ИНСТИТУТ ЗА ИКОНОМИЧЕСКИ ИЗСЛЕДВАНИЯ НА БЪЛГАРСКАТА АКАДЕМИЯ НА НАУКИТЕ
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ASSESSING THE EFFECTS OF IMPOSING VAT ON THE SERVICES PROVIDED BY THE BANKING SECTOR – THE CASE OF BULGARIA

The treatment of banking services as VAT exempted is a dominant model and common practice among EU member countries mainly due to the technical difficulties of calculating value added and applying the general credit – invoice method of VAT taxation. Not charging VAT on banking sector results in overtaxation of business customers and undertaxation of final consumers, and creates serious distortions in the economy. With this study and empirical assessment made, we seek to address some of the problems that have not been solved so far and to contribute, at least to a certain degree, to the ongoing academic debate on whether financial services need and should stay VAT exempt. By using a modified mobile-ratio method the current paper explores and assesses economic effects of including banking sector in the range of VAT taxable supplies. To identify the potential gains and losses that could have been generated under a hypothetical case of applying VAT to banking services in Bulgaria we provide a quantitative estimate for the period 2008 through 2016 at two separate levels: (1) banking system, and (2) business consumers of banking services. Finally, we estimate the volume of revenue that could has been accumulated to the State budget during the period under review if banking services were subject to VAT.
JEL: H20; H22; H25; G2

Introduction

A number of solutions that can be found in current tax practice largely depart from the established basic taxation standards, such as the preferences extended in order to promote one activity or another. In fact, not every tax exemption is intended to achieve specific economic or social objectives. Exemptions are sometimes granted for other, purely administrative, technical, legal, etc. reasons and banking sector services are a case in point.

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The main reason for banking sector services not being subject to VAT is the difficulty to determine the tax base correctly. The problems emerge above all in the so-called implicit banking services, such as credit and deposit intermediation, purchase and sale of foreign exchange, etc. There, it is not always easy to identify the exact amount of the margin so as to determine the taxable amount. Other reasons for exemptions of banking services from VAT is the unclear net effect on tax revenue (potential losses), a possible increase of the prices of the services offered by the banking sector, the additional costs of applying VAT (to the government or to the financial intermediaries themselves). At the same time, the banking sector and the financial sector at large generate a rather large amount of value added within the national economies, and this amount remains untaxed. On the one hand, this gives rise to a debate about the need of a change in the tax systems with respect to the treatment of banking services for the purpose of levying VAT and, on the other, an in-depth review of the other distortions typical of the system of exempt supplies.

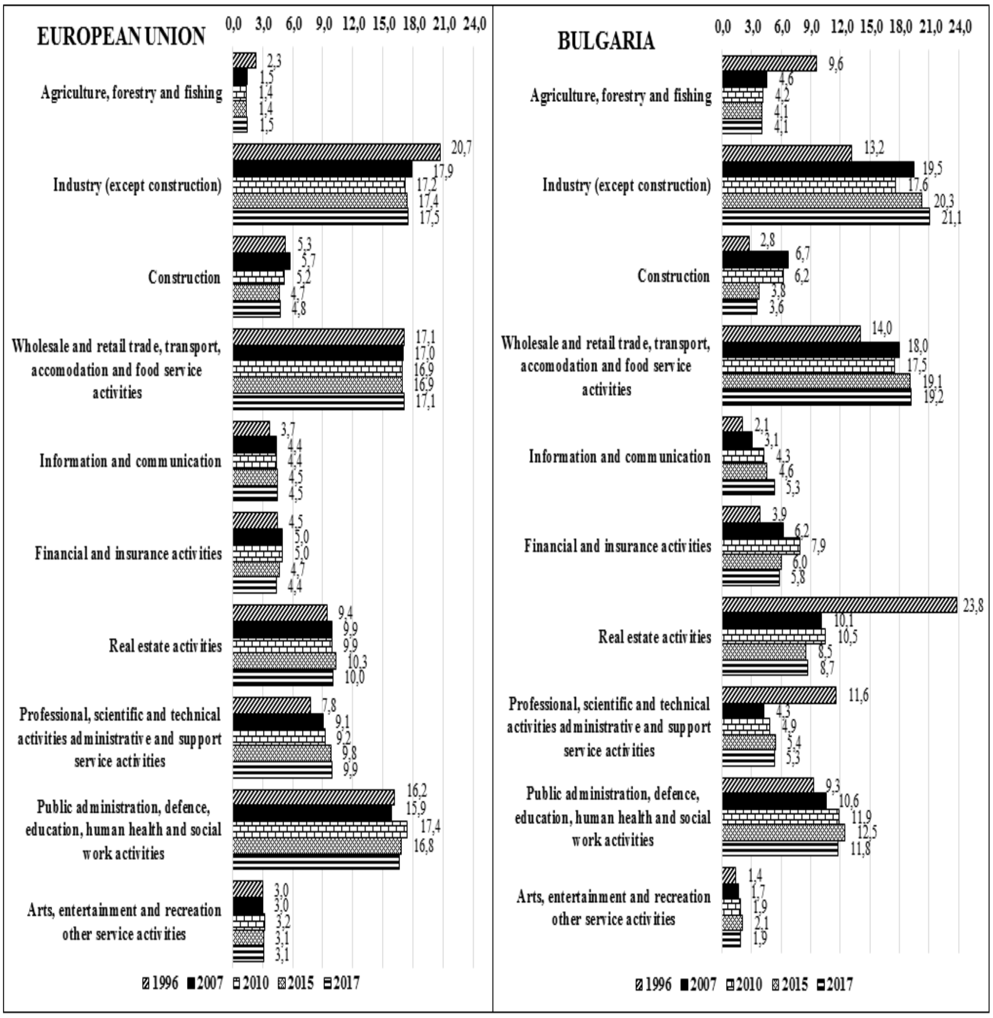
With current analysis, we seek to explore and assess the effects of including banking sector services in the range of VAT-taxable services. The study is structured into several distinct sections. It begins with a comprehensive review of the existing theoretical and empirical literature on the subject. Section 3 provides information about the sources of data for the purposes of the empirical assessment and presents, in an abridged form, the empirical (mathematical) method of analysis applied. Section 4 presents the results of the study and the quantified effects for the banking sector, the business sector and the budget. Section 5 formulates the conclusions and outlines the opportunities for future studies making it possible to analyse the subject more comprehensively.

1. Problem statement

The financial sector, and the banking sector in particular, has been growing at an exceptionally brisk pace in recent decades. Hence the significance of financial institutions and above all of the banks as leading financial intermediaries in present-day society (some 85% of the financial sector assets in Bulgaria are managed by commercial banks). Banks facilitate the channelling of enormous amounts of capital from economic agents which temporarily do not need these resources to other economic agents for which the financial assets are crucial for their own development, for the economic development of a particular country, region or community. Thus, the intermediation services offered by present-day banking institutions contribute to stimulating business activity and emerge as a major generator of economic growth. At the same time, the expansion of the banking services sector poses certain risks to the stability of both the financial system and the economy as a whole. Precisely such risks manifested themselves in the conditions of the latest financial crisis (2007-2008). This gives rise to a debate about the need to tax the financial (banking) services sector because, judging from practice, this sector largely enjoys certain preferences, i.e. the financial and banking services sector is supposed to contribute mostly to fiscal stability in the way this is done by the rest of the economic sectors. Most authors single out the value added tax treatment of the services provided by this sector as one of its most significant privileges. Back when VAT was introduced in European and global practice (in the late 1960s and the early 1970s), it was decided to leave financial and banking services outside the scope of taxation. These services are treated as exempt, i.e. financial and banking service providers are not obliged to charge VAT when they sell these services. This tax practice established itself with time, and we continue to witness its existence at present. On the other hand, the financial and banking services sector is highly dynamic, which finds expression in the rather large amount of value added generated as a result of the business of the institutions operating in the sector.

Figure 1

Industry Value Added (% of GDP)



Source: own calculations based on data from Eurostat.

During the years 1996 through 2017 the weight of financial and insurance activities in the European economy as reflected in the ratio of value added to GDP was almost equal to that one of construction industry and information and communication industry. (Figure 1). EU-wide, the share of the value added by the financial sector grew from an average 4.5% of GDP in 1996 to 5% in 2007. During that period, the sector has registered a quite remarkable growth of value added (expressed as a share of GDP) amounting to 11 percent. It is the information and communication industry as well as the sector of professional, scientific and technical activities that demonstrated higher growth rate of the share of value added in GDP – 22% and 20% respectively. The growth of value added of financial sector in Bulgaria is much more apparent – over 50 percent, with only the construction industry reporting higher growth during this period.

Luxembourg, which is one of the top financial' centres not only in Europe but worldwide, takes the lead in this respect: there, it is precisely the banking sector and the financial sector at large that generates about a quarter of the value added. Bulgaria is among the EU Member States (along with the UK, Ireland, Cyprus and the Netherlands) that also have a significant financial (banking) sector within the context of their national economy. The value added by the Bulgarian banking sector grew from 3.9% of GDP in 1996 to 6.2% of GDP in 2007, reaching almost 8% in 2010.

It should be noted that after the onset of the crisis, the financial services sector remained steady as compared to other sectors of the economy, especially construction, but during the consequent years the share of its value added in GDP has declined. For example, in 2015 and 2017 the share of value added by the financial sector within the European Union decreased to 4.7 and 4.4% of GDP respectively (Figure 1). However, over the last 25-30 years in nominal terms, the value added by the sector has doubled in the EU countries and has more than sextupled in Bulgaria.

The summary information logically begs the question why Bulgarian banks, as well as the rest of the financial intermediaries, continue to provide their services not subjected to VAT (Article 46(1) of the Value Added Tax Act). Nowhere in the world could be found a tax system that has resolved all the difficulties with determining the proper VAT taxable base of financial services. In the EU, these difficulties have been overcome with the exemption system applied and no VAT levied on most of the financial services. Certainly, Bulgaria, being an EU Member State, is obliged to comply with EU tax legislation (Article 135(1) of Council Directive 2006/112/EC), which expressly exempts a large part of financial services and above all the credit and deposit services. Nevertheless, EU legislation also admits certain exceptions, the so-called option to tax, under which the intermediary may charge tax on the services provided in the market. Article 137 of Council Directive 2006/112/EC allows EU member states to enact legislation that provides an option to charge VAT on otherwise exempt financial services (except insurance and reinsurance). It should be mentioned that so far only 8 EU Member States – France, Belgium, Germany, Austria, Estonia, Lithuania, Croatia and Bulgaria have enabled financial service providers to apply it. In fact, this option to tax does not resolve the problems with determining correctly the tax base. Moreover, its application is accompanied by so many restrictions and serious costs that prevent its wide adoption in practice (Merrill, 2011). However, the value added taxation of financial services has been debated for many years at EU level, but no concrete decision has been taken to impose VAT on financial sector on a global scale.

In 2007, the European Commission submitted two legislative proposals containing package of measures in order to changing EU VAT treatment of financial services, the so called three pillars: re-definition of financial services which are subject to exemption, introduction of a cost-sharing group, allowing economic operators to pool investments and re-distribute the costs of these investments to the members of the group, exempt from VAT, and introduction of a compulsory option to tax, i.e. compulsory for Member States, optional for financial institutions. Despite the active negotiations that followed the proposals the outbreak of the financial crisis changed the focus of debate about financial sector taxation (De la Feria, Lockwood, 2010).

One of the last serious discussions of removing the exemption of VAT on financial services in EU which happened under the Polish Presidency in 2011 had come to a standstill due to the inability of Member states to reach an agreement. As of the beginning of 2019, the option of imposing VAT on financial services has been discussed yet again in the context of the debate on the future of the VAT system in Europe and the long-standing distortions of VAT exempt supplies of the financial sector (European Commission, 2019). The question of removing financial services VAT exemption remains open and proposals to reform VAT rules are still with the Council for discussion.

2. Literature review

The literature available so far does not take a categorical stand in favour or against VAT taxation of the services provided by the banking sector (and by the financial sector at large). A review of the studies dealing with tax treatment of financial and banking services under VAT shows that these studies can be divided into two groups.

The first group of studies applies mainly a conceptual (theoretical-methodological) approach. The reasons why these services are exempt from VAT, on the one hand, and the distortions resulting from this exemption, on the other, have been analysed for years on end. The following principal arguments for not subjecting financial and banking services to VAT are most often pointed out: problems with the calculation of the margin and its allocation so as to determine the value added correctly (Merrill and Edwards, 1996; Jack, 2000; Edgar, 2001; Huizinga, 2002; Honohan, 2003; Prebble and Van Schalkwyk, 2004; Bird and Gendron, 2005; Zee, 2005; De la Feria, 2007; Schenk, 2009; Kerrigan, 2010), the separation of the fee charged by the financial intermediary as a form of value added from the value of the entire cash flow (Garber and Raboy, 1989; Poddar, 2003; Boadway and Keen, 2003; Iwamura et al., 2006), the additional administrative costs of follow-up control (Ebrill et al., 2001), the risk of public disclosure of the value of financial margins which constitutes a trade secret (Amand, 2008; Benedict, 2011), the lack of institutional experience, the low level of pay and work incentives in the public administration, corruption and lack of support by governments (Gendron, 2008), and the increase in the prices of the services offered. Grubert and Mackie (2000) even argue that intermediary services should be exempt because they should not be treated as final goods (since they do not influence the consumer's utility function and are respectively treated as intermediate goods), hence, they should not attract consumption tax.

In addition to the reasons for the exemption of financial and banking services, the conceptual studies also address the distortions resulting from the current tax practice and from the vigorous development of economic, technical and technological processes. The main problem is outstanding and is further exacerbated, which is probably the reason why a number of authors advocating a change in the taxation technique have gained ground in recent years. The VAT system needs to be reconsidered and updated (modernised) so as to respond adequately to the present challenges. The most commented arguments in favour of including these services in the VAT tax base (respectively, treated as market distortions) include: the large amount of irrecoverable VAT because deductible input tax is not available (Garber and Raboy, 1989; Huizinga, 2002; Borselli, 2009; De la Feria and Lockwood, 2010; PricewaterhouseCoopers, 2011), generation of deadweight loss (emergence of the so-called cascading effect) as a result of which the same turnovers become liable for tax for a second time (Garber and Raboy, 1989; Merrill, 1997; Edgar, 2001; Huizinga, 2002), the effective price of an intermediation service when treated as exempt is considerably higher for business consumers (and their customers) than for consumers borrowing directly from the financial institution (Schenk and Zee, 2004; De la Feria and Krever, 2013; Yilmaz, 2013), vertical integration (self-supply bias) of the phases of the production process in search of indirect mechanisms to minimise the cost of irrecoverable tax (Ebrill at al., 2001; Englisch, 2011, Van Brederode and Krever, 2017), loss of neutrality of taxation and emergence of tax competition (Gillis, 1987; Englisch, 2011; Paardt, 2012), administrative burden as a result of outdated regulations (compliance costs), discriminatory interpretation and implementation of tax legislations (legal uncertainty), litigation (European Commission, 2006; Borselli, 2009; De la Feria and Walpole, 2009; Braakman, 2011).

The second group encompasses studies trying to diagnose the impact of taxing or not taxing the services concerned on the revenue side of State budgets. These studies are considerably fewer in number than the studies stressing above all the conceptual debate on the problem at issue. Just as with the studies in the first group, here, too, the results obtained are somewhat discrepant. The empirical literature predominantly confirms that levying VAT on banking sector services is a solution that can lead to an increase of budget revenues (Genser and Winker, 1997; Kaliva, 2002; Huizinga, 2002; Schatan, 2003; Mirrlees at al., 2011; Büttner and Erbe, 2014; Næss-Schmidt at al., 2016). According to the European Commission (2011), the system of financial and banking services exemptions from VAT generated a potential loss of revenue to EU Member States' State budgets in an amount approximating EUR 16-20 billion for the period between 2000 and 2009. Even though quite a few of the conceptual analyses are apprehensive about the potential adverse impact of levying VAT on financial and banking services on budget revenue, this assumption has so far been borne out by only one more comprehensive study. This study was conducted by PricewaterhouseCoopers (2010) in cooperation with Professor B. Lockwood.

Several key factors explain the discrepancies in the results on budget revenue impact arrived at in the empirical studies conducted so far. On the one hand, these discrepancies are essentially due to the territorial scope of each one of these studies (i.e. the cohort of countries for which the effects are quantified), the different time periods, the level of development of the banking sector and the financial sector at large, and above all the rather limited information available. On the other hand, a universal methodology for the evaluation of the effects on budget revenues is not available, at least for the time being. What is essentially lacking is a commonly accepted approach to tax banking sector services. Therefore, we aim to bring together the positive aspects of each one of these empirical studies and catalyse the arrival at a realistic assessment of the change in the manner of taxing financial and banking services in Bulgaria.

3. Methodology and Data

Since the early 1990s, various methods have been proposed for charging VAT on financial and banking services. The methods analysed can be classified into three large groups: generally applicable methods (credit-invoice method, subtraction method and addition method), alternative treatments of the system of exempt banking services (levying reduced or zero rate VAT, provisions for relief of input tax, taxation limited to explicit services, where the price takes the form of a fee or commission) and 'transaction-by-transaction' methods (cash flow method, tax calculation account, truncated cash flow method, modified reverse-charging approach (Zee, 2005) and mobile-ratio method (Laborda and Peña (2016).

Whatever method is applied, it should be based on the credit – invoice method because the latter is used as an essential tool for VAT computation in almost all countries worldwide. Still, it should be emphasised that the tax-credit method is difficult to use to identify the value added generated as implicit charge for some financial and banking services and, in this case, a way to modify this method should be sought. Weighing the pros and cons of the approaches that have been proposed so far and taking into consideration developments in recent years, we are of the opinion that the mobile-ratio method designed by Spanish researchers Laborda and Peña (2016) is the most suitable one to apply. This method largely solves most of the current problems with the determination and allocation of the financial margin (by applying an adjustment ratio K representing the fraction between the financial margin generated during the previous period (BM_{P-1}) and the total value of the margin services for that same period (MBS_{P-1})) for the purposes of charging VAT, and it is also fully compatible with the credit-invoice method, i.e. is not supposed to put an extra burden on the administration (in terms of training, control, legislative amendments), nor would it encumber the intermediaries themselves with heavier investment in accounting software and extra expert consultations.

In order to minimize the cost of seeking the correct calculation and distribution of the spread of margin services, including any legislative and allocation arrangements, it is preferable to specify an adjustment ratio (K) to apply to the entire set of this type of service over the selected tax period. Calculation of this ratio does not guarantee a maximum degree of accuracy in determining the tax base and tax liability, but it helps to simplify the VAT model and to include banking services in the tax base. In essence, the data needed to calculate the ratio is obtained by procedures known to the intermediaries with a view to their accountability over time. For each subsequent tax period the adjustment ratio K will be different. In Bulgaria, the obligation under the VAT Act is set on a monthly basis. However, in order to simplify the procedure, this ratio may be calculated for taxing purposes on a quarterly, semi-annual or annual basis. This will make the process easier from an administrative point of view. Making a decision on the periodicity of recalculating this ratio is of particular importance and should not be overlooked. The solution must be in line with the dynamics observed in the variables determining the ratio K. If this dynamics is significant, it is preferable to use shorter periods (such as monthly or quarterly), whereas if the dynamics is insignificant, then it is better to set it on a semi-annual or annual basis. Adjustment ratio K can be calculated in a manner indicated in equation (1):

(1) $K = BM_{P-1} / MBS_{P-1}$

Besides this, the present paper attempts to build on the afore-mentioned method by adding the assessment of certain effects which are not addressed by Laborda and Peña (2016). The methodology we use analyses the effects of replacing the current exemption system by imposing VAT on banking services in Bulgaria at three separate levels: (1) an analysis of the effects on the banking system, (2) an analysis of the effects on the business consumers of banking services, and, above all, (3) an analysis of the effects on the State budget. There is also a difference in the methodology for the assessment of investment cost (on fixed assets) in respect of which the financial intermediary will be entitled to deduct input tax. Finally, the probably most distinctive feature of the methodology is the evaluation of the cascading effect and its elimination and the consequences of this elimination above all for the budget.

Banking system

Two important aspects need to be analysed at the level of the banking system. On the one hand, the banks' 'gross' liability for tax arising from the now taxable services they provide and, on the other hand, assessing the amount of input tax which the banks will be able to recover as a result of the change in the tax treatment of banking services. The assessment is done separately for margin banking services and for explicit banking services, i.e. the tax is applied to the broadest possible range of services. The tax base for the margin services provided (TB[MBS]) will equal the difference between the total output of these services (MBS) and the value of the cost of irrecoverable VAT incurred by the banking system which is indirectly (implicitly) included in the value of this type of services (NVAT[MBS]), taking into account the influence of the adjustment ratio k, the amount of input tax for the taxable margin services before the change in the manner of taxing banking services (VAT[MBSBVAT]) and taking account of the share of sales of extra-Community exports (%X[BS]). The amount of input tax for the taxable margin services before the change in the model of taxation is included in the calculation in order to determine the value of irrecoverable VAT which banks pass through in the prices of their services. The computation procedure assumes that after the change in the manner of taxing banking services the intermediaries in this sector may not deduct the entire cost of VAT which they were previously unable to recover, i.e. that they may not subtract the entire cost from the value of the services they provide. That is why yet another variable is inserted to take account of the extent of cost reduction ($z \in [0;1]$). The computation model assumes basically that, for the purposes of neutral taxation, z should equal 1, but the ensuing results can be verified additionally at z<1. If z=0, this means that the banks will not subtract the undeducted cost from the system of exempt supplies and will proceed with charging the tax rate directly to the existing prices. The amount of input tax deducted in conditions of exempt banking services is related to the part of services provided by the banking system which is subject to tax.

(2) TB[MBS] = [(MBS – NVAT[MBS] * z) * k] * (1 – %X[BS])

The tax base for the explicit banking services provided (TB[EBS]) will be arrived at in a similar way, the only difference being that an adjustment ratio k is not applied:

(3) TB[EBS] = [EBS – NVAT[EBS] * z] * (1 – X%[BS])

The liability of the banking system (VAT[BS]) is obtained as a product of the total tax base (TB[BS]=TB[MBS]+TB[EBS]) and the applicable VAT rate t.

(4) VAT[BS] = TB[BS] * t

The total effect for the banking system from the changed tax policy (ΔBS) is determined on the basis of the liabilities for tax (VAT[BS]) which arise for the banks because their services are included in the VAT tax base, but also considering the entitlement of those banks to deduct the VAT paid on costs incurred for taxable purchases (VAT[TC] = (E[BS]-NTP) * t, where E[BS] shows the costs incurred by the banking system, including costs of fees and commissions, administrative costs and investment costs, whereas NTP is the non-taxable part of the banking system's costs), as well as taking account of the liabilities for tax (VAT[BSBVAT]) and the amount of input tax (VAT[TCBVAT]) before the change itself.

(5) ΔBS = (VAT[BS] – VAT[TC]) – (VAT[BSBVAT] – VAT[TCBVAT])

Business consumers

One advantage of the computation method applied is that it assesses the second-round effects for the consumers of banking services and their customers. The exemption of banking sector services from VAT places a significant burden on the business consumers of these services in the sense that the lack of an explicitly charged tax limits their ability to benefit from input tax as well as because of the implicit increase of the prices of the services themselves with the inclusion of the cost unrecoverable by the intermediary. This generates a significant tax burden upon subsequent sales down the chain. With the change in the way banking services are treated for the purposes of VAT taxation, tax is already actually charged on the price of the banking service and, respectively, the consumer of these services can claim input tax. To this end, the value of the services which are used by business consumers must be determined. The computation method here, just as with the banking system, can be viewed as a sequence of several stages: calculating the part of banking services that is consumed by business consumers, calculating the amount of input tax that business consumers can deduct, and taking account of the net effect, including a calculation of the amount of the eliminated cascading effect. The amount of input tax for business consumers (VAT[BTC]) is that part of the tax base (of the banking system) which is allocated to business consumers (BCBS=TB[MBS] * c + TB[EBS] * d, where c and d are the share of margin banking services and explicit banking services consumed by business consumers), multiplied by the tax rate (t) applicable to banking services. Therefore, the total amount of input tax can be calculated in a manner indicated in equation (6):

(6) VAT[BTC] = BCBS * t

The amount of the cascading effect (TCE) is the part undeducted by the business consumer in conditions of exempt supplies, thereafter included and taxed as part of the price of the business services provided. In order to calculate this part, account has to be taken of the value of the banking services before the change in the tax system (BCBS[BVAT]) and after that change (BCBS), i.e. the net effect for business consumers. The values of margin banking services and explicit banking services include the cost of irrecoverable VAT in the price of these services.

(7) TCE = (BCBS[BVAT] – BCBS) * t

State budget

The inclusion of banking sector services in the tax base will generate an additional budget revenue from VAT (VAT[BS]) but, at the same time, will give rise to an entitlement of the provider of the financial services and of the consumers of these services to deduct full input tax (VAT[TC]) and (VAT[BTC]), in addition to the input tax from which they benefited before the change. The ultimate effect (ΔBB) of the change in the tax system will depend on all components discussed so far and above all on the structure of consumption of banking services and the amount of the eliminated cascading effect (TCE). The assessment of the effects on the State budget must also take into consideration the changes in tax revenues from the levy of other types of taxes on these services. Thus, if it is assumed that VAT is charged on the value of the banking service before charging the existing tax on interest income from deposit accounts (TIPDA), it should be borne in mind that the tax base for the income tax would be lower than in the general case, where the tax is charged directly, without VAT on the banking service. The reduction will depend on the value of the adjustment ratio k and the tax rate t (ΔTR[TIPDA]=TR[TIPDA] * k * t). The ultimate effect on the budget balance can be represented as follows:

(8) ΔBB = ΔBS – (VAT[BTC] – VAT[BTCBVAT]) – TCE – ΔTR[TIPDA]

Mainly data reported by the Bulgarian National Bank (BNB) are used for the purposes of assessing the effects of an introduction of VAT on banking services. The data are aggregated and cover the activity of the entire banking system. The data used refer to the situation as of 31 December of each calendar year. The information is augmented by data from the annual financial statements and the annual activity reports of the commercial banks, the Bulgarian Deposit Insurance Fund, the annual reports of the Ministry of Finance on the implementation of the State budget of the Republic of Bulgaria, and data from the Supply Use Tables of the National Statistical Institute (NSI). The computation procedure seeks to identify the potential effects of applying the tax to banking services in the period between 2008 and 2016.

The methodology is developed and applied on the basis of certain assumptions:

- All banking services must be included in the VAT tax base;
- All services provided by banks in Bulgaria are subject to taxation with standard VAT rate of 20%;
- Providers of banking services will adjust the prices of these services by eliminating the implicitly included tax before charging VAT;
- Business consumers will adjust the prices of their goods and services in a manner reflecting the changes in the formation of their total liability for tax.

4. Results

Analysis of the effects on the banking system

Table 1 shows that the inclusion of banking services in the taxable VAT base will help to provide a significant resource to the State budget, ceteris paribus. The gross amount of tax liabilities for the banking sector (VAT[BS]) varies between BGN 585 million and BGN 830 million in the period 2008-2016, but in the result of a change in the tax system, Bulgarian banks would be entitled a tax credit (VAT[TC]) amounting to BGN 170 million annually. At first glance, the main burden of introducing a new value added tax on these services would be imposed on financial intermediaries operating in the sector.

Applying the methodology shows (Table 1) that if all banking services are included in the VAT tax base during the period between 2008 and 2016, the banking system in Bulgaria would have been incurred a liability (VAT[BS] – VAT[TC]) in an amount ranging between BGN 411 million and BGN 645 million.

In order to determine more accurately the ultimate effect for the banking system (ΔBS) of the change in the tax practice, the liability for tax (VAT[BSBVAT]) and the input tax deductible before the tax reform (VAT[TCBVAT]) have to be eliminated (Table 2). The results in Table 2 do not differ significantly from those pointed in Table 1 above. Under the current tax practice of financial (banking) services exempted from VAT, the proportion of those services subject to VAT is too low (about 7%).

The quantitative assessment above is presented at several levels (gross tax liability, net tax liability and total effect) in order to outline the effect less on the intermediaries themselves than on the State budget. The “real” effect on the banking system will depend to a large extent on the ability of intermediaries to pass the tax burden on service consumers by increasing the prices of their services. The final consumers of banking services will take most of the burden on the banking sector (as shown in Table 1 and Table 2) as opposed to registered business consumers of these services.

If commercial banks in Bulgaria do not change the prices of their services, the burden of introducing VAT on banking services will be entirely at the expense of intermediaries operating in the sector.

Table 1

Tax liability for the banking system (BGN millions)

Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tax base and „gross“ tax liability for the banking system									
%X[BS]	0.80%	0.12%	0.01%	0.03%	0.12%	0.25%	0.11%	0.12%	0.13%
MBS	7048.37	7475.95	7224.76	7189.54	7007.32	6782.05	5362.42	4582.65	3861.72
NVAT[MBS]	105.34	115.067	99.765	100.922	86.3212	121.614	119.626	116.5323	92.87486
K[3]	0.48	0.41	0.40	0.43	0.42	0.40	0.38	0.52	0.64
TB[MBS]	3287.11	2977.69	2844.73	3015.97	2903.27	2662.32	1991.08	2301.78	2408.25
EBS	874.74	823.24	844.19	874.96	876.88	930.60	950.82	1026.59	1063.25
NVAT[EBS]	5.15	5.21	5.33	7.25	1.72	8.52	12.93	19.23	20.18
TB[EBS]	862.62	817.07	838.79	867.44	874.14	919.77	936.84	1006.18	1041.76
TB[BS]	**4149.72**	**3794.75**	**3683.52**	**3883.41**	**3777.41**	**3582.09**	**2927.92**	**3307.95**	**3450.01**
VAT[BS]	**829.94**	**758.95**	**736.70**	**776.68**	**755.48**	**716.42**	**585.58**	**661.59**	**690.00**
Tax credit									
E[BS]	1193.21	1073.14	1029.75	1092.23	1178.82	1247.58	1197.80	1290.56	1159.54
NTP	273.42	178.48	271.76	354.31	397.61	329.62	324.87	377.11	345.38
VAT[TC]	**183.96**	**178.93**	**151.60**	**147.59**	**156.24**	**183.59**	**174.59**	**182.69**	**162.83**
Net tax liability									
VAT[BS] – VAT[TC]	**645.98**	**580.02**	**585.1**	**629.09**	**599.24**	**532.83**	**410.99**	**478.9**	**527.17**

Source: own calculations; z=1, t=20%

Table 2

Total effect on the banking systems (BGN millions)

Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016
VAT[BS] – VAT[TC]	**645.98**	**580.02**	**585.1**	**629.09**	**599.24**	**532.83**	**410.99**	**478.9**	**527.17**
VAT[BSBVAT]	66.67	57.75	46.44	39.17	67.31	51.63	41.36	46.13	48.89
VAT[TCBVAT]	73.47	58.65	46.50	39.42	68.20	53.46	42.03	46.93	49.78
ΔBS	**652.79**	**580.92**	**585.16**	**629.34**	**600.13**	**534.66**	**411.67**	**479.70**	**528.06**

Source: own calculations; z=1, t=20%

Analysis of the effects for business consumers of banking services

The calculations made show a substantial amount of input tax from which business consumers would benefit if banking services were taxed with VAT.

[3] The adjustment ratio K data indicates a relatively constant share of financial intermediaries margin in comparison with the total value of the services offered by them in the period 2009-2014, which also favors the use of annual data in order to simplify the calculation procedure.During the years 2015 through 2016 there is a sharp rise in the value of the ratio. This is due to the growing financial' margin, against the decline in value of margin bank services. Although there is a reduction in interest receipts and interest payments, the spreads between them remain and even increase.

Table 3

Tax credit for business consumers (BGN millions)

Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016
C	0.66	0.57	0.54	0.55	0.53	0.52	0.49	0.49	0.5
TB[MBS]	3287.11	2977.69	2844.73	3015.97	2903.27	2662.32	1991.08	2301.78	2408.25
D	0.49	0.46	0.45	0.48	0.45	0.47	0.42	0.37	0.38
TB[EBS]	862.62	817.07	838.79	867.44	874.14	919.77	936.84	1006.18	1041.76
VAT[BTC]	**514.78**	**415.36**	**383.01**	**412.21**	**385.55**	**363.15**	**275.09**	**301.12**	**322.52**

Source: own calculations; Business consumption of margin services (c) and explicit services (d) are presented with coefficient, t=20%

The average annual amount of input tax for the period between 2008 and 2016 approximates BGN 375 million and, respectively, the same amount of tax would be included in the price of the service they consume, i.e. the change in the manner of taxing banking services would not result in an appreciable difference for business consumers in this respect. The change would make a difference for these consumers to the extent that the financial intermediary will adjust its price because of the deductibility of input tax for services that are already taxable. That is why the net effect for business consumers (NEBC) needs to be calculated, including a change in the liabilities for tax, a change in the amount of input tax and a change in the value of services consumed by business. With regard to the first two elements, there is no change. In conditions of exempt supplies, the business sector is not liable for tax, nor is it entitled to deduct input tax, whereas in conditions of taxable supplies, business consumers pay VAT as part of the price of the services and, at the same time, become entitled to deduct input tax amounting to this cost.

Table 4

Net effect for business consumers (BGN millions)

Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016
BCBS	2573.88	2076.79	1915.03	2061.05	1927.76	1815.73	1375.47	1505.62	1612.62
BCBS[BVAT]	2609.05	2105.81	1938.96	2087.95	1947.64	1844.96	1403.27	1542.30	1650.25
NEBC	**35.18**	**29.02**	**23.93**	**26.90**	**19.87**	**29.23**	**27.79**	**36.69**	**37.63**

Source: own calculations

The results in Table 4 show that the change in the manner of taxing banking services with VAT will result in a relief for business consumers in an average annual amount of BGN 29-30 million for the period between 2008 and 2016. These results would be valid if it is assumed that, as a result of the change in the manner of taxing banking services, the financial intermediary decides to reduce the prices by the entire cost which it was previously unable to recover, i.e. by assuming that z=1 in the above computation procedure. The possibility that z<1 and the after-tax value of the banking services would be higher cannot be ruled out, and this would erode the net effect for business consumers (NEBC).

Table 5
Net effect for business consumers and amount of eliminated cascade effect (BGN millions)

Z	Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016
0	NEBC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.1	NEBC	3.52	2.90	2.39	2.69	1.99	2.92	2.78	3.67	3.76
	TCE	0.70	0.58	0.48	0.54	0.40	0.58	0.56	0.73	0.75
0.2	NEBC	7.04	5.80	4.79	5.38	3.97	5.85	5.56	7.34	7.53
	TCE	1.41	1.16	0.96	1.08	0.79	1.17	1.11	1.47	1.51
0.3	NEBC	10.55	8.71	7.18	8.07	5.96	8.77	8.34	11.01	11.29
	TCE	2.11	1.74	1.44	1.61	1.19	1.75	1.67	2.20	2.26
0.4	NEBC	14.07	11.61	9.57	10.76	7.95	11.69	11.12	14.67	15.05
	TCE	2.81	2.32	1.91	2.15	1.59	2.34	2.22	2.93	3.01
0.5	NEBC	17.59	14.51	11.96	13.45	9.94	14.61	13.90	18.34	18.82
	TCE	3.52	2.90	2.39	2.69	1.99	2.92	2.78	3.67	3.76
0.6	NEBC	21.11	17.41	14.36	16.14	11.92	17.54	16.68	22.01	22.58
	TCE	4.22	3.48	2.87	3.23	2.38	3.51	3.34	4.40	4.52
0.7	NEBC	24.62	20.31	16.75	18.83	13.91	20.46	19.46	25.68	26.34
	TCE	4.92	4.06	3.35	3.77	2.78	4.09	3.89	5.14	5.27
0.8	NEBC	28.14	23.21	19.14	21.52	15.90	23.38	22.24	29.35	30.11
	TCE	5.63	4.64	3.83	4.30	3.18	4.68	4.45	5.87	6.02
0.9	NEBC	31.66	26.12	21.54	24.21	17.88	26.30	25.01	33.02	33.87
	TCE	6.33	5.22	4.31	4.84	3.58	5.26	5.00	6.60	6.77
1	NEBC	35.18	29.02	23.93	26.90	19.87	29.23	27.79	36.69	37.63
	TCE	7.04	5.80	4.79	5.38	3.97	5.85	5.56	7.34	7.53

Source: own calculations

Table 5 calculates the value of the net effect for business consumers with every possible reaction by the banking system regarding the cost of VAT that is implicitly included in conditions of exempt supplies, once the tax system is changed. The net effect for business consumers actually determines the extent to which the change in the tax system would contribute to eliminating the cascading effect (TCE) of VAT on banking services. The data show that if it is assumed that the previously undeducted cost is fully eliminated when setting the value of banking services (i.e. z=1), the amount of the eliminated cascading effect ranges between BGN 3.97 million and BGN 7.34 million. At the other extreme is the value if it is assumed that banks in Bulgaria decide against any reduction of the prices of the services they provide and the tax rate is applied to the unchanged value of these prices (i.e. z=0).

Analysis of the effects for the State budget

Calculating the total budget effect requires to take into account the loss of revenue from the tax on interest income from deposit accounts (ΔTR[TIPDA]), introduced in 2013, as a result of the VAT taxation of these services. The calculations make it possible to assess the potential effect on the budget balance (ΔBB) if VAT were charged on the services provided by the banking sector in the period between 2008 and 2016.

Table 6

Total effect for the State budget (BGN millions)

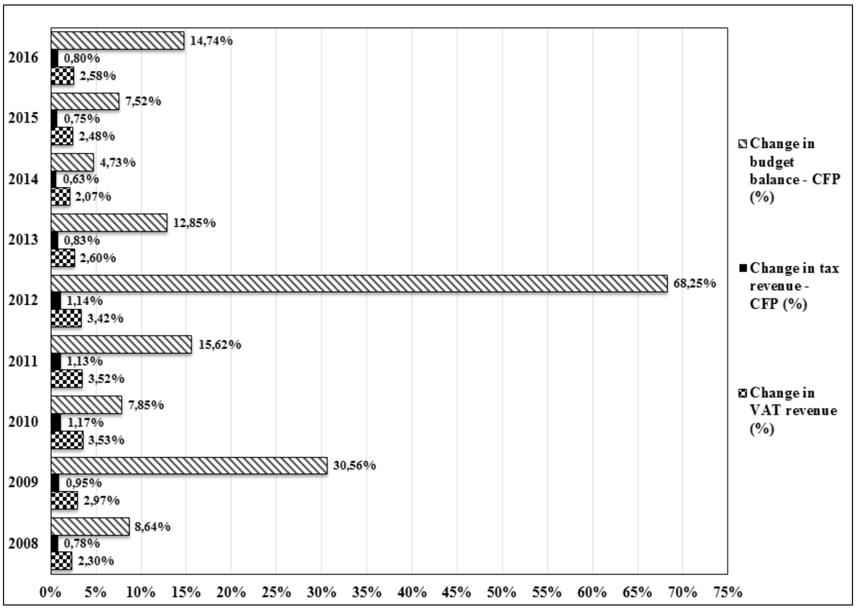
Indicator	2008	2009	2010	2011	2012	2013	2014	2015	2016
ΔBS	652.79	580.92	585.16	629.34	600.13	534.66	411.67	479.70	528.06
VAT[TBC]-BCCR[BVAT]	473.74	383.78	358.86	391.42	351.23	337.04	255.68	280.14	299.70
ΔTR[TIPDA]	0.00	0.00	0.00	0.00	0.00	6.61	5.00	5.37	4.49
TCE	7.04	5.80	4.79	5.38	3.97	5.85	5.56	7.34	7.53
ΔBB	**172.02**	**191.34**	**221.52**	**232.54**	**244.92**	**185.17**	**145.44**	**186.85**	**216.36**

Source: own calculations

Other things being equal, the inclusion of banking services in the tax base during the period between 2008 and 2016 results in an increase of VAT revenues by an average annual BGN 200 million (or 2.83%), a 0.91% rise in total tax revenues under the Consolidated Fiscal Programme (CFP), and an 18.97% improvement of the budget balance. For 2012 alone, the recorded budget deficit would be 68.25% lower if the services at issue are part of the taxable supplies (Figure 2).

Figure 2

Change in budget indicators as a result of the imposing VAT on the services provided by the Bulgarian banking sector for the period 2008-2016



Source: own calculations based on data from the Annual reports of the Ministry of Finance on the implementation of the State budget of the Republic of Bulgaria

The conclusion is more than obvious: eliminating the problems typical of the conditions of exempt banking services can contribute, among other things, to an increase of State budget revenues. Given the certain assumptions that the proposed model makes, calculations show that the VAT revenue side of Bulgaria's budget would change favourably in the period between 2008 and 2016 compared to the pre-existing system of exempt supplies. Even with an allowance for the loss of revenue from the deposit interest income tax, the budget would nevertheless benefit from the change in the tax system.

These results would certainly be welcomed, too, by the consumers of banking services which are registered for VAT, as they would be able to reduce their costs by an average annual BGN 19-38 million, even provided the prices of their goods and services are lowered. To a certain extent, the burden of introducing VAT on banking services would fall mainly on the final consumers of these services. Charging VAT at the rate of 20% would definitely raise the price of banking services for final consumers. The exact amount of this rise is a matter of calculations and depends on the extent to which those consumers would react to the change. If intermediaries are allowed to eliminate the VAT implicitly included in the price of services in conditions of exempt supplies and charge VAT on this 'tax-free price' in conditions of taxable supplies, prices will rise by an average of some 18.60% for the period between 2008 and 2016.

Taking into consideration the cascading effect and the possible reduction of the prices of non-financial goods and services or financial goods and services at a later stage down the chain, the burden on the final consumer may decrease by an average of some 0.34 percentage points over the period. The calculation method admits the subtraction of financial intermediaries' cost of irrecoverable VAT which is conventionally included in the value of the services in conditions of exempt supplies, but if this does not happen and the prices are not adjusted, i.e. if VAT is charged on the prices as they are, the final effect for the budget would be better. The improvement would be in the order of BGN 7.59 million – 15.90 million, but this would be at the expense of a larger tax burden on the final consumers of financial and non-financial services.

5. Conclusion

Making a decision on a change in the taxation of one type of goods and services or another is indisputably a complicated process requiring weighty arguments in favour of taking such a step. This process must reflect above all an analysis of the problematic aspects of the existing tax system, including both advantages and disadvantages, but also the effects that a change of the system would entail. Other important factors are the exact way in which the change will be handled and whether prerequisites for such action exist. The process of changing any tax system should by anyway juxtapose different viewpoints and above the viewpoints of the parties affected: taxable entities, on the one hand, and governments and tax administrations, on the other. That is why the VAT treatment of banking services has been and still is such a debatable issue and is expected to retain its relevance in the near future as well.

Using a modified mobile-ratio method we approximate the fiscal revenue loss from VAT exempt banking services and tax relief loss for the business consumers of these services. The results of the current study show that if banking sector in Bulgaria was subject to VAT during the period 2008-2016 as other sectors in the economy there would be a positive revenue effect – additional revenue would have been generated for State budget amounting to BGN 200 million annually. This amount reaches about 2.5-3% of the total VAT revenues collected annually during the period under review. At the same time, such a change would have resulted in a far not insignificant effect for the business sector using these services. The "tax relief" for business sector (or the value of irrecoverable VAT) that would arise from such a change in fiscal policy depends mostly on the potential for eliminating the cascading effect typical in terms of exempt supplies. The average annual amount of this relief (net effect) in our hypothetical case is substantial – approximately BGN 30 million. This value would have been generated if assuming that the calculated amount of cascading effect was completely eliminated.

Under VAT exempt treatment of banking services transactions between banks and final consumers are under-taxed. Hence, final consumers of banking services are expected to be most negatively affected by the introduction of VAT through elimination of the advantages of under taxation they possess over those of business sector. The "real" effect will depend to a large extent on the ability of intermediaries to pass the tax burden on service consumers by increasing the prices of their services. In addition, the change in the Bulgarian tax system would create exceptional prerequisites for an improvement of the neutrality of taxation. Applying a broader tax base with fewer exemptions would ease the reporting and control process, would reduce the possible losses from litigation, and would facilitate a partial or full elimination of the main problem with the cascading effect. Our study is a first attempt to assess the effects of imposing VAT on banking sector services in Bulgaria. The methodology presented can be used as a basis for a future larger-scale study involving all sub-sectors of the financial sector and covering a longer time period of research.

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