tax).

Summary of Parameters for Simulation

The following table summarises the different parameters that are crucial for the application of NEMESIS to the Study. For the sensitivity analysis, 'low: 0.6' , 'medium: 0.7' and 'high: 0.8' values were used for the pass-on rate and 'medium: -0.2 ' and 'high: -0.5' for all price elasticities.

Table 13. List of parameters of interest for the impact assessment of the policy considerations

Description	*Symbol*
Pass-on rate	*PASS_ON-RATE*
Households' price elasticity of demand	ε_{ph}
Firms' price elasticity of demand	ε_{pf}
Price elasticity of exports	ε_{px}
Price elasticity of imports	ε_{pm}

3. Supporting data

This annex provides the supporting data collected for the assessment of the current situation (Part B of the main report). In particular it includes granular data for the sectoral analysis as well as data on VAT analysis.

3.1 Supporting data for sectoral analysis of financial services

This section provides detailed tables supporting the sectoral analysis, including data on cross-border activities (exports and imports), the compound annual growth rate (CAGR) of employee remuneration across EU Member States, and the customer base for the three sectors under review: (i) banking services, (ii) insurance services, and (iii) other financial services. The section also includes an overview of cooperative banks and green finance.

➢ *Banking sector*

Table 14. Exports of banking services (2023, EUR million)

Member State	Intra-EU	Extra-EU	Member State	Intra-EU	Extra-EU
EU27	**117,236**	**100,628.5**	HU	240.7	448.7
AT	1,641	658	IE	6,684	15,461
BE	4,414	4,683	IT	7,563.3	1,865.1
BG	84.6	78.6	LT	1,114	264.5
CY	2,034	3,263.5	LU	40,604	31,062
CZ	550.2	202.6	LV	70	104
DE	19,379	15,081	MT	333.1	500.4
DK	1,112.9	522.6	NL	10,759.9	7,335.5
EE	157.9	43	PL	1,183.6	644.9
EL	565.3	500.5	PT	223	213
ES	3,132	2,985	RO	335.2	80.1
FI	310	213	SE	2,356.6	2,617.5
FR	11,921	11,615	SI	69.8	49.6
HR	128	87	SK	268.9	49.4

Source: Eurostat, Balance of Payments – BoP, Eurostat, reference year 2023.

Table 15. Imports of banking services (2023, EUR million)

Member State	Intra-EU	Extra-EU	Member State	Intra-EU	Extra-EU
EU27	**80,966.8**	**82,273**	HU	429.9	211.9
AT	1,747	369	IE	2,250	18,090
BE	7,285	1,557	IT	11,139.9	871.5
BG	163.6	88.1	LT	338.3	104.6
CY	925.5	2,574.8	LU	22,386	27,651
CZ	458.8	341.1	LV	67	102
DE	11,740	13,513	MT	151.9	132.9

DK	853.2	687.8	NL	8,570.9	6,955.2
EE	110.9	61	PL	955.5	449.1
EL	639.7	118.2	PT	541	137
ES	1,261	720	RO	326.7	124.1
FI	799	202	SE	1,126.6	1,109
FR	6,324	5,960	SI	50.5	17.2
HR	62	82	SK	262.9	43.5

Source: Eurostat, Balance of Payments – BoP, Eurostat, reference year 2023.

Table 16. Compound annual growth rate of employee remuneration in the financial sector across EU Member States (2016-2022)

Member State	Employee remuneration (CAGR 2016-2022)	Member State	Employee remuneration (CAGR 2016-2022)
EU27	**1.3%**	HU	4.4%
AT	1.6%	IE	4.5%
BE	0.3%	IT	0.7%
BG	4.9%	LT	19.9%
CY	3.5%	LU	4.0%
CZ	6.0%	LV	1.5%
DE	0.4%	MT	7.6%
DK	1.4%	NL	1.6%
EE	10.7%	PL	2.9%
EL	-0.5%	PT	0.4%
ES	-0.7%	RO	6.2%
FI	1.4%	SE	3.3%
FR	1.8%	SI	2.4%
HR	2.7%	SK	2.3%

Source: Eurostat, nama_10_a64 available at https://doi.org/10.2908/NAMA_10_A64

Table 17. Customer base for banking services, supply and use tables

Member State	Market segment	Consumption in 2018 (EUR m)	Consumption in 2022 (EUR m)	% of consumption in 2022	CAGR of consumption (2018-2022)
EU27	B2B	404734.9	468565	73.40%	3.70%
	B2C	128954.3	137839.3	21.60%	1.70%
	B2G	28432.3	32341.7	5.10%	3.30%
AT	B2B	10642.1	12472.7	80.00%	4.00%
	B2C	2521.9	1948.8	12.50%	-6.20%
	B2G	1021.3	1162.8	7.50%	3.30%
BE	B2B	13079.5	14903.6	76.80%	3.30%
	B2C	3194.2	3051.5	15.70%	-1.10%
	B2G	1446.7	1438.2	7.40%	-0.10%
BG	B2B	2977.5	4035.8	88.60%	7.90%
	B2C	333.3	424.6	9.30%	6.20%
	B2G	61	94.1	2.10%	11.50%
CY	B2B	1457.8	1522.2	69.60%	1.10%
	B2C	473.4	627.5	28.70%	7.30%
	B2G	44.4	37.4	1.70%	-4.20%
CZ	B2B	7024.4	8349.7	79.90%	4.40%
	B2C	1372	1658.7	15.90%	4.90%
	B2G	282.1	447.3	4.30%	12.20%
DE	B2B	85704.4	101788.4	68.50%	4.40%
	B2C	39961.5	40050.3	26.90%	0.10%
	B2G	5670	6801	4.60%	4.70%
DK	B2B	9999.1	12776.3	66.60%	6.30%
	B2C	5394.2	5978.1	31.20%	2.60%
	B2G	290.1	415.2	2.20%	9.40%
EE	B2B	520.7	841.5	60.90%	12.70%
	B2C	349.1	513.4	37.10%	10.10%
	B2G	17.1	27.4	2.00%	12.50%
ES	B2B	20308.9	24610.4	54.70%	4.90%
	B2C	16508.8	18291.9	40.70%	2.60%
	B2G	1491.2	2070.8	4.60%	8.60%
FI	B2B	4135.1	5119.7	61.30%	5.50%
	B2C	2234.7	2811.4	33.70%	5.90%
	B2G	402.3	416.8	5.00%	0.90%

FR	B2B	88227.4	95801.2	84.40%	2.10%
	B2C	13849.5	12146.1	10.70%	-3.20%
	B2G	5698.5	5623.3	5.00%	-0.30%
HR	B2B	1621.7	1945.1	59.70%	4.70%
	B2C	481.8	820.8	25.20%	14.20%
	B2G	515.8	491.5	15.10%	-1.20%
HU	B2B	2864.1	3503.5	55.20%	5.20%
	B2C	1594.7	2468.9	38.90%	11.50%
	B2G	383.4	374	5.90%	-0.60%
IE	B2B	1978.6	5478	73.50%	29.00%
	B2C	627.2	1592.4	21.40%	26.20%
	B2G	80.3	384.6	5.20%	47.90%
IT	B2B	48966.2	46435.8	73.20%	-1.30%
	B2C	12449.4	12092.1	19.10%	-0.70%
	B2G	4815.1	4914.3	7.70%	0.50%
LT	B2B	578.9	1108.8	60.10%	17.60%
	B2C	331.7	602.4	32.70%	16.10%
	B2G	110.6	133.2	7.20%	4.80%
LU	B2B	37170.4	50748.4	81.90%	8.10%
	B2C	6503.5	8648.7	14.00%	7.40%
	B2G	2126.6	2575.1	4.20%	4.90%
LV	B2B	653.9	783.1	68.30%	4.60%
	B2C	209.3	322.7	28.10%	11.40%
	B2G	23.6	40.7	3.50%	14.60%
MT	B2B	712.7	2343.2	68.20%	34.70%
	B2C	138	848	24.70%	57.50%
	B2G	62.2	246.5	7.20%	41.10%
NL	B2B	34360.8	34144	86.40%	-0.20%
	B2C	4613.8	2979.3	7.50%	-10.40%
	B2G	2213.9	2406.3	6.10%	2.10%
PL	B2B	9095	13852.4	56.80%	11.10%
	B2C	7576.7	9584.5	39.30%	6.10%
	B2G	636	961.6	3.90%	10.90%
PT	B2B	6106.4	7266.4	67.90%	4.40%
	B2C	2874.3	3056.5	28.60%	1.50%
	B2G	311.3	375.9	3.50%	4.80%
RO	B2B	5299.6	5271	91.70%	-0.10%

	B2C	165.5	347.2	6.00%	20.40%
	B2G	112.4	130.6	2.30%	3.80%
SE	B2B	9179.7	10684.2	64.60%	3.90%
	B2C	3312.5	5231.5	31.60%	12.10%
	B2G	502.4	616.5	3.70%	5.20%
SI	B2B	674.5	811.3	51.40%	4.70%
	B2C	486.5	709.7	44.90%	9.90%
	B2G	66.3	58.8	3.70%	-3.00%
SK	B2B	1395.5	1968.2	63.50%	9.00%
	B2C	1397.1	1032.3	33.30%	-7.30%
	B2G	47.6	97.9	3.20%	19.80%

Source: Eurostat FIGARO - EU Inter-Country Use Tables (EU IC-SUIOTs).

➢ *Insurance services*

Table 18. Compound annual growth rate of net turnover in the insurance sector across EU MS (2021-2023)

Member State	Net turnover (CAGR 2021 - 2023)	Member State	Net turnover (CAGR 2021 - 2023)
EU27	**2.1%**	HU	2.3%
AT	5.0%	IE	-2.2%
BE	8.7%	IT	-2.4%
BG	16.3%	LT	17.3%
CY	12.5%	LU	-10.1%
CZ	13.1%	LV	13.5%
DE	3.1%	MT	-4.0%
DK	15.3%	NL	3.0%
EE	-27.7%	PL	6.4%
EL	15.9%	PT	-14.4%
ES	10.6%	RO	20.5%
FI	-0.7%	SE	-0.8%
FR	1.5%	SI	9.0%
HR	-27.0%	SK	1.0%

Source: Eurostat, nama_10_a64 available at https://doi.org/10.2908/NAMA_10_A64, authors' own calculations

Table 19. Export of insurance services, EUR millions (2023)

Member State	Intra-EU	Extra-EU	Member State	Intra-EU	Extra-EU
EU27	**26,907**	**38,106**	HU	38.5	15.5
AT	648	101	IE	7,959	7,889
BE	1,944	1,139	IT	919.3	407.4
BG	312.7	318.1	LT	0	0
CY	101.8	41.7	LU	2,447	795
CZ	202.8	188	LV	4	1
DE	5,255	12,799	MT	Confidential	43.6
DK	140.3	141.9	NL	Confidential	Confidential
EE	17.7	1.4	PL	Confidential	Confidential
EL	401.5	169.5	PT	124	27
ES	743	1,161	RO	83.9	4
FI	15	1	SE	409	460.7
FR	4,889	12,258	SI	154.3	129.9
HR	39	6	SK	59.1	7.8

Source: Eurostat, Balance of Payments – BoP, Eurostat, reference year 2023. All values are in EUR million

Table 20. Insurance institutions cross border activities, debits (2023)

Member State	Intra-EU	Extra-EU	Member State	Intra-EU	Extra-EU
EU27	**26,439**	**33,333**	HU	199.3	68.9
AT	530	505	IE	5,839	8,350
BE	1,659	1,725	IT	2,262.9	1,063.5
BG	85.1	224.4	LT	71.9	11.3
CY	168.3	111.7	LU	1,056	339
CZ	1,341.6	291.6	LV	5	3
DE	4,415	6,544	MT	Confidential	Confidential
DK	192.7	228.8	NL	Confidential	Confidential
EE	46.7	5.2	PL	Confidential	Confidential
EL	950.1	813	PT	422	314
ES	1,107	1,256	RO	398.4	115.2
FI	251	323	SE	414.9	318.2
FR	4,657	10,577	SI	127.3	80.7
HR	82	27	SK	157	38.1

Source: Eurostat, Balance of Payments – BoP, Eurostat, reference year 2023. All values are in EUR million

Table 21. Compound annual growth rate of employees' remuneration in the insurance sector across EU Member States (2016-2022)

Member State	Employee remuneration (CAGR 2016-2022)	Member State	Employee remuneration (CAGR 2016-2022)
EU27	**1.9%**	HU	0.8%
AT	1.4%	IE	-1.7%
BE	1.6%	IT	1.4%
BG	1.5%	LT	12.6%
CY	3.4%	LU	5.1%
CZ	4.8%	LV	8.2%
DE	1.6%	MT	7.9%
DK	4.4%	NL	-1.2%
EE	6.8%	PL	6.6%
EL	7.4%	PT	2.3%
ES	-1.6%	RO	6.6%
FI	3.9%	SE	2.0%
FR	3.6%	SI	4.3%
HR	1.4%	SK	1,4%

Source: Eurostat, nama_10_a64 dataset[34]

Table 22. Customer base for insurance services, supply and use tables

Member State	Market segment	Consumption in 2018 (EUR million)	Consumption in 2022 (EUR million)	% of consumption in 2022	CAGR of consumption (2018-2022)
EU27	B2B	88199.6	106467.4	35%	4.80%
	B2C	173650.9	188707.8	62.10%	2.10%
	B2G	6388.3	8785.2	2.90%	8.30%
AT	B2B	1921.9	2255.2	30.60%	4.10%
	B2C	4454.8	5001.8	67.80%	2.90%
	B2G	98.8	121.6	1.60%	5.30%
BE	B2B	3183.2	3562.8	28.90%	2.90%
	B2C	7156.9	8523.6	69.20%	4.50%
	B2G	240	237.3	1.90%	-0.30%
BG	B2B	998.9	1535.7	90.30%	11.40%

[34] Source: Eurostat, nama_10_a64 available at https://doi.org/10.2908/NAMA_10_A64, authors' own calculations.

	B2C	84.4	128.5	7.60%	11.10%
	B2G	20.8	36.2	2.10%	15.00%
CY	B2B	108.3	120.6	28.50%	2.70%
	B2C	259	299.8	70.80%	3.70%
	B2G	1.6	3.3	0.80%	18.70%
CZ	B2B	1061.1	1653.2	41.50%	11.70%
	B2C	1971.8	2258.1	56.60%	3.40%
	B2G	54.5	74.9	1.90%	8.30%
DE	B2B	28727	35292.7	40.60%	5.30%
	B2C	43881.8	45752	52.60%	1.00%
	B2G	3875.3	5906	6.80%	11.10%
DK	B2B	1241.7	1779.7	33.70%	9.40%
	B2C	2653.3	3408.5	64.60%	6.50%
	B2G	52.7	91.2	1.70%	14.70%
EE	B2B	96.7	116.1	46.20%	4.70%
	B2C	136.2	132.1	52.50%	-0.80%
	B2G	4.2	3.2	1.30%	-6.80%
ES	B2B	6780.4	7781.7	39.70%	3.50%
	B2C	11171.3	11547.4	59%	0.80%
	B2G	188.2	247.6	1.30%	7.10%
FI	B2B	681.7	941.2	25.20%	8.40%
	B2C	2209.6	2641.6	70.90%	4.60%
	B2G	113.2	144.8	3.90%	6.40%
FR	B2B	17926.3	20602.1	29.70%	3.50%
	B2C	45891.3	48092.5	69.40%	1.20%
	B2G	687.5	613.6	0.90%	-2.80%
HR	B2B	296.7	277.3	36.60%	-1.70%

	B2C	364.9	454.7	60.10%	5.70%
	B2G	21.7	24.8	3.30%	3.40%
HU	B2B	501.5	574.2	46.10%	3.40%
	B2C	710.1	654.8	52.60%	-2.00%
	B2G	14.5	16.9	1.40%	3.90%
IE	B2B	6887.3	7870.5	75.80%	3.40%
	B2C	2870.2	2131.2	20.50%	-7.20%
	B2G	133.7	383.4	3.70%	30.10%
IT	B2B	7982.5	8820.4	29.10%	2.50%
	B2C	19909.9	21077	69.50%	1.40%
	B2G	535.1	445.6	1.50%	-4.50%
LT	B2B	161	277.7	46.50%	14.60%
	B2C	236.1	308.6	51.70%	6.90%
	B2G	6.7	11.2	1.90%	13.80%
LU	B2B	1908.5	2270.1	60.90%	4.40%
	B2C	1093.7	1411.3	37.80%	6.60%
	B2G	38.9	47.4	1.30%	5.10%
LV	B2B	79.1	99.4	28.10%	5.90%
	B2C	224.8	252.4	71.50%	2.90%
	B2G	2.9	1.4	0.40%	-17.20%
MT	B2B	30.6	57.6	19.40%	17.10%
	B2C	139.9	235.1	79.10%	13.90%
	B2G	2.2	4.6	1.60%	20.40%
NL	B2B	2247.6	2588.8	11.80%	3.60%
	B2C	15980.4	19340.3	87.80%	4.90%
	B2G	72.2	87.4	0.40%	4.90%
PL	B2B	1895	2705	31.70%	9.30%

	B2C	4224.8	5735.1	67.20%	7.90%
	B2G	78.8	91.8	1.10%	3.90%
PT	B2B	829.4	1440.5	37.30%	14.80%
	B2C	2302	2367.6	61.40%	0.70%
	B2G	39.5	48.6	1.30%	5.40%
RO	B2B	486.4	923	65.60%	17.40%
	B2C	452.1	478.7	34%	1.40%
	B2G	2.9	5.7	0.40%	17.80%
SE	B2B	1356.9	2001.5	28.50%	10.20%
	B2C	4030.6	4924.9	70.10%	5.10%
	B2G	82.7	99.2	1.40%	4.60%
SI	B2B	325.4	449	39%	8.40%
	B2C	546.6	682.4	59.30%	5.70%
	B2G	14	19.1	1.70%	8.00%
SK	B2B	484.5	471.6	34.70%	-0.70%
	B2C	694.6	867.7	63.90%	5.70%
	B2G	5.7	18.5	1.40%	34.50%

Source: Eurostat, FIGARO - EU Inter-Country Use Tables (EU IC-SUIOTs).

- ***Other financial services***

Table 23. Compound annual growth rate of employees' remuneration in investment services across EU Member States (2016-2022)

Member State	Employee remuneration (CAGR 2016-2022)	Member State	Employee remuneration (CAGR 2016-2022)
EU27	6.3%	HU	5.6%
AT	6.5%	IE	7.5%
BE	4.5%	IT	2.6%
BG	12.7%	LT	25.7%
CY	12.9%	LU	9.4%
CZ	11.3%	LV	10.2%
DE	4.8%	MT	13.2%
DK	2.1%	NL	6.2%
EE	9.7%	PL	7.8%

EL	4.4%	PT	8.7%
ES	7.9%	RO	15.2%
FI	5.0%	SE	6.9%
FR	8.8%	SI	5.2%
HR	2.8%	SK	7.1%

Source: Eurostat nama_10_a64 dataset[35]

Table 24. Compound annual growth rate of net turnover in the investment services across EU Member States (2021-2023)

Member State	Net turnover CAGR (2021 - 2023)	Member State	Net turnover CAGR (2021 - 2023)
EU27	**2.1%**	HU	-5.8%
AT	7.5%	IE	-14.0%
BE	16.6%	IT	1.5%
BG	23.2%	LT	-3.1%
CY	12.2%	LU	-3.8%
CZ	-8.0%	LV	14.8%
DE	-8.9%	MT	-9.1%
DK	3.6%	NL	3.5%
EE	*Unavailable*	PL	7.2%
EL	14.1%	PT	-1.1%
ES	16.9%	RO	-0.1%
FI	2.0%	SE	-12.1%
FR	10.7%	SI	11.0%
HR	7.2%	SK	4.1%

Source: Eurostat, sbs_sc_ovw dataset [36]

Table 25. Customer base for other financial services, supply and use tables

Member State	Market segment	Consumption in 2018 (EUR million)	Consumption in 2022 (EUR million)	% of consumption in 2022	CAGR of consumption (2018-2022)
EU27	B2B	206473.5	257622.2	90.50%	5.70%
	B2C	22232.3	25080.7	8.80%	3.10%
	B2G	1773.3	1995.2	0.70%	3.00%
AT	B2B	3348.6	3789.3	90.40%	3.10%
	B2C	329.8	387	9.20%	4.10%
	B2G	8	13.6	0.30%	14.00%
BE	B2B	14412.6	17897.8	84.10%	5.60%
	B2C	2851.9	3145	14.80%	2.50%

[35] Source: Eurostat, nama_10_a64, available at https://doi.org/10.2908/NAMA_10_A64, authors' own calculations.

[36] Source: Eurostat, sbs_sc_ovw, available at https://doi.org/10.2908/SBS_SC_OVW, authors' own calculations.

	B2G	283.1	237.2	1.10%	-4.30%
BG	B2B	333.3	648	95.70%	18.10%
	B2C	1	1.8	0.30%	16.40%
	B2G	12.8	27.2	4.00%	20.70%
CY	B2B	307.2	833.3	92.00%	28.30%
	B2C	33.7	64.2	7.10%	17.50%
	B2G	1.9	8.6	1.00%	46.60%
CZ	B2B	1887	3158.5	84.20%	13.70%
	B2C	458.6	586.2	15.60%	6.30%
	B2G	0.8	4.5	0.10%	54.90%
DE	B2B	33982.8	48080.7	98.10%	9.10%
	B2C	651.3	841.2	1.70%	6.60%
	B2G	26.4	67.1	0.10%	26.20%
DK	B2B	2132.5	2566.7	84.30%	4.70%
	B2C	430.5	379.6	12.50%	-3.10%
	B2G	106.7	99.6	3.30%	-1.70%
EE	B2B	240.4	317.8	84.30%	7.20%
	B2C	29	56.4	15.00%	18.10%
	B2G	1.3	2.8	0.80%	20.90%
ES	B2B	9262.5	12811.7	60.60%	8.40%
	B2C	6121.6	7882.7	37.30%	6.50%
	B2G	267.1	433.8	2.10%	12.90%
FI	B2B	2466	2371.8	83.30%	-1.00%
	B2C	499.1	424.4	14.90%	-4.00%
	B2G	52.7	51.7	1.80%	-0.50%
FR	B2B	47107.2	60185.1	99.40%	6.30%
	B2C	41.5	45.4	0.10%	2.30%
	B2G	248.3	306.9	0.50%	5.40%
HR	B2B	332.1	350.8	69.60%	1.40%
	B2C	96.5	151.5	30.10%	11.90%
	B2G	1.3	1.6	0.30%	5.60%
HU	B2B	883.1	1259.9	95.90%	9.30%
	B2C	75.9	53.8	4.10%	-8.20%
	B2G	0.06	0	0,0%	-100.00%
IE	B2B	10306.1	7857.6	93.10%	-6.60%
	B2C	983.9	568	6.70%	-12.80%
	B2G	25.3	13.5	0.20%	-14.50%

IT	B2B	32543	32673.6	90.00%	0.10%
	B2C	3372.5	3380.2	9.30%	0.10%
	B2G	367.2	241.8	0.70%	-9.90%
LT	B2B	159.3	859.7	81.80%	52.40%
	B2C	46	164.7	15.70%	37.50%
	B2G	13.5	26.4	2.50%	18.20%
LU	B2B	31602.5	41503.6	99.97%	7.10%
	B2C	22.2	9.8	0.01%	-18.50%
	B2G	6.8	3.9	0.02%	-12.80%
LV	B2B	206.3	189.9	94.30%	-2.10%
	B2C	5.3	9	4.50%	14.40%
	B2G	1.6	2.5	1.30%	12.60%
MT	B2B	331.8	556	90.50%	13.80%
	B2C	39.4	53.6	8.70%	8.00%
	B2G	3.2	4.9	0.80%	11.50%
NL	B2B	9372.2	11363.9	89.90%	4.90%
	B2C	647.3	924.4	7.30%	9.30%
	B2G	274.6	345.7	2.70%	5.90%
PL	B2B	1558.2	2495.5	35.90%	12.50%
	B2C	3857.7	4418.1	63.50%	3.40%
	B2G	24.7	39.3	0.60%	12.30%
PT	B2B	1450.6	1907.2	98.80%	7.10%
	B2C	13.3	18.6	1.00%	8.70%
	B2G	3.2	4.7	0.20%	9.60%
RO	B2B	243.5	1014.6	70.40%	42.90%
	B2C	705.1	417.9	29.00%	-12.30%
	B2G	1.8	8.9	0.60%	50.00%
SE	B2B	1368.9	1764.8	65.80%	6.60%
	B2C	671	911.4	34.00%	8.00%
	B2G	4	4.7	0.20%	4.40%
SI	B2B	222.7	319.3	87.80%	9.40%
	B2C	25.7	32.8	9.00%	6.30%
	B2G	9.5	11.7	3.20%	5.20%
SK	B2B	413	845.3	82.00%	19.60%
	B2C	222.6	153.1	14.80%	-8.90%
	B2G	27.3	32.5	3.20%	4.50%

Source: FIGARO - EU Inter-Country Use Tables (EU IC-SUIOTs).

➢ *Green finance*

According to the European Commission, sustainable finance refers to the process of taking **Environmental, Social and Governance (ESG) considerations** into account when making investment decisions, leading to more long-term investments in sustainable economic activities and projects. The Commission also distinguishes between what is already environment-friendly today (green finance), and what supports the transition to environmentally friendly performance levels over time (transition finance)[37]. Sustainability had been of increasing importance to the financial sector in recent years and come to account for growing amounts of capital, with sectoral rules in this area also playing an important role. However, a recent political backlash against ESG has moderated growth in the EU and led to an outright decline in the United States.[38]

The Sustainable Finance Disclosure Regulation (SFDR) is a fundamental regulation in the EU's investment services transparency framework, as it defines how financial market participants have to disclose sustainability information.[39] According to SFDR's framework, sustainable funds are divided into two categories: (i) Article 8 Funds, which promote environmental and/or social characteristics but do not have sustainability as their primary objective, and (ii) Article 9 Funds, which have a sustainable investment objective.[40]

Based on industry figures, total assets in Articles 8 and 9 amount to EUR 6.1 trillion, with Article 8 funds accounting for 57% of the market, while those in Article 9 for 3%. The importance of funds with a green classification increased significantly in the last three years, with an annual growth rate of roughly 5-6% per year from 2021 to 2024. The composition of market shares has also fluctuated, seeing an increase of Article 8 Funds at the expense of the other categories.[41]

As for banking services, a key indicator in determining banks' exposure to sustainable economic activities is the Green Asset Ratio (GAR). This regulatory requirement, which banks have been required to publish since 2024, measures the proportion of assets aligned to sustainability principles compared to total assets. These principles are defined in the so-called EU Taxonomy,[42] a regulatory[43] and navigational[44] tool providing a unified and broad classification system for sustainable economic activities. It was primarily conceived to steer capital allocation by leveraging investors' demand for demonstrable sustainable investments and to reduce the risk of greenwashing in market practices.

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[37] European Commission, Overview of Sustainable Finance, available at: https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance_en

[38] While the effects of the 'ESG backlash' were still playing out at the time of writing and could not yet be determined, the trend has been widely reported in the media, e.g., in the Financial Times from late 2023 (Masters, Brooke, and Patrick Temple-West. 'The Real Impact of the ESG Backlash'. Financial Times, 4 December 2023. Available at: https://www.ft.com/content/a76c7feb-7fa5-43d6-8e20-b4e4967991e7) and Bloomberg from early 2025 (Bloomberg.com. 'Why ESG Faces Backlash and Its Future Under Trump 2.0'. 3 March 2025. Available at: https://www.bloomberg.com/news/articles/2025-03-03/why-esg-faces-backlash-under-trump-2-0.).

[39] European Commission, Sustainability-related disclosure in the financial services sector, available at:

https://finance.ec.europa.eu/sustainable-finance/disclosures/sustainability-related-disclosure-financial-services-sector_en

[40] Those funds that do not have ESG characteristics are classified as Article 6.

[41] Morningstar, "SFDR Article 8 and Article 9 Funds: Q4 2024 in Review**"**

[42] Cf. Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088. Cf. also Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, Giannotti, E., Bolognini, A., Pal, T., (2024) SME disclosure on taxonomy alignment – Cost/benefit analysis – Final report. Volume 1, Publications Office of the European Union, https://data.europa.eu/doi/10.2873/48775

[43] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088

[44] EU Taxonomy Navigator, available at: https://ec.europa.eu/sustainable-finance-taxonomy/

Initial estimates on a sample of banks by the European Banking Authority (EBA) set the initial point of their average GAR at about 8%[45], though recent disclosures showed an average GAR of around 2-3%. The range of GARs varies notably among different institutions and countries, spanning from 0% to 10%, highlighting geographical and regulatory differences[4647].

A notable instrument to directly invest in sustainable activities is green bonds, which are used to finance activities that address climate change and environmental issues[48]. In 2023, the EU green bond market reached EUR 282 billion in green bonds issued, with Germany leading at EUR 64 billion.[49] The Commission has committed to funding up to 30% of NextGenerationEU by issuing green bonds, which will result in the EU being the largest issuer of green bonds in the world.[50]

It should also be mentioned that the initiatives to standardise and codify the sustainable financing framework have not been without problems. In this regard, in response to concerns about the complexity of sustainable finance regulations[51], the Council in its conclusions from March 2025[52] called for simplification and reduction of the administrative burden of sustainability reporting standards. These informed the subsequent Commission 'Omnibus' packages[53], which propose simplifying sustainable finance reporting, including the EU Taxonomy, and seek to balance the need for rigorous environmental standards with practical considerations for financial institutions and investors.

➢ *Cooperative banks*

Cooperative banks originated in the second half of the 19th century in continental Europe, notably from the ideas of Friedrich Wilhelm Raiffeisen and Hermann Schulze-Delitzsch. Their initial purpose was to provide basic financing services to underserved local communities, such as farmers and small artisans, who were excluded by traditional financial intermediaries[54].

At the core of cooperative banks is their incentive structure based on the principle of member ownership (as opposed to shareholder ownership). Each customer who is a member typically holds an equal voting right in major decisions, regardless of their deposit size or shares held, according to the "one member, one vote" approach. Members elect the board of directors from among themselves, with shares in a cooperative institution being usually nominal and unable to be freely traded or sold for profit; they can only be returned

[45] European Banking Authority, EBA publishes results of EU-wide pilot exercise on climate risk, available at: https://www.eba.europa.eu/publications-and-media/press-releases/eba-publishes-results-eu-wide-pilot-exercise-climate-risk

[46] ING, Taxonomy Disclosures: A slow start, but a start nonetheless, available at: https://think.ing.com/articles/hold-taxonomy-disclosures-a-low-start-but-a-start-nonetheless/

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to the collective. In practice, this means that strategic decisions of cooperative banks tend to focus on benefits to the wider geographic or sectorial community in which it acts instead of profitability and growth of shareholder value[55].

Another key difference in the cooperative banking business model is the way profits are distributed and utilised. Cooperatives operate on a not-for-profit-maximisation basis, ensuring they generate enough income to remain sustainable, but without directly paying dividends to members as a corporation would to its shareholders. Surplus is largely reinvested in the institution or returned to members in indirect ways. For example, profits often bolster the bank's capital reserves (to support long-term stability and growth), are used to improve services and reduce costs for members (e.g. higher interest on deposit accounts, lower interest rates on loans or reduced fees) or are invested in public-good initiatives (e.g. sustainable social and community infrastructure development). Since cooperative banks cannot easily issue new equity stock like "regular" banks, earning and retaining some profits is critical as it is their main way to build capital[56].

In general, cooperatives focus on traditional retail banking services tailored to their member base. They take deposits (savings accounts, checking accounts) and make loans mainly in the locality/region or the sector they serve. The product suite usually includes personal loans, home mortgages, agricultural or small enterprise loans, and other basic financial services like payment services or investment products on a limited scale. This focus has advantages: coops often excel in customer service for retail clients and fill niches (like agricultural credit) that big banks may neglect. But it also means cooperatives might not offer large corporate loans or investment products beyond a certain point, often referring such needs to commercial banks[57].

The 2019-2023 data for the domestic market share of EU cooperative banks reveals the general stability or slight growth in market share for most countries, particularly evident in the recovery patterns following the 2020 disruptions. The French collective market share numbers (FR) remain by far in the lead throughout the period, maintaining a dominant position around 62-63% of domestic deposits, reflecting the strong presence of institutions like Crédit Agricole, Crédit Mutuel and BPCE in the French banking landscape.

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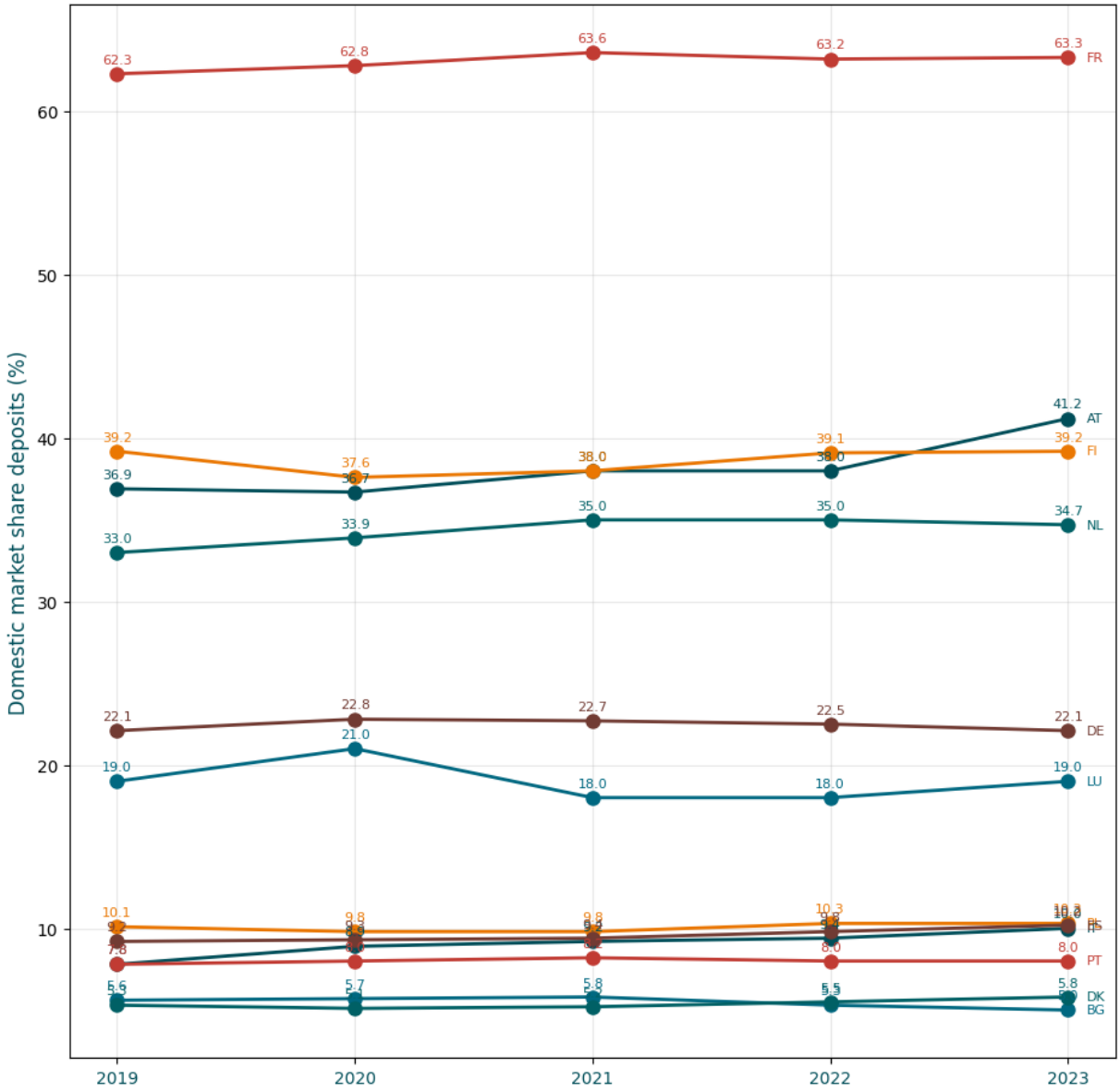
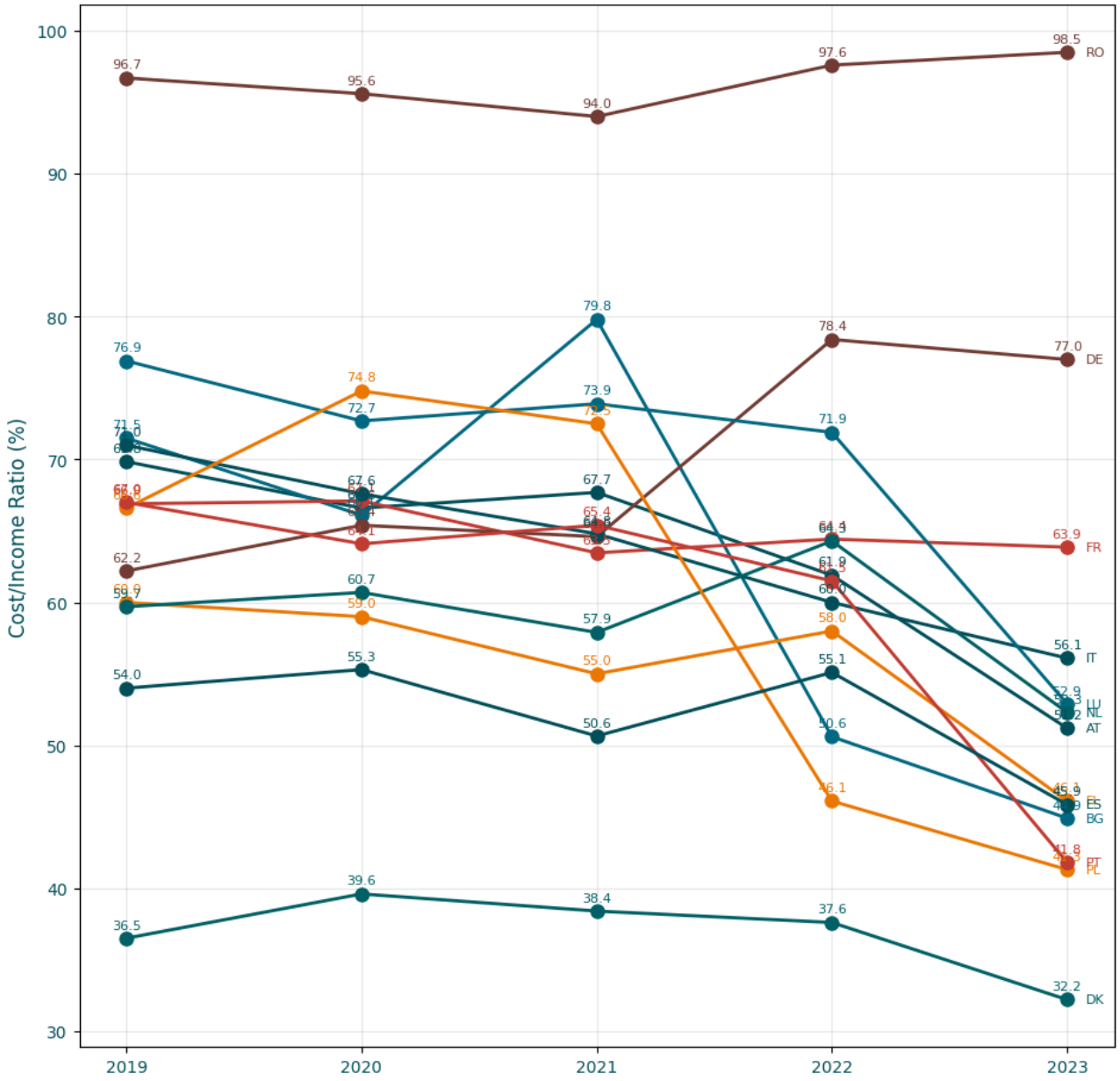
Figure 36. Evolution of the collective domestic market share of deposits with EU cooperative banks



Source: European Association of Cooperative Banks' Key statistics of European Co-operative Banks (2019-2023).

The Cost to Income Ratio (CIR) is a financial metric commonly used in the banking and financial services sector to measure efficiency. It compares the bank's operating costs to its income, with a lower ratio generally indicating better efficiency. Even with the COVID-19 disruptions in 2020-2021, the overall sector has seen overall a notable diminution of its CIR, to a remarkable average of 52.9%. This indicates that the cooperative banking sector in the EU is in good health and resilient to crises.

Figure 37. Evolution of the domestic average Cost to Income Ratio of EU cooperative banks



Source: European Association of Cooperative Banks' Key statistics of European Co-operative Banks (2019-2023).

3.2 Statistical annex to the VAT analysis

This section provides supporting data for the VAT analysis, derived from an economic model based on national accounts data and supply and use tables, following necessary adjustments. The model also incorporates parameters developed primarily from data provided by the authorities.

Table 26. Components of VAT liability associated with the use of services provide by the financial sector (EUR million, 2023)

	Final consumption of services provided by the financial sector	Intermediate consumption of companies without the right to deduct (exclusive of financial and insurance companies)	Non-deductible VAT on intermediate consumption and GFCF of the financial sector
BE	1,356	497	2,151
BG	33	19	185
CZ	0	0	1,083
DK	0	0	1,519
DE	1,875	456	13,212
EE	9	7	52
IE	403	199	352
EL	192	51	519
ES	1,369	233	5,141
FR	2,435	1,955	10,904
HR	65	51	274
IT	2,823	1,653	5,540
CY	25	9	185
LV	39	22	111
LT	74	35	196
LU	33	6	655
HU	238	58	627
MT	4	2	100
NL	0	0	3,190
AT	111	136	1,836
PL	0	0	2,489
PT	175	106	872
RO	80	4	592
SI	9	2	129
SK	83	38	197
FI	212	88	972
SE	566	533	923

Table 27. Breakdown of VAT liability associated with the use of services provided by the financial sector (by sub-sector, EUR million, 2023)

	NACE K64	NACE K65	NACE K66
BE	2,092	1,086	824
BG	171	52	14
CZ	850	176	57
DK	1,288	133	98
DE	9,665	3,773	2,105

EE	56	6	7
IE	483	43	428
EL	520	156	86
ES	3,834	1,718	1,191
FR	8,309	5,308	1,677
HR	286	85	19
IT	5,939	2,511	1,566
CY	160	41	18
LV	121	38	12
LT	191	48	66
LU	582	54	59
HU	746	147	30
MT	76	5	25
NL	2,074	645	471
AT	1,446	480	158
PL	1,417	946	126
PT	852	260	41
RO	441	95	141
SI	94	42	4
SK	232	54	31
FI	755	285	232
SE	1,686	245	90

Source: Authors' own elaboration.

Table 28. Output VAT and deductible input VAT of the financial sector (EUR million, 2023)

	Output VAT	Deductible input VAT (-)
BE	4,421	-2,811
BG	166	-28
CZ	0	-36
DK	0	-188
DE	5,855	-3,084
EE	35	-71
IE	1,902	-3,427
EL	638	-291
ES	4,186	-2,371
FR	14,984	-7,168
HR	285	-117
IT	14,473	-5,426
CY	236	-366
LV	136	-54
LT	193	-112
LU	798	-354

HU	616	-180
MT	59	-139
NL	0	-360
AT	754	-635
PL	0	-837
PT	843	-321
RO	240	-15
SI	21	-85
SK	297	-110
FI	656	-197
SE	1,802	-1,273

Source: Authors' elaboration.

Table 29. VAT policy gap for the financial sector (by subsectors, EUR million, 2023)

	NACE K64	NACE K65	NACE K66
BE	154	2,473	323
BG	170	24	-8
CZ	103	580	117
DK	1,305	748	50
DE	-497	8,050	-1,960
EE	64	27	0
IE	585	1,734	45
EL	804	262	-77
ES	2,143	1,998	608
FR	-1,379	11,383	-1,530
HR	48	17	12
IT	-315	3,907	-651
CY	8	50	-11
LV	15	56	-6
LT	106	98	-22
LU	-453	83	-59
HU	638	347	-12
MT	-4	66	4
NL	2,854	9,021	-22
AT	-400	937	-73
PL	1,992	691	1,021
PT	433	479	-35
RO	-233	59	-57
SI	127	174	8
SK	29	125	-1
FI	561	583	-51
SE	728	875	115

Source: Authors' own elaboration.

Table 30. Effective tax rates for sectoral taxes 2023)

	NACE K64	NACE K65	NACE K66
BE	2,092	1,086	824
BG	171	52	14
CZ	850	176	57
DK	1,288	133	98
DE	9,665	3,773	2,105
EE	56	6	7
IE	483	43	428
EL	520	156	86
ES	3,834	1,718	1,191
FR	8,309	5,308	1,677
HR	286	85	19
IT	5,939	2,511	1,566
CY	160	41	18
LV	121	38	12
LT	191	48	66
LU	582	54	59
HU	746	147	30
MT	76	5	25
NL	2,074	645	471
AT	1,446	480	158
PL	1,417	946	126
PT	852	260	41
RO	441	95	141
SI	94	42	4
SK	232	54	31
FI	755	285	232
SE	1,686	245	90

Source: Authors' own elaboration based on Taxes in Europe Database, Eurostat National Tax Lists, targeted consultation – for revenue figures, SUTs – for output values. Note: tax revenue to output ratio. See for additional details for taxes on insurance sector.

4. Sectoral taxes

This Annex presents a detailed overview of sectoral taxes across the EU27.

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
AT	Insurance tax	1953	Insurance companies	Insurance premiums	1.00-11.00	1,465	1.11%	6.53%	0.31%	Taxes on sales of certain products
AT	Levy on banks / Stabilitätsabgabe[1]	2011	Credit institutions	Balance sheet totals after subtracting secured deposits, equity and trust transactions	0.024-0.029	149	0.11%	0.66%	0.03%	Financial institution levies
BE	Insurance tax	2007	Insurance companies	Amount of the premiums, employers' and employees' contributions, plus the charges, to be paid in the course of the tax year either by the policyholder or by the affiliated members and their employers.	1.10-9.60	1,648	0.95%	5.09%	0.28%	Taxes on sales of certain products
BE	Miscellaneous duties and taxes	2007	Financial intermediaries, insurance companies	Duties on written documents; tax on stock-exchange and carry-over transactions;	Duties on written documents (EUR 0.15-100); tax on stock-exchange and carry-over transactions (1.20-	644	0.37%	1.99%	0.11%	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
				annual tax on insurance transactions; annual tax on profit-sharing schemes; tax on long-term savings; bill-posting tax; annual tax on credit institutions; tax on securities accounts	3.50 per thousand, limits apply); annual tax on insurance transactions (1.10-9.25%); annual tax on profit-sharing schemes (9.25%); tax on long-term savings (8-33%); bill-posting tax (EUR 0.50 per m2); annual tax on credit institutions (0.13231%); annual tax on investment and insurance companies (0.0925%); tax on securities accounts (0.15%)					
BE	Tax on stock-exchange transactions / taxe sur les opérations boursières	2007	Initiator of transaction or performer of transaction (if initiator is based outside Belgium)	For purchases or acquisitions: the amount to be paid by the purchaser, excluding the brokerage of the intermediary; for sales or transfers: the amount to be received by the	0.35 general rate	300	0.17%	0.93%	0.05%	Financial transaction tax

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
				seller or the transferor, including the brokerage of the intermediary						
BE	Annual tax on unit trusts, credit companies and insurance companies	2016	Unit trusts, credit companies and insurance companies	Concerning the Belgian investment funds, the management companies and the foreign investment funds the basis of assessment equals the sum of the outstanding amounts on 31 December of the preceding year. For the insurance companies the taxable amount equals in both cases the provisions that have been reserved for the specific tax exemptible products.	0.0925	206	0.12%	0.64%	0.03%	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
BE	Annual tax on credit institutions	2007	Credit institutions	Average amount of total debts opposite clients in the year preceding the taxation year	0.13231 (below €50 billion taxable base) 0.17581 (above €50 billion) Increase with 2026 to 0.15205 & 0.20204 Further increase 2027 (0.19286 & 0.25626)	897	0.52%	2.77%	0.15%	Financial institution levies
BG	Insurance tax	2011	Insurance companies	Insurance premiums	2	59	0.30%	1.11%	0.06%	Taxes on sales of certain products
CY	Insurance premium tax (life insurance)	2002	Insurance companies	Gross premium income	1.50	*No data*	-	-	-	Taxes on sales of certain products
CY	Special tax for financial institutions	2011	Financial institutions	Deposits held	0.15	83	1.08%	2.97%	0.26%	Financial institution levies
CZ	Windfall tax	2023	Banks	Profit margins exceeding 120% of average taxable profit of 2018-21	60.00	25	0.04%	0.26%	0.01%	Windfall tax
DE	Insurance tax	1922	Insurance companies	Insurance premium	19	16,850	1.74%	11.83%	0.40%	Taxes on sales of certain products
DE	Fire Protection act	1996	Insurance companies	Insurance premium	22.00 (on 60% of premium)	656	0.07%	0.46%	0.02%	Taxes on sales of certain products
DK	Payroll tax	1990	Financial institutions and insurance companies	Sum of wages to the employees	15.00 (2019), 15.30 (from 2021)	1,495	0.91%	8.20%	0.40%	Payroll taxes
DK	Non-life insurance tax	2013	Insurance companies	Insurance premium	1.10	99	0.06%	0.54%	0.03%	Taxes on sales of certain products

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
DK	Tax on pleasure boat insurance	1976	Insurance companies	Insured value of the vessel, not including the tax	1	13	0.01%	0.07%	0.00%	Taxes on sales of certain products
DK	Tax on third-party insurance for motor vehicles	1975	Insurance companies	Third-party insurance premium	34.40-42.90	189	0.12%	1.03%	0.05%	Taxes on sales of certain products
DK	Additional CIT	2023	Financial institutions	Total income	25.2 (2023) 26 (2024)	*No data*	-	-	-	Additional CIT
EE	None						-	-	-	
EL	Insurance premium tax	2006	Insurance companies	Insurance premium	4.00-20.00	540	0.87%	4.25%	0.24%	Taxes on sales of certain products
EL	Financial transaction taxes				0.1-0.2	587	0.95%	4.62%	0.26%	Financial transaction taxes
ES	Insurance tax - Tax on insurance premiums	1997	Insurance companies	Insurance premium	4	2,353	0.66%	3.18%	0.16%	Taxes on sales of certain products
ES	Financial transaction tax	2021	Acquirer of securities (financial intermediary)	Shares in companies that have a market capitalisation value in excess of 1 billion euros. The taxable base is the amount of the consideration, excluding the costs associated with the transaction.	0.2	198	0.06%	0.27%	0.01%	Financial transaction taxes
ES	Windfall tax	2022	Banks	Net interest income and net	4.8	1,695	0.48%	2.29%	0.11%	Windfall tax

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
				fees if the net income from these sources exceeded EUR 800 million in 2019	(2025-27: 1-7 progressive; 7 for largest banks, annual revenue over EUR 5 billion)					
FI	Tax on fire insurance	1946	Insurance companies	Insurance premium	3	13	0.02%	0.13%	0.005%	Taxes on sales of certain products
FI	Tax on Insurance Premiums	1967	Insurance companies	Insurance premium	25.5	922	1.12%	9.27%	0.34%	Taxes on sales of certain products
FR	Tax on insurance contracts	1944	Insurance companies	Total amount of premiums and additions	7.00-30.00	10,100	1.23%	13.96%	0.36%	Taxes on sales of certain products
FR	Additional solidarity tax	2011	Insurance companies	Total amount of premiums and additions	6.27-20.27	5,719	0.70%	7.91%	0.20%	Taxes on sales of certain products
FR	Tax on excess provisions	1983	Non-life insurance companies	The tax base is made up of a fraction of the excess provisions reinstated after deductibles and additional allocations made during the year.	0.4	229	0.03%	0.32%	0.01%	Taxes on sales of certain products

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
FR	Payroll tax	1968	Any operator who is not subject to VAT or who has been subject to less than 90% of his turnover during the year preceding that of the payment of remuneration	Gross annual compensation of the employee.	Progressive scale (from 4.25 to 13.60)	4,500	0.55%	6.22%	0.16%	Payroll taxes
FR	Financial transaction tax	2012	Investment service providers (PSI)	Acquisition of equity securities issued by a company with its registered office in France, which are admitted to trading on a regulated market and whose market capitalization exceeds EUR 1 billion on December 1 preceding the taxation year	0.3	1,077	0.13%	1.49%	0.04%	Financial transaction taxes

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
FR	Tax on production factors	2015	Funds / Asset Managers	Capital (Minimum capital requirement)	0.0642, to decrease to 0.0505 for 2026-28	138	0.02%	0.19%	0.00%	Financial institution levies
HR	Tax on motor third party vehicle insurance	2003	Insurance companies	Insurance premiums	10.00-15.00	58	0.28%	1.82%	0.07%	Taxes on sales of certain products
HR	Tax on comprehensive road vehicles insurance premium	2012	Insurance companies	Insurance premiums	4	25	0.12%	0.79%	0.03%	Taxes on sales of certain products
HU	Insurance premium tax	2013	Insurance companies	Insurance premiums	10.00-23.00	478	0.97%	6.71%	0.24%	Taxes on sales of certain products
HU	Special tax on financial institutions	2010	Financial institutions	Credit institutions - adjusted balance-sheet total; financial enterprises - total interest revenue less interest total interest expense, and income from fees, charges and commission less expense from fees and charges; exchange market operators, commodity	Credit institutions 0.15% up to tax base of HUF 50 billion tax, 0.2% on the exceeding tax base; financial enterprises 6.5%.	218	0.45%	3.07%	0.11%	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
				dealers and venture investors – adjusted revenues						
HU	Special Tax of Dealers and Investment Funds	2015	Dealers and Investment Funds	Dealers – adjusted collective investment instrument value; investment funds - value of investment units	0.05	15	0.03%	0.21%	0.01%	Financial institution levies
HU	Financial transaction levy	2013	Institutions providing payment services, financial institutions providing credit and loan, currency exchange dealers	Value of payment transactions	General rate 0.3%, but not exceeding HUF 10,000 per payment transaction (since July 2024 0.45%, max 20,000); rate defers from the general rate on certain payment transactions	873	1.78%	12.26%	0.44%	Financial transaction taxes
HU	Windfall tax	2022	Financial institutions	100% of last year's pretax earning (lowered to 50%)	8 on tax base not exceeding HUF 20 billion / 20 applies to excess amount	690	1.41%	9.69%	0.35%	Windfall tax
IE	Stamp duty insurance	1975	Insurance companies	Insurance premiums	3	171	0.18%	0.72%	0.03%	Taxes on sales of certain products

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
IE	Stamp duty on life insurance premiums	2009	Insurance companies	Insurance premiums	1	33	0.03%	0.14%	0.01%	Taxes on sales of certain products
IE	Stamp duty on non-life insurance premiums	1982	Insurance companies	Insurance premiums	1 EUR	3	0.00%	0.01%	0.00%	Taxes on sales of certain products
IE	Stamp duty - Credit and charge cards	1999	Banks	The duty is charged by reference to the number of credit card accounts which are maintained by the bank. In the case of charge cards, the duty is charged by reference to the number of cards which are issued or renewed by the promoter and expressed to be valid.	Credit cards EUR 30 per account. Charge cards EUR 30 per card. 12 cent for ATM withdrawals, capped at EUR 2.50 / EUR 5 per year.	39	0.04%	0.16%	0.01%	Taxes on sales of certain products
IE	Levy on private health insurance	2009	Private Health Insurance Providers	Insurance premiums	59 EUR - 449 EUR	815	0.87%	3.42%	0.16%	Taxes on sales of certain products

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
IE	Stamp Duty on shares	1999	Purchaser of the stocks or shares	Consideration paid for the stocks or shares where that consideration exceeds EUR 1,000	1	785	0.84%	3.29%	0.15%	Taxes on sales of certain products
IE	Levy on certain financial institutions	2024	Financial institutions	Total value of eligible deposits	0.112	N.A.	-	-	-	Financial institution levies
IE	Bank Levy on DIRT accounts	2014-2023	Financial institutions, holding customer deposits	Deposit interest	35	87	0.09%	0.36%	0.02%	Financial institution levies
IT	Provincial tax on motor vehicle insurances	2011	Insurance companies	Insurance premiums	9.00-16.00	2,163	0.35%	1.97%	0.10%	Taxes on sales of certain products
IT	Tax on insurance	1961	Insurance companies	Insurance premiums	2.5-21.25	4,513	0.74%	4.10%	0.21%	Taxes on sales of certain products
IT	Emergency health services	pre 2007	Motor liability insurance	Premium value	10.5	*No data*	-	-	-	Taxes on sales of certain products
IT	Road accident victim funds	pre 2007	Motor liability insurance	96% of premium value	2.5	*No data*	-	-	-	Taxes on sales of certain products
IT	Hunting accident victim funds	pre 2007	Hunting liability insurance	96% of premium value	10	*No data*	-	-	-	Taxes on sales of certain products

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
IT	Stamp duty	1972	Banks	The tax is due on deeds, documents and checking accounts provided in the tariff attached to Presidential Decree n. 642/1972	Rates are fixed or proportional: - fixed rate range from EUR 0.258-300.00, most deeds and documents are subject to the fixed rate of EUR 16.00; - proportional rate range from 0.1% to 12%	6,777	1.11%	6.16%	0.32%	Taxes on sales of certain products
IT	Stamp duty - Duty in lieu of registration and stamp duties (excl. Insurance tax)	1973	Medium and long term financing operations as specified by law and effected by banking institutions	This substitute tax is determined in accordance with the amount of financing granted within the relevant year	2	384	0.06%	0.35%	0.02%	Taxes on sales of certain products
IT	Transaction Tax	post 2007	Share transactions; derivatives; high frequency trading	Share and high-frequency trading: transaction value Derivatives: determined per transaction	Share: 0.2% (0.1% for regulated markets) Financial Derivatives: fixed amount depending on notional value High-frequency trading: 0.02%	367	0.06%	0.33%	0.02%	Financial transaction taxes
IT	Additional IRAP for banks and insurance	1997	Financial institutions			489	0.08%	0.44%	0.02%	Additional CIT

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
IT	Windfall tax	2023	Banks	Portion of interest margin realised by Italian credit institutions, including Italian branches of foreign credit institutions, in the 2023 fiscal year that exceeds by more than 10% the interest margin realised in the 2021 fiscal year. Amount is capped to 0.26% of the risk-weighted assets. In lieu of paying the tax, banks can increase their capital by an amount more than proportional to the tax due.	40	9	0.001%	0.01%	0.00%	Windfall tax
LT	Additional corporate income tax	2020	Banks	Profits exceeding 2 million	5 (on top of 17 standard rate)	60	0.37%	1.86%	0.08%	Additional CIT

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
LT	Windfall tax (Temporary Solidarity Contribution)	2023	Banks	Net interest income that exceeds a four-year moving average by 50%	60	164	1.02%	5.10%	0.22%	Windfall tax
LU	Insurance tax	1937	Insured party, but the insurer is liable for collection, declaration and payment	Consideration paid for the insurance	4	65	0.28%	0.38%	0.08%	Taxes on sales of certain products
LU	Insurance (Fire)	Pre 2008	Insurance companies	Insurance premiums	6	5	0.02%	0.03%	0.01%	Taxes on sales of certain products
LU	Insurance (Emergency)	Post 2008	Insurance companies	Insurance premiums	3.00	5	0.02%	0.03%	0.01%	Taxes on sales of certain products
LU	Subscription Tax / Taxe d'abonnement	1988	Funds	Net asset value	0.01-0.05	1,281	5.47%	7.51%	1.62%	Financial institution levies
LV	Additional CIT	2024	Credit institutions and consumer credit service providers	Net profit	20	N.A.	-	-	-	Additional CIT
LV	Financial Stability Fee	2011	Credit institutions	Total liabilities of the fee payer at the end of the year	0.072	1	0.01%	0.03%	0.001%	Financial institution levies
LV	Windfall tax	2025	Credit institutions	Net interest income that exceeds a four-year average (2018-22) by 50%	60	N.A.	-	-	-	Windfall Tax

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
MT	Duty on documents and transfers - Insurance policy	1992	Insurance companies	Insurance premiums	Life insurance policies renewable yearly 10%; Non-renewable life insurance 0.1% on sum insured; Other Insurance 11%; Aviation, Marine cargo/hull/boat, Credit & Suretyship, Medical Cover - exempt	36	0.79%	2.11%	0.17%	Taxes on sales of certain products
NL	Tax on legal transactions (Insurance)	1972	Insurance companies	Insurance premiums and the fee for the insurance related services	21	3,666	1.32%	7.11%	0.34%	Taxes on sales of certain products
NL	Tax on banks	2012	Credit institutions	Total amount of equity and liabilities on the balance sheet minus the amount of tier 1 capital, the actually secured deposits under a deposit insurance scheme and the liabilities connected with the assurance	0.029-0.058	458	0.16%	0.89%	0.04%	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
				activities of the bank						
PL	Tax on certain financial institutions	2016	Credit institutions, credit unions, Insurance companies, lending institutions	Surplus of the total value of assets of the taxpayer resulting from the statement of turnovers and balances	0.037	1,299	0.80%	3.76%	0.17%	Financial institution levies
PT	Stamp duty on insurance premiums	1986	Financial institutions	Insurance premiums	2.00-9.00	503	0.75%	3.05%	0.19%	Taxes on sales of certain products
PT	Fee on life and non life insurance premiums intended to the national system of civil protection and medical emergency	2012	Insurance companies	Insurance premiums	2.5	206	0.31%	1.25%	0.08%	Taxes on sales of certain products
PT	Fee on motor vehicle insurance premiums intended to Road Safety	2007	Insurance companies	Insurance premiums	0.21	5	0.01%	0.03%	0.002%	Taxes on sales of certain products
PT	Fee on motor vehicle liability insurance premiums intended to the Motor	2007	Insurance companies	Insurance premiums	2.5	29	0.04%	0.17%	0.01%	Taxes on sales of certain products

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
	Vehicle Guarantee Fund									
PT	Fee on occupational accident insurance premiums intended to the Occupational Accident Fund	1999	Insurance companies, firms	Insured salaries / Redemption capital of pensions in payment	0.15-0.85	112	0.17%	0.68%	0.04%	Taxes on sales of certain products
PT	Other taxes on production	1978	Insurance companies			260	0.39%	1.58%	0.10%	Taxes on sales of certain products
PT	Stamp duty on credit, interest and fees charged by funds, financial institutions, issuers and portfolio management entities	1986	Financial institutions	Amount of credit granted, interest and commissions charged	0.5-0.6 for credit; 3-4 for interest and fees	723	1.08%	4.38%	0.27%	Taxes on sales of certain products
PT	Regulatory fee on insurance companies and pension funds management entities	2015	Insurance companies, Insurance intermediaries, Pension Funds	Insurance premiums; Contributions to pensions funds; Individual fee / Last year total receipts / Individual acts of registration and extension of activity	0.048 (Life), 0.242 (Non-life), 0.048% (Pension funds), EUR 20-5 000 (Insurance intermediaries)	21	0.03%	0.13%	0.01%	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
PT	Pension redemption fee on insurance companies		Insurance companies			10	0.01%	0.06%	0.004%	Financial institution levies
PT	Contribution on banking industry	2011	Financial institutions	Liabilities subtracted of net equity and guaranteed deposits / Notional value of the financial derivatives off balance sheet	0.00030-0.110	254	0.38%	1.54%	0.09%	Financial institution levies
PT	Solidarity contribution on the banking industry	2020	Financial institutions	1. Liabilities subtracted of liabilities consisting in own funds, guaranteed deposits and deposits by mutual agricultural credit banks 2. Notional value of the financial derivatives off-balance sheet	0.02 & 0.00005	39	0.06%	0.24%	0.01%	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
RO	Supplemental turnover tax	2024	Credit institutions	Turnover	2 (2025) 1 (from 2026 onwards)	N.A.	-	-	-	Additional CIT
SE	Insurance tax - Tax on life insurance premium	1991	Insurance companies, employers and self-employed	Premiums for group life insurances	45.00 (of 95% of premium)	49	0.02%	0.22%	0.01%	Taxes on sales of certain products
SE	Insurance tax - Tax on traffic insurance premiums	2007	Insurance companies	Premiums for traffic insurances	32	238	0.11%	1.07%	0.04%	Taxes on sales of certain products
SE	Risk Tax	2022	Banking institutions	Debts held by the credit institution (i.e., banks' liabilities)	0.06	560	0.27%	2.53%	0.10%	Financial institution levies
SI	Insurance tax	1999	Insurance companies	Insurance premiums	8.5	135	1.02%	4.93%	0.21%	Taxes on sales of certain products
SI	Fire Tax	1994	Insurance companies	Insurance premium	9	19	0.14%	0.70%	0.03%	Taxes on sales of certain products
SI	Financial services tax	2012	Financial institutions	Fee (commission) that has been paid for the financial service	8.5	74	0.55%	2.69%	0.12%	Financial institution levies
SI	Tax on the balance sheet of banks and savings banks	2023	Banks and savings banks	Value of all assets in the statement of financial position (i.e., the	0.2	*No data*	-	-	-	Financial institution levies

Country	Name of measure	Introduction (year)	Providers affected	Tax base	Tax rate (% unless indicated otherwise)	Tax revenue 2023				Category of tax
						EUR million	% of total tax revenue	% of GVA of sector	% of GDP	
				balance sheet total) of the taxpayer, calculated as the average value of the balances on each last day of the month in the tax period.						
SK	Insurance Tax	2019	Insurance companies (non-life)	Insurance premium	8	100	0.41%	3.27%	0.08%	Taxes on sales of certain products
SK	Special levy on businesses in regulated industries	2012/2024	Insurance companies (2012)/Financial institutions (2024)	Profit exceeding EUR 3 million	0.363 / Banks higher until 2028 (gradually decreasing)	106	0.43%	3.49%	0.09%	Financial institution levies
SK	Tax on Financial Transactions	2025	Financial institutions	Amount of debiting funds from bank accounts and withdrawal of cash	0.4 on each non - cash transaction with a maximum limit of 40 EUR for transfer, 0.8 on cash withdrawal with no maximum limit, 2 EUR per year for use for payments cards	N.A.	-	-	-	Financial transaction tax
SK	Windfall tax	2024	Banks	Net profit of banks	30 (in 2024, then fall by 5 percentage points until 15 in 2027)	N.A.	-	-	-	Windfall tax

5. Data tables from the PEM and NEMESIS

This annex presents additional tables from the partial equilibrium and macroeconomic models used to simulate the impact of Block 3 policy considerations of different economic variables. This includes sensitivity scenarios, which were defined using different parameter values of elasticity and pass-through, as below.

Table 31. Parameter values of the core and sensitivity scenarios

Scenario name and description		Pass-through	Elasticity
S1	Core scenario	0.8	-0.5
S2	Lowest pass-through, same elasticity	0.6	-0.5
S3	Lower pass-through, lower elasticity	0.7	-0.2
S4	Lower pass-through, very high elasticity	0.7	-1.0

5.1 Partial-equilibrium model: impact on sales for the core and sensitivity scenarios

Table 32. Impact on sales from the S1 core scenario (as % of current sales), partial equilibrium model

Impact on sales of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C)				
	As % of current sales				EUR bn
	Banking	Insurance	Other financial services	Total	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	<1%	3%	5%	2%	13
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-1%	-3%	3%	-1%	-11
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	<1%	-1%	4%	<1%	<1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	2%	1%	5%	2%	16
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	1%	3%	5%	2%	15
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	<1%	-3%	3%	-1%	-7
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1%	<1%	1%	<1%	<1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	1%	1%	5%	2%	15
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-2%	4%	-7%	<1%	-3

Table 33. Impact on sales from the S1 core scenario (in EUR bn), partial equilibrium model

Impact on sales of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C) - EUR bn			
	Banking	Insurance	Other financial services	Total
3A(i) – VAT on all services, standard rates, removal of all sectoral taxes	<1	9	4	13
3A(i) – VAT on all services, standard rates, sectoral taxes maintained	-6	-7	2	-11

3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	<1	-3	3	<1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	8	4	4	16
3B(i) – VAT on fee-based services, standard rates, removal of all sectoral taxes	3	9	4	15
3B(i) – VAT on fee-based services, standard rates, sectoral taxes maintained	-1	-7	2	-7
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1	-1	1	<1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	7	4	4	15
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-8	11	-6	-3

Table 34. Impact on sales from the S2 sensitivity scenario, partial equilibrium model

Impact on sales of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C)				
	As % of current sales				EUR bn
	Banking	Insurance	Other financial services	Total	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	<1%	2%	4%	1%	10
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-1%	-2%	2%	-1%	-8
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	<1%	-1%	3%	<1%	<1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	1%	1%	4%	1%	12
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	<1%	2%	4%	1%	11
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	<1%	-2%	2%	-1%	-5
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1%	-1%	3%	<1%	<1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	1%	1%	4%	1%	11
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-1%	3%	-5%	<1%	-2

Table 35. Impact on sales from the S3 sensitivity scenario, partial equilibrium model

Impact on sales of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C)				
	As % of current sales				EUR bn
	Banking	Insurance	Other financial services	Total	Total
3A(i) – VAT on all services, standard rates, removal of all sectoral taxes	<1%	1%	2%	1%	4
3A(i) – VAT on all services, standard rates, sectoral taxes maintained	<1%	-1%	1%	<1%	-4
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	<1%	<1%	1%	<1%	<1

3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	1%	<1%	2%	1%	6
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	<1%	1%	2%	1%	5
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	<1%	-1%	1%	<1%	-2
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1%	<1%	1%	<1%	<1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	1%	<1%	2%	1%	5
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-1%	1%	-2%	<1%	-1

Table 36. Impact on sales from the S4 sensitivity scenario, partial equilibrium model

Impact on sales of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C)				
	As % of current sales				EUR bn
	Banking	Insurance	Other financial services	Total	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	<1%	5%	8%	3%	22
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-2%	-5%	5%	-2%	-19
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	<1%	-2%	7%	<1%	<1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	3%	2%	9%	3%	28
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	1%	5%	8%	3%	27
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-1%	-5%	5%	-1%	-12
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1%	-2%	6%	<1%	-1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	3%	2%	9%	3%	26
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-3%	7%	-12%	-1%	-5

5.2 Partial-equilibrium model: impact on revenues for the core and sensitivity scenarios

Table 37. Impact on revenues from the S1 core scenario, partial equilibrium model

Impact on revenues of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C) - EUR bn			
	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-2	-29	-11	-41
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	15	20	-6	30
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1	9	-8	<1

3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-24	-11	-11	-46
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-8	-29	-11	-47
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	4	20	-6	19
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-1	10	-8	1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-20	-11	-11	-42
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	22	-36	14	<1

Table 38. Impact on revenues from the S2 sensitivity scenario, partial equilibrium model

Impact on revenues of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C) - EUR bn			
	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-2	-29	-11	-41
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	16	21	-6	31
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1	9	-8	<1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-24	-11	-11	-46
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-8	-29	-11	-47
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	4	21	-6	20
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1	10	-8	2
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-20	-11	-11	-42
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	22	-36	14	<1

Table 39. Impact on revenues from the S3 sensitivity scenario, partial equilibrium model

Impact on revenues of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C) - EUR bn			
	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-2	-29	-11	-41
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	16	22	-6	33
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1	9	-8	<1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-24	-11	-11	-47

3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-8	-29	-11	-48
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	5	22	-6	21
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1	10	-8	2
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-21	-11	-11	-43
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	23	-37	15	1

Table 40. Impact on revenues from the S4 sensitivity scenario, partial equilibrium model

Impact on revenues of removing the VAT exemption and/or sectoral taxes	Impact (B2B + B2C) - EUR bn			
	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-2	-28	-11	-41
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	14	18	-6	26
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1	8	-8	-1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-23	-10	-11	-44
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-8	-28	-11	-46
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	4	18	-6	16
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	<1	8	-8	1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-20	-10	-11	-41
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	20	-34	13	-1

5.3 Macroeconomic model: detailed impacts for the core scenario

Table 41. Impact on sales from the core scenario, macroeconomic model

No recycling

Impact on sales of removing the VAT exemption and sectoral taxes	Impact (B2B + B2C)							
	As % of current sales				EUR bn			
	Banking	Insurance	Other financial services	Total	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-0,1%	2,1%	1,3%	0,7%	-1	7	5	11
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-0,8%	-2,2%	-0,6%	-1,1%	-6	-7	-2	-16

3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-0,1%	-1,0%	0,1%	-0,3%	-1	-3	<1	-4
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,8%	0,9%	1,0%	0,9%	6	3	4	13
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-0,2%	2,1%	0,0%	0,4%	-2	7	0	5
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-0,8%	-2,2%	-1,9%	-1,4%	-6	-7	-7	-20
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-0,5%	-1,0%	-0,7%	-0,7%	-4	-3	-3	-10
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,6%	0,9%	0,9%	0,8%	5	3	3	11
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-0,8%	3,5%	-0,6%	0,3%	-6	11	-2	4

Recycling through changes in VAT rates

Impact on sales of removing the VAT exemption and sectoral taxes	Impact (B2B + B2C)							
	As % of current sales				EUR bn			
	Banking	Insurance	Other financial services	Total	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-0,1%	2,2%	1,3%	0,8%	-1	7	5	11
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-0,8%	-2,1%	-0,6%	-1,1%	-6	-7	-2	-15
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-0,1%	-0,9%	0,1%	-0,3%	-1	-3	<1	-4
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,8%	0,9%	1,0%	0,9%	6	3	4	12
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-0,2%	2,1%	<0,1%	0,4%	-2	7	<1	5
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-0,8%	-2,2%	-1,9%	-1,4%	-6	-7	-7	-20
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-0,5%	-1,0%	-0,7%	-0,6%	-3	-3	-2	-9
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,6%	0,9%	0,9%	0,8%	5	3	3	11
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-0,8%	3,4%	-0,6%	0,2%	-6	11	-2	4

Recycling through lump-sum transfers

Impact on sales of removing the VAT exemption and sectoral taxes	Impact (B2B + B2C)							
	As % of current sales				EUR bn			
	Banking	Insurance	Other financial services	Total	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-0,1%	2,3%	1,4%	0,8%	<1	8	5	12
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-0,7%	-2,0%	-0,5%	-1,0%	-5	-7	-2	-14
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	<0,1%	-0,9%	0,1%	-0,2%	<1	-3	1	-3
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,8%	0,9%	1,0%	0,9%	6	3	4	13
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-0,2%	2,2%	0,1%	0,4%	-1	7	<1	6
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-0,8%	-2,1%	-1,8%	-1,4%	-6	-7	-6	-19
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-0,4%	-1,0%	-0,7%	-0,6%	-3	-3	-2	-9
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,6%	0,9%	0,9%	0,8%	5	3	3	11
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-0,8%	3,4%	-0,6%	0,2%	-6	11	-2	3

Table 42. Impact on revenues from the core scenario, macroeconomic model

No recycling

Impact on revenues of removing the VAT exemption and sectoral taxes	EUR bn			
Consideration	Banking	Insurance	Other financial services	Total
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	3	-32	-6	-35
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	18	15	-2	31
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	3	3	-4	2
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-16	-12	-7	-35
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-6	-32	-6	-43
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	10	15	-2	23

3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	2	3	-4	2
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-20	-12	-7	-39
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	19	-34	18	3

Recycling through changes in VAT rates

Impact on revenues of removing the VAT exemption and sectoral taxes	EUR bn			
Consideration	**Banking**	**Insurance**	**Other financial services**	**Total**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	3	-32	-6	-35
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	18	15	-2	32
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	3	3	-4	2
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-16	-12	-7	-35
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-6	-32	-6	-43
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	10	15	-2	23
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	2	4	-4	2
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-20	-12	-7	-39
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	19	-34	18	3

Recycling through lump-sum transfers

Impact on revenues of removing the VAT exemption and sectoral taxes	EUR bn			
Consideration	**Banking**	**Insurance**	**Other financial services**	**Total**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	3	-32	-6	-34
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	19	15	-1	32
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	3	3	-4	2
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	-16	-12	-7	-35
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-6	-32	-6	-43
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	10	15	-2	24
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	2	4	-4	2

3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	-20	-12	-7	-39
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	19	-34	18	3

Table 43. Impact on imports of financial services from the core scenario, macroeconomic model

No recycling

Impact on imports 2030 deviation from baseline - no recycling	EUR bn			
Consideration	**Imports from UK**	**Imports from CH**	**Imports from RoW**	**Total imports**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-1,6	-1,2	-5,2	-8,0
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-2,1	-1,5	-6,3	-9,9
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1,1	-0,9	-3,3	-5,3
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	<0,1	0,1
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-1,0	-0,8	-2,9	-4,8
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-1,6	-1,1	-4,0	-6,7
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-0,9	-0,6	-2,2	-3,6
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,1	0,1	0,2	0,4
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	0,5	0,4	1,4	2,3

Recycling through changes in VAT rates

Impact on imports 2030 deviation from baseline - no recycling	EUR bn			
Consideration	**Imports from UK**	**Imports from CH**	**Imports from RoW**	**Total imports**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-1,4	-1,1	-4,7	-7,3
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-2,0	-1,4	-5,8	-9,2
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1,0	-0,8	-3,0	-4,8
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	<0,1	0,1
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-1,0	-0,8	-2,9	-4,8
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-1,5	-1,0	-3,7	-6,3
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-0,8	-0,6	-2,0	-3,4
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	0,2	0,3

3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	0,5	0,3	1,3	2,2

Recycling through lump-sum transfers

Impact on imports 2030 deviation from baseline - no recycling	EUR bn			
Consideration	**Imports from UK**	**Imports from CH**	**Imports from RoW**	**Total imports**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-1,3	-1,0	-4,2	-6,5
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-1,8	-1,3	-5,3	-8,4
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-1,0	-0,7	-2,7	-4,4
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	0,1	0,2
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	-0,9	-0,7	-2,3	-3,8
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-1,4	-0,9	-3,4	-5,8
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-0,8	-0,5	-1,8	-3,1
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	0,2	0,3
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	0,5	0,3	1,2	1,9

Table 44. Impact on exports of financial services from the core scenario, macroeconomic model

No recycling

Impact on exports 2030 deviation from baseline - no recycling	EUR bn			
Consideration	**Exports to UK**	**Exports to CH**	**Exports to RoW**	**Total exports**
3A(i) – VAT on all services, standard rates, removal of all sectoral taxes	0,4	0,3	2,9	3,6
3A(i) – VAT on all services, standard rates, sectoral taxes maintained	0,3	0,2	2,0	2,6
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	0,2	0,2	1,4	1,8
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,1	0,1	0,6	0,8
3B(i) – VAT on fee-based services, standard rates, removal of all sectoral taxes	0,2	0,1	2,1	2,4
3B(i) – VAT on fee-based services, standard rates, sectoral taxes maintained	0,1	0,1	1,2	1,4
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	0,1	0,1	0,8	1,0
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	0,5	0,7
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-0,2	-0,2	-1,0	-1,4

Recycling through changes in VAT rates

Impact on exports 2030 deviation from baseline - no recycling	EUR bn			
Consideration	**Exports to UK**	**Exports to CH**	**Exports to RoW**	**Total exports**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	0,4	0,2	2,7	3,3
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	0,3	0,2	1,8	2,3
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	0,2	0,1	1,3	1,6
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,1	0,1	0,6	0,8
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	0,2	0,1	2,1	2,4
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	0,1	0,1	1,1	1,3
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	0,1	0,1	0,8	0,9
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	0,5	0,7
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-0,2	-0,2	-0,9	-1,3

Recycling through lump-sum transfers

Impact on exports 2030 deviation from baseline - no recycling	EUR bn			
Consideration	**Exports to UK**	**Exports to CH**	**Exports to RoW**	**Total exports**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	0,4	0,2	2,6	3,2
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	0,3	0,2	1,6	2,2
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	0,2	0,2	1,2	1,6
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	0,1	0,1	0,6	0,8
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	0,2	0,1	1,8	2,1
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	0,1	0,1	1,0	1,2
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	0,1	0,1	0,7	0,8
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	0,1	<0,1	0,5	0,7
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	-0,2	-0,2	-0,8	-1,2

Table 45. Impact on total employment from the core scenario, macroeconomic model

No recycling

Impact on total employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-64	-17	25	42
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-474	-70	-44	-26
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-183	-16	-18	1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	208	48	17	37
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	77	-1	23	14
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-330	-52	-46	-54
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-158	-30	-21	-20
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	213	41	17	35
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	122	-34	56	-9

Recycling through changes in VAT rates

Impact on total employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	121	-13	26	44
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-278	-66	-43	-25
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-68	-13	-17	2
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	213	48	17	37
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	77	-1	23	14
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-206	-49	-45	-53
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-84	-28	-20	-19
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	201	41	17	35

3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	68	-35	55	-9

Recycling through lump-sum transfers

Impact on total employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	206	-14	28	45
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-201	-66	-41	-24
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-21	-13	-16	2
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	223	48	17	37
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	240	2	25	16
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-163	-50	-44	-52
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-62	-29	-20	-19
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	198	41	17	35
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	43	-35	55	-10

Table 46. Impact on high-skilled employment from the core scenario, macroeconomic model

No recycling

Impact on high-skilled employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	4	-9	14	29
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-178	-37	-24	-75
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-63	-8	-10	-17
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	96	26	9	56
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	41	-1	13	21
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-140	-28	-25	-82
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-66	-16	-11	-38

3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	95	22	9	51
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	44	-19	31	8

Recycling through changes in VAT rates

Impact on high-skilled employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	64	-7	15	33
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-115	-35	-23	-71
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-25	-7	-9	-15
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	97	26	9	56
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	41	-1	13	21
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-99	-27	-24	-79
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-41	-15	-11	-36
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	91	22	9	51
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	26	-19	30	6

Recycling through lump-sum transfers

Impact on high-skilled employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	92	-7	16	34
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-89	-35	-22	-69
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-9	-7	-8	-14
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	100	26	10	56
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	95	1	14	24
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-85	-27	-23	-78
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-34	-16	-11	-36

3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	90	22	9	51
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	17	-19	30	6

Table 47. Impact on low-skilled employment from the core scenario, macroeconomic model

No recycling

Impact on low-skilled employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-68	-8	11	19
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-295	-33	-20	-12
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-119	-8	-8	0
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	112	22	8	17
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	36	0	10	6
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-190	-24	-21	-25
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-92	-14	-10	-9
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	118	19	8	16
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	78	-15	25	-4

Recycling through changes in VAT rates

Impact on low-skilled employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	58	-6	11	19
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-163	-31	-20	-12
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-42	-6	-8	1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	116	22	8	17
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	36	0	10	6
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-106	-23	-21	-25

3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-42	-13	-9	-9
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	110	19	8	16
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	42	-16	25	-4

Recycling through lump-sum transfers

Impact on low-skilled employment 2030 deviation from baseline - no recycling	Thousands of employees			
Consideration	**Whole economy**	**Banking**	**Insurance**	**Other financial services**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	114	-7	12	20
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-112	-31	-19	-11
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-12	-6	-7	1
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	122	22	8	17
3B(i)a – VAT on fee-based services, standard rates, proportional removal of sectoral taxes	146	1	11	7
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-78	-23	-20	-24
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-28	-13	-9	-9
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	108	19	8	16
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	26	-16	25	-5

5.4 Macroeconomic model: impacts on GDP components and employment for sensitivity scenarios (no recycling)

Table 48. Impact on GDP components and employment, S1 scenario, macroeconomic model

Impact on macroeconomic aggregates	GDP components - EUR bn				Employment - Thousand persons		
Consideration	**GDP**	**Final consump.**	**Investment**	**Trade balance**	**Total empl.**	**High-skilled empl.**	**Low-skilled empl.**
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-16	-39	-11	35	-64	4	-68
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-29	-52	-15	45	-474	-178	-295
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-14	-28	-8	24	-182	-63	-119

3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	8	5	1	-2	208	96	112
3B(i)a – VAT on fee-based services, standard rates, proport. removal of sectoral taxes	3	-18	0	19	77	41	36
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-10	-31	-3	29	-330	-140	-190
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-5	-17	-2	16	-158	-66	-92
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	9	7	2	-4	213	95	118
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	8	14	3	-12	122	44	78

Table 49. Impact on GDP components and employment, S2 scenario, macroeconomic model

Impact on macroeconomic aggregates	GDP components - EUR bn				Employment - Thousand persons		
Consideration	GDP	Final consump.	Investment	Trade balance	Total empl.	High-skilled empl.	Low-skilled empl.
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-19	-38	-11	31	-118	-22	-96
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-29	-48	-13	39	-423	-158	-266
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-15	-26	-7	20	-175	-61	-114
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	6	3	1	-1	154	71	83
3B(i)a – VAT on fee-based services, standard rates, proport. removal of sectoral taxes	-2	-19	-1	17	17	17	1
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-12	-29	-4	25	-287	-118	-168
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-6	-16	-2	14	-140	-57	-83
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	7	6	2	-3	164	73	91
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	8	12	3	-10	106	38	69

Table 50. Impact on GDP components and employment, S3 scenario, macroeconomic model

Impact on macroeconomic aggregates	GDP components - EUR bn				Employment - Thousand persons		
Consideration	GDP	Final consump.	Investment	Trade balance	Total empl.	High-skilled empl.	Low-skilled empl.
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-21	-41	-10	32	-141	-38	-103
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-33	-46	-14	33	-371	-134	-238
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-17	-26	-7	19	-162	-56	-106
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	6	1	2	2	112	49	64
3B(i)a – VAT on fee-based services, standard rates, proport. removal of sectoral taxes	-2	-21	0	18	10	8	2
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-14	-26	-4	19	-220	-87	-133
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-7	-14	-2	11	-106	-42	-64
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	8	3	2	0	125	52	73
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	8	12	3	-9	90	31	59

Table 51. Impact on GDP components and employment, S4 scenario, macroeconomic model

Impact on macroeconomic aggregates	GDP components - EUR bn				Employment - Thousand persons		
Consideration	GDP	Final consump.	Investment	Trade balance	Total empl.	High-skilled empl.	Low-skilled empl.
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-13	-37	-12	35	-39	23	-62
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-23	-55	-14	54	-552	-211	-341
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-12	-28	-8	27	-204	-70	-134
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	7	8	1	-6	267	127	140
3B(i)a – VAT on fee-based services, standard rates, proport. removal of sectoral taxes	4	-18	-1	20	80	49	31

3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-6	-36	-4	39	-428	-183	-245
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-3	-19	-2	21	-205	-87	-119
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	8	10	2	-7	267	123	144
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	7	14	4	-14	141	51	91

5.5 Macroeconomic model: impacts on GDP components and employment if Switzerland and UK were to apply the same policy changes (core scenario, no recycling)

Table 52. Impact on GDP components and employment if Switzerland and UK were to apply the same policy changes, macroeconomic model

Impact on macroeconomic aggregates	GDP components - EUR bn				Employment - Thousand persons		
Consideration	GDP	Final consump.	Investment	Trade balance	Total empl.	High-skilled empl.	Low-skilled empl.
3A(i)a – VAT on all services, standard rates, removal of all sectoral taxes	-18	-39	-11	32	-64	4	-68
3A(i)b – VAT on all services, standard rates, sectoral taxes maintained	-33	-52	-15	42	-492	-186	-306
3A(ii) – VAT on all services, revenue-neutral rates, sectoral taxes maintained	-18	-28	-8	21	-209	-74	-135
3A(iii) – VAT on all services, lower rate (5%), sectoral taxes maintained	3	4	1	-5	174	82	92
3B(i)a – VAT on fee-based services, standard rates, proport. removal of sectoral taxes	0	-19	0	17	65	36	29
3B(i)b – VAT on fee-based services, standard rates, sectoral taxes maintained	-14	-32	-4	27	-360	-152	-208
3B(ii) – VAT on fee-based services, revenue-neutral rates, sectoral taxes maintained	-9	-18	-2	13	-190	-79	-111
3B(iii) – VAT on fee-based services, lower rate (5%), sectoral taxes maintained	4	6	2	-7	177	80	96
3C – FAT and VAT-zero rating all services, revenue-neutral rates, removal of all sectoral taxes	2	12	3	-15	62	20	43

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