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Introduction to Taxation of Interest on Term Deposits in Croatia

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Abstract*

The paper discusses the environment of the current Croatian tax system and the impact of the taxation on interest as a new form of taxation. Although most of the EU countries have been applying the taxation of interest on savings for many years, announced taxation is expected to be implemented in Croatia from the beginning of 2015. Considering the significant importance of tax revenues for the central government budget, the paper compares the level of tax burden in Croatia with the level of tax burden in economic peer countries from CEE region. Despite the fact that overall tax burden in Croatia is lower than the EU average, it could be concluded that, from the investor's perspective in CEE countries, the tax environment in Croatia is unfavourable. Moreover, the tax environment refers not only to the tax burden, but also to frequent changes in tax regulations. The intention to write this paper was the assumption that the implementation of tax may impact the status of depositors and consequently that it will affect financial stability of banks. For the purposes of this paper, banks have been divided into three peer groups (large, medium-sized and small banks) and it was found that medium-sized and small banks rely more on deposits, particularly retail term deposits, as a source of financing and they, therefore, bear higher costs of funding and operational costs. Analyzing the potential effects of taxation, it has been concluded that small and medium-sized banks are much more sensitive to potential outflows of retail deposits which would be reflected to their liquidity and profitability. Potential spill-over effects could happen if banks decide to transfer their interest expenses to debtors through the increase of interest rates on loans. Although the effects of interest taxation may individually affect certain bank in terms of relation between sources of funding and granted loans, it is unlikely to expect serious distortions in banking system that would result from this new form of taxation.

Keywords

Taxation of interest, interest expenses, outflow of deposits

* The views expressed in this article are those of the authors and do not necessarily represent the views of their employers.

1. Introduction

In the period when the global economy is undergoing toward a new global economic crisis of enormous proportions, national economies are concerned about the strategies for stimulating economic activities which will consequently serve in budget revenue formation. Although most of the EU countries have been applying the taxation of interest on savings for many years, it is a novelty in the Croatian tax system and currently is under preparation to be implemented. Since it is a new form of tax which will be implemented within the personal income tax, this paper is dealing with the main features of the tax system and finally will be examined the consequences of the new tax revenue from the aspect of depositors and from the aspect of banks as main participants in the financial system.

2. Current fiscal environment prior to the introduction of a new tax

2.1. Overview of the tax system

Croatian tax system has evolved parallel with the establishment of the Republic of Croatia in the early 1990s. First significant changes were done with the reform of the direct taxes (personal income tax and corporate income tax) which have been implemented from the beginning of 1994. The intention of the second part of the reform was to transform the sales tax by introducing value added tax and excise taxes from the beginning of 1998. Above mentioned taxes, together with social security contributions[1] represent the basis of the tax system while other taxes are not so relevant with regard to their contribution to total tax revenues. Taking into account various levels of public administration, we can distinguish state taxes, county taxes and municipal or city taxes.

Irrespective to the level of the administration, taxes represent the most abundant source of budget revenues and, due to that, the government has paid the greatest attention to their development and optimization of their usage. For this reason, a lot of changes in the tax system took place in the last twenty years which has resulted with numerous amendments to tax laws.

2.2. The impact of tax burden in Croatia

Total budgetary central government revenue at the end of 2013 amounted to HRK 108.6 bn out of which HRK 100.2 bn (92.3%) is related to revenues from taxes and social security contributions (Ministry of Finance, 2014). Considering the significant importance of tax revenues for the central government budget, it is reasonable to verify the level of tax burden in Croatia and consequently, to come to a conclusion whether there is still room for a further increase of tax revenues.

Considering that value added tax and social security contributions are real state taxes, they represent more than three quarters of tax revenues of the central budget. On the other hand, personal income tax is an example of the tax whose revenues are shared among various levels of government, so these revenues represent the most important item in local budgets. It is important to address the major differences between personal income tax and value added tax. While personal income tax has features of progressivity, since individuals with higher incomes are taxed higher, value added tax is regressive. Irrespective to the level of personal

[1] The basic difference between taxes and social contributions is that taxes have no predetermined purpose, while the purpose of contributions is known in advance (e.g. pension insurance, health insurance).

income, all individuals pay value added tax at the same rate, so regressivity is evident because people with lower incomes have relatively higher expenditures according to the share in their gross income. Therefore, it is considered that these two taxes act complementary: the progressivity of the personal income tax "compensates" the regressivity of value added tax (Urban, 2011).

Considering the level of tax burden, it is useful to observe the level of tax burden in Croatia compared with its economic peer countries. For the purpose of this paper, another 7 EU member countries situated in CEE region (Poland, Czech Republic, Slovakia, Hungary, Slovenia, Bulgaria and Romania) have been compared.

From the perspective of overall tax burden, which is in Croatia at the level of 35.7% of GDP (Eurostat, 2014), it can be concluded that the impact of taxes is not very significant. Namely, the average in EU is 39.4%, while the highest values were recorded in Denmark (48.1%) and Belgium (45.4%). However, the Croatian economy should be rather compared with its peer countries among which, the results show that, five countries have lower tax burden and only Slovenia (37.6%) and Hungary (39.2%) have more significant impact of taxes in GDP. Therefore, it could be concluded from the investor's perspective that the tax environment in Croatia is unfavourable. An insight into the structure of the tax system is showing that Croatian tax system significantly relies on indirect taxes and on revenues from the social security contributions. Since VAT standard rate of 25% is one of the highest in EU, it can be assumed that, in budget revenues, VAT plays a crucial role. On the other hand, direct taxes among which is the personal income tax, represent only 6.1% of GDP, which is very favourable compared to the other peer countries and significantly less than EU average of 13.2%. Some surveys show that the majority of the older EU members collect almost equal amounts of revenue from direct and indirect taxes and social security contributions, while in the new member states, the share of direct taxes in total revenues is lower (Bratić, 2013). Considering the calculation of tax effort for each of peer countries, it is obvious that the level of tax collection in Croatia as in other countries is high, but the tax effort in Croatia is the highest respectively tax authority collects more tax than allowed by tax capacity of taxpayers (Le, T.M., Moreno-Dodson, B., Bayraktar, N., 2012).

With regard to the above mentioned relations, it can be concluded that one of the areas for the competition between the peer countries is the tax environment which, in case of Croatia, is mostly burdened by the influence of indirect taxes and social security contributions. Taking into account the focus of this paper, the personal income tax will be more detailed discussed in the following section.

2.3. The role of personal income tax

From the beginning of application of the personal income tax in 1994, two rates of 25% and 35% were prescribed by law. Three years later, the lower rate of 25% was replaced by the rate of 20%. Other changes were related to changes in personal allowances and, consequently, in changes of tax brackets. From the beginning of 2001 until the adoption of the second personal income tax law, three tax rates were applied (15%, 25% and 35%) and were finally supplemented with a fourth rate of 45% in 2003. From the introduction of the personal income tax law from 2004, (which is still in use today), some changes were made in terms of tax rates and personal allowances. From July 2010 three tax rates (12%, 25% and 40%) have been applied and personal allowance is currently at HRK 2,200. The tax rate of 12% is applied to income up to the amount of single personal allowance, the tax rate of 25% is applied to income of four times the amount of personal allowance and tax rate of 40% is applied to income which is higher than the four times the amount of personal allowance.

In case of Croatia, incomes below the amount of HRK 2,200 (EUR 288) are currently taxed by the rate of 12%, incomes below the amount of HRK 8,800 (EUR 1,152) are taxed by the rates of 12% and 25% and higher incomes are taxed by all three rates of 12%, 25% and 40%. Comparison with the other seven peer countries is showing the following facts: flat rate ranging from 10% to 16% is being used in four countries, system of two tax rates is applied in two countries and system of four tax rates is applied in one country. Higher tax rates are usually applied to taxpayers with distinctly high incomes, but for the vast majority of taxpayers lower statutory rate is applied. This is, specifically, the main difference between the tax brackets currently applied in Croatia and those applied in other countries.

Regulation of personal income tax, stated previously, is an introduction for the main topic of this paper - taxation applied to interest on saving deposits. Although this form of taxation has already been applied in other European countries for a long time, it is still not applied in Croatia, although there are serious discussions about its implementation. As shown in the Table 1, all the CEE countries, which are observed as peer countries, apply taxation of interest on saving deposits in the range from 10% in Bulgaria to 25% in Slovenia. It is evident that taxpayers do not show any kind of serious resistance in acceptance of this form of taxation. The importance of saving as well as correlation of saving and its taxation was recognized by the developed countries many years ago due to its importance for personal economic security and for national economic performance as well (Bernheim, 2002). In that sense, different strategies for stimulating or discouraging savings depending on the situation in the economy can be applied. It should also be noted that, in some papers, relationship between the personal income taxation and economic growth was identified aiming at the governments to choose the optimal taxation (Myles, 2009). Arnold (2008) found negative relationship between the progressivity of personal income tax and economic growth and his analysis suggested that income taxes are generally associated with lower economic growth than taxes on consumption and property.

Table 1: Overview of personal income tax rates and tax rates on interest on savings deposit among peer countries

Country	Personal income tax rates	Tax rates of interest on savings deposits
Slovenia	16%, 27%, 41%, 50%	25%
Hungary	16%	16%
Poland	18%, 32%	19%
Czech Republic	15%	15%
Slovakia	19%, 25%	19%
Romania	16%	16%
Bulgaria	10%	10%
Croatia	12%, 25%, 40%	???

Source: Eurostat: Taxation Trends in the European Union

Taxation of interest on savings deposits is generally organised as a flat tax rate and is equally applied for the taxation of dividends as a form of capital gain. In countries which use flat tax, the same tax rate is used for taxation of interest and in countries which use several different rates, one of the lowest tax rates is usually applied for the taxation of interest.

From the beginning of 2013, receipts from dividends are deemed as an income from capital and tax rate of 12% is applied. However, dividends up to the amount of HRK 12,000 per year are not taxed. Since the interest on savings is often observed similar to the income from

dividends, it is expected that the tax exemption will be set on the same level. Under the assumption that the average interest rate is 3%, for the realization of interest on savings in the amount of HRK 12,000, deposit saving of HRK 400,000 is required. With an increase in interest rates, the marginal principal is logically lower and vice versa. Existence of tax exemptions is perhaps very doubtful. In fact, the reduction or even elimination of tax exemption on certain forms of income would offer the advantage of broadening the income tax base, allowing potential decrease of income tax rates (Fuentes, 2013).

Implementation of taxation of interests on savings is economically reasonable because equal tax treatment for all forms of income from capital is expected. Apart from the additional tax revenues, it is necessary to take into account non-financial effects of taxation, due to the fact that spill over effects in form of capital outflows to other types of assets could appear. Significant reduction of deposits could encourage banks to increase deposit interest rates, but would probably have negative effect in form of the increase of interest rates on loans which would have a negative impact on debtors and increase the probability of loan default. However, many researchers have shown that financial stability risks mainly remain manageable after exposure to commonly used economic shocks (increase in interest rate on loans, devaluation of the exchange rate, increase in the unemployment rate) (Sugawara & Zalduendo, 2011).

Announced taxation is expected to be implemented from the beginning of 2015 and is estimated that the state budget revenues will increase by 0.09% of GDP per year or about HRK 300 million. However, in case of any unplanned outflow of deposits, this target will be difficult to achieve. Hopefully, mentioned taxation is not only the instrument of increase of tax revenues, but also a fiscal tool for realization of other macroeconomic goals.

2.4. Effects of consecutive changes in the tax system

Considering the level of tax burden in Croatia, compared to its peer countries, tax environment is not attractive for new investors. Moreover, the tax environment refers not only to the tax burden, but also to frequent changes in tax regulations that do not provide adequate stability and predictability required by potential investors. For example, from its introduction in 1994 personal income tax was replaced by two new laws and in addition there were eight amendments to the law. Too often changes in tax system combined with relatively high tax burden surely do not motivate new investments.

It is often discussed how to reduce excessive tax burden and what kind of taxation is optimal for achieving it. However, fiscal policy is a much broader concept than the tax policy (Roller, 2009) and certain shifts have to be made not only on the revenue side of the budget, but also on the expense side. Problem of fiscal policy in Croatia is that it is often focused on the exploitation of tax capabilities by the introduction of new forms of taxation rather than on expenditure restraints. For instance, although the state budget is already in excessive deficit and there are weak signs of recovery, the government proposes to reduce the tax burden on income with the aim of increasing individual consumption. By increasing the personal allowance and by extending tax brackets, higher net income will be available for taxpayers, but at the same time, it will increase the budget deficit. European Commission has recently made similar recommendations for countries with high tax burdens. Effective ways of control of public finances without hindering growth potential are not tax rate increases, but the reductions in the level of expenditures or a broadening of the tax base and the removal of ill-targeted exemptions (European Commission, 2013). It is important to understand that, for the long term sustainability of fiscal policy, it is required to reduce public expenditures with aim of reducing public debt.

Announced taxation of interest is a good starting point to explore the correlation between the taxes and their impact on individual depositors in banks and consequently on the financial stability of banks and of the whole banking system. It will be discussed in the following section.

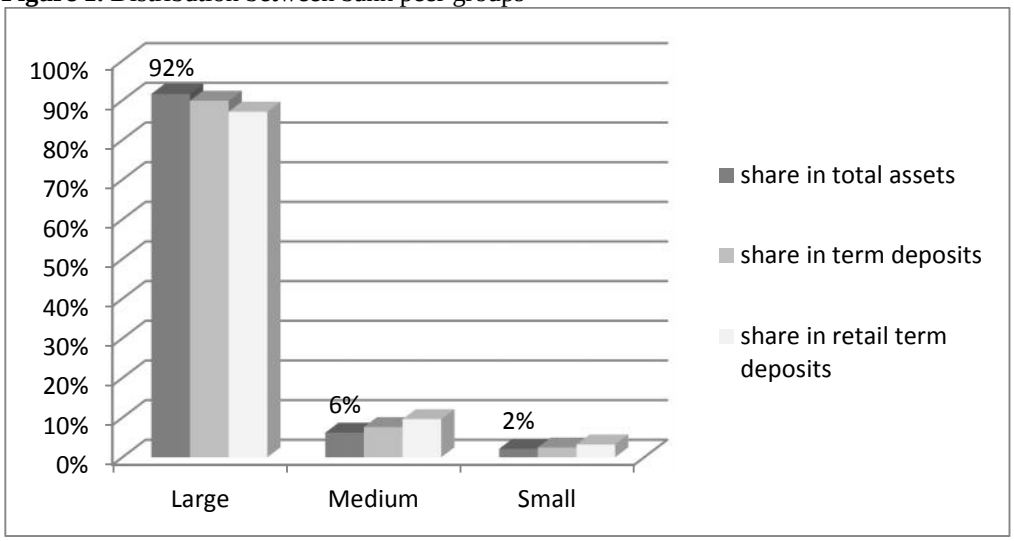
3. Anticipated changes in the banking sector due to the introduction of taxation

3.1. Structure of banking system and different types of deposits

At the end of 2013, there were 29 banks and one savings bank operating in Croatia and their assets stood at HRK 397.8 bn (EUR 52.1 bn). For the purposes of this analysis, banks have been divided into three peer groups (large, medium-sized and small banks). The criterion for selecting the banks into one of the peer groups was done according to the size of their assets. Large banks are banks whose assets exceed HRK 5 bn (EUR 655 m), medium-sized banks are those whose total assets are greater than HRK 1.5 bn (EUR 196 m) and less than HRK 5 bn (EUR 655 m) and small banks are institutions whose assets are less than HRK 1.5 bn (EUR 196 m). Following such distribution, each of the peer groups contains almost the same number of banks. According to the size of the assets at the end of 2013, the banking system included nine large, ten medium-sized and ten small banks. A proof of the considerable concentration of the banking system is the fact that the peer group of nine large banks accounted for more than 90% of total assets of banking system. Since this paper is focused on retail deposits, it was interesting to examine the distribution of term deposits and particularly the distribution of retail term deposits among the banks grouped into those three peer groups.

As it is shown in the figure 1, the concentration of total assets in the group of large banks was not similarly followed by the same distribution of total amount of term deposits and of total amount of retail term deposits. Distribution between the medium-sized banks is not surprising when we take into account the fact that medium-sized and small banks rely more on deposits as a source of financing. Therefore, the share of the total assets of medium-sized banks in the total assets of the banking system is 6.2%, while the share of the total amount of retail term deposits in the total amount of retail term deposits of the entire banking system is 9.6% which proves the above explained fact.

Figure 1. Distribution between bank peer groups

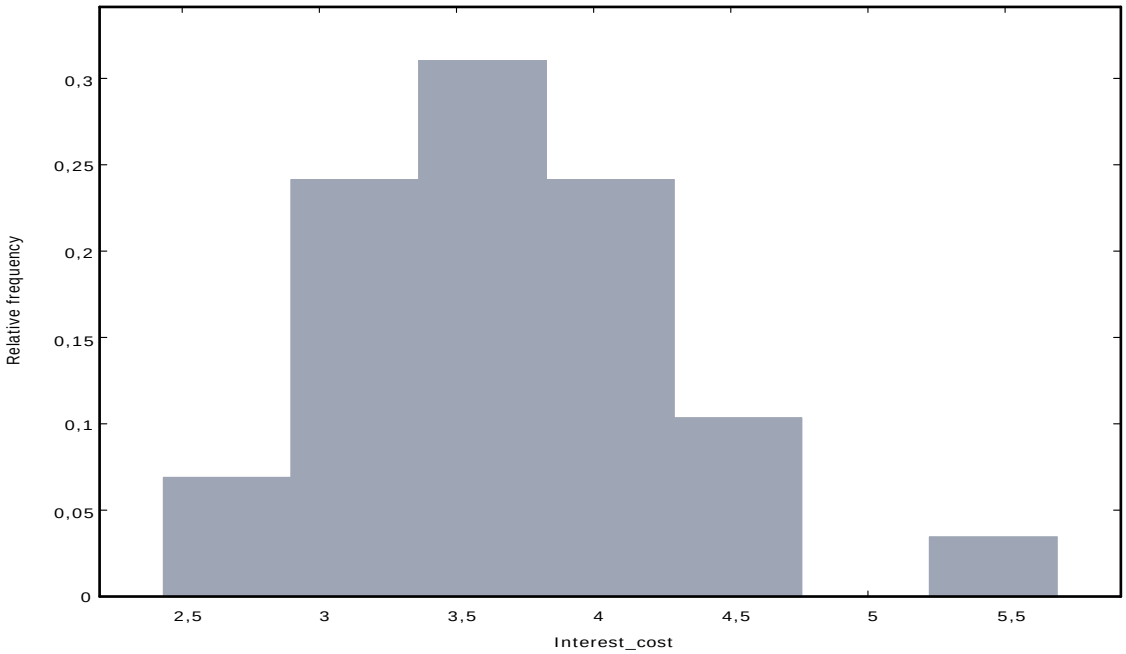


Source: Financial statements of banks

Considering the total deposits to asset ratio, the highest average value was recorded by medium-sized banks (78.4%) and was much lower at large and small banks (70.6% and 70.1% respectively). Taking into account only retail term deposits to total assets, calculated ratios for medium and small banks (50.5% and 49.5%) significantly differ compared to large banks (33.1%). Namely, many large banks are oriented to funding from abroad (mainly by borrowing from their foreign majority owner in Austria, Italy, France etc.), while significant proportion of their funds includes deposits of corporate sector, government and public enterprises.

Costs of funding and operational costs are typically higher for small and medium-sized banks in comparison to large banks, what results in differences in their profitability, level of interest rates on bank loans, variety of products offered to clients etc. According to data at the end of 2013, average annual interest cost on retail term deposits was 3.4% for the whole banking system, but the differences occur depending on the size of banks. Average ratio of paid annual interest to cumulated retail term deposits was 3.3% for large banks, 3.8% for medium-sized banks and 4.0% for small banks. For eight small or medium-sized banks they exceed 4.2% which together with value of 4.0% at one large bank could indicate the basis for unstable sources of funding in the banking system because these are deposits (depositors) with higher response to the level or changes in interest rates. Additionally, it is a potential indicator of banks with possibly higher negative effects of interest rate taxation or another shock which could stimulate the withdrawing of deposits.

Figure 2. Distribution of interest costs on retail term deposits in banking system



Source: Financial statements of banks

Since small and medium-sized banks are much more sensitive to potential outflows of retail deposits, they could be willing to pay much higher interest on term deposits in case of undesirable depositors' behaviour and/or unstable conditions with significant effects on the liquidity position of banks. That is one of the reasons why monetary, fiscal or other shocks usually are not linearly distributed in banking system. Impacts are more effective for small banks, while (due to dominant position of large banks) potential negative effects can be lower

or relatively irrelevant for system as a whole. Negative consequences of expensive costs of financing could result in higher interest rates on loans and stronger orientations on short-term lending, while both can be related to the increase of credit risk and/or destruction in the quality of banks' debtors. On the other hand, depositors (both in stable and unstable banks) often don't care about the safety of a particular credit institution if their retail deposits are covered by government organized system for deposit insurance which is in Croatia set up to the amount up to 100,000 euro per depositor at one credit institution. Depositors with large amounts of savings often dedicate a considerable attention to the level of interest rates that can be achieved at a particular bank, but do not think enough about the potential problems of poor corporate governance and moral hazard behaviour of individual banks. The above was confirmed by several cases of bank failures in last few years whereas term deposits of some individuals were significantly higher than the amount covered by insurance (see more in Ivanov et al., 2013).

Table 2. Credit institutions' interest rates on retail term deposits in kuna

Kuna deposits	1Q 2013	2Q 2013	3Q 2013	4Q 2013	1Q 2014	2Q 2014
Outstanding amounts (weighted monthly averages of interest rates)						
Up to 3 months	2.80	2.68	2.52	2.43	2.25	2.17
Over 3 and up to 6 months	3.58	3.30	3.10	2.97	2.87	2.76
Over 6 months and up to 1 Y	4.08	3.94	3.77	3.59	3.41	3.27
Over 1 and up to 2 years	4.48	4.36	4.17	4.00	3.78	3.63
Over 2 years	4.09	3.91	3.76	3.70	3.59	3.53
Total retail term deposits	3.92	3.77	3.61	3.49	3.32	3.21
New business (weighted monthly averages of interest rates)						
Up to 3 months	2.53	2.67	2.28	2.13	1.97	1.87
Over 3 and up to 6 months	3.40	3.12	3.00	2.87	2.74	2.54
Over 6 months and up to 1 Y	3.81	3.63	3.53	3.30	3.07	2.96
Over 1 and up to 2 years	4.45	4.18	3.95	3.74	3.46	3.44
Over 2 years	4.04	4.31	4.13	3.95	3.79	3.56
Total retail term deposits	3.43	3.33	3.11	2.93	2.77	2.63

* 16.42% of total retail term deposits consist of term deposits in domestic currency (kuna).
Source: Croatian National Bank

Apart from average interest cost of retail term deposits calculated from financial statements of particular banks, monetary statistics for whole banking system indicate lower weighted average interest rates on retail term deposit both in domestic currency (kuna) and foreign currency (mostly euro). Interest rates are typically higher for deposits in domestic currency (since depositors prefer holding of f/c deposits) and for deposits with longer maturity. In last two years interest rates (on loans and deposits) recorded downward trend as a result of stabilization in banking system after period characterized by negative events caused by the global crisis. However, the downward trend could be changed if the banks will have to raise interest rates on deposits, for example in case of increased competition between banks to attract depositors. Consequently, it is possible for bank to transfer interest expenses to the debtors through the increase of interest rates on loans. Therefore, the consequences of the taxation of interest on term deposits could be probably paid by debtors of bank.

Prior to start calculating the effects of the potential outflows of deposits, it would be useful to briefly consider the structure of deposits and their formal status. Apart from term deposits as the largest deposit group, there are giro account and current account deposits as well as savings deposits. Retail giro and current account deposits are form of transactional accounts used with the purpose of the efficient transfer of funds between different accounts. Although they are defined as deposits, their

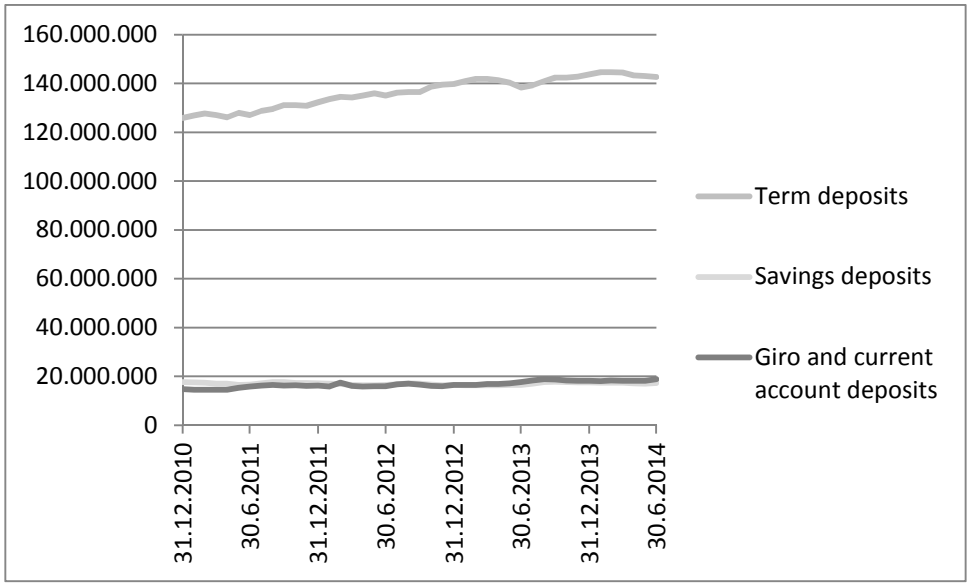
primarily purpose is not interest revenue nor they are used for saving. The other two types of retail deposits are primarily used for saving: savings deposits are contracted without a predetermined date of maturity whereas term deposits are negotiated by the depositor for a specific agreed time.[2] The most important impact has latter mentioned retail term deposits and actually their developments initiate growth or fall of total retail deposits. At the end of 2013 total retail deposits stood at HRK 178.2 bn out of which the largest items are retail term deposits with the amount of HRK 143.0 bn. Next figure shows upward trend in the growth of term deposits with average annual growth of HRK 4.9 bn.

Table 3. Credit institutions' interest rates on retail term deposits in foreign currency

Foreign currency deposits	1Q 2013	2Q 2013	3Q 2013	4Q 2013	1Q 2014	2Q 2014
Outstanding amounts (weighted monthly averages of interest rates)						
Up to 3 months	2.08	1.86	1.69	1.60	1.53	1.45
Over 3 and up to 6 months	2.73	2.50	2.27	2.10	2.00	1.93
Over 6 months and up to 1 Y	3.44	3.31	3.12	2.89	2.69	2.57
Over 1 and up to 2 years	3.78	3.58	3.42	3.29	3.19	3.04
Over 2 years	3.92	3.80	3.66	3.55	3.48	3.41
Total retail term deposits	3.48	3.34	3.18	3.03	2.91	2.82
New business (weighted monthly averages of interest rates)						
Up to 3 months	2.09	1.83	1.67	1.58	1.52	1.49
Over 3 and up to 6 months	2.62	2.45	2.23	2.09	1.98	1.95
Over 6 months and up to 1 Y	3.12	2.90	2.69	2.55	2.42	2.31
Over 1 and up to 2 years	3.83	3.55	3.36	3.10	2.91	2.90
Over 2 years	3.96	3.76	3.55	3.34	3.27	3.14
Total retail term deposits	3.14	2.91	2.73	2.54	2.48	2.40

* 83.57% of total retail term deposits consist of term deposits in foreign currency.
Source: Croatian National Bank

Figure 3. Structure of retail deposits



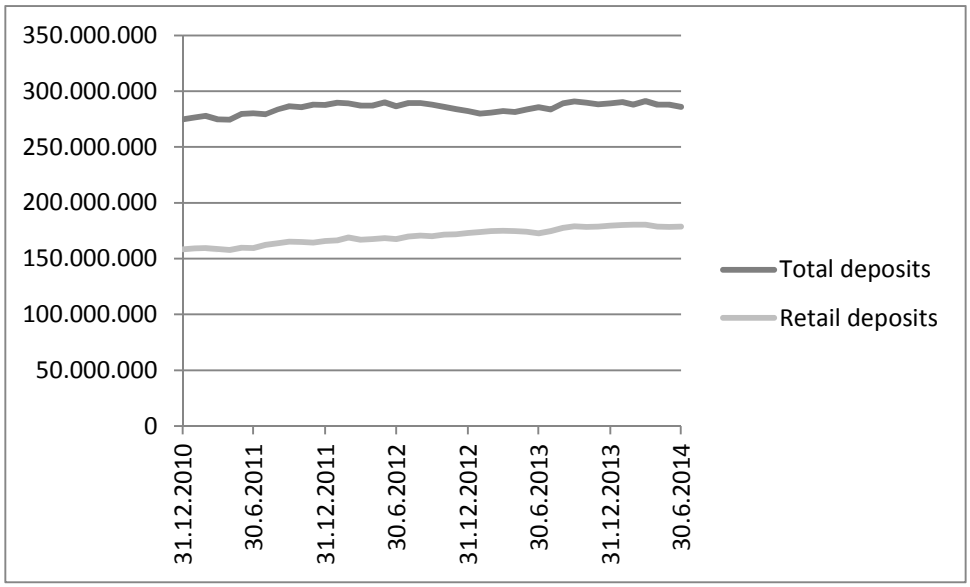
Source: Croatian National Bank

Above mentioned importance of retail deposits was particularly emphasized because of its impact on total deposits in the banking system. In fact, nearly two thirds of total deposits (62.5%) consist of retail

[2] The difference between savings deposits and term deposits is well described in Bulletin of Croatian National Bank.

deposits. While total deposits have increased in the previous three and half years for HRK 11.2 bn, retail deposits rose even sharper and have increased for HRK 20.3 bn (+12.8%). Other two groups, less important than retail deposits, are corporate category and foreign financial institutions category which have even recorded a fall of deposits in the observed period.

Figure 4. The importance of deposits as source of funding



Source: Croatian National Bank

About half of total amount of retail term deposits (50.2%) consists of short-term deposits what means that the static liquidity position of the banking system is strongly influenced by the maturity mismatch between granted loans (including high share of housing loans) and collected deposits. The share of retail term deposits with maturity over 2 years is only 11.93% for kuna deposits and 24.29% for f/c deposits, but both shares are relatively stable during the time. Thus in the dynamical term, the majority of deposits in whole banking system can be viewed as stable core deposit, irrespective to their formal maturity. However, for every single bank is important to collect long-term sources of funds which includes permanently renewal of deposit after expiry of the initial period of their maturity. Therefore, potential significant outflow of deposits from one or several banks could mean particular liquidity problems, while consequences could be higher if outflow behaviour affect whole banking system (for example if depositors decide to substitute their term deposits with other form of financial assets or with deposit outflows abroad). In such circumstances central bank is able to offer short-term loans to banks or increase system liquidity by lowering required reserves. In spite of this, it is reasonably to suppose the rise in interest rates of term deposits (due to higher competition between banks) and consequently higher interest rates on bank loans (outstanding amount and new business).

In addition, banks are particularly interested to retain clients with very high amounts of savings, including amounts exceeding HRK 400,000 (as it could be the potential base for taxation of interest) to the very high amount of several million HRK. According to the latest publicly available information, such important clients represent only 5% of all depositors which implies that introduction of interest tax will have relatively weak effect on the macro-system of saving, However, the share of large deposits over HRK 400,000 is in some banks substantially more significant, reaching even nearly 50% of the total amount of retail term deposits.

Interest rates on large savings are typically negotiated at levels considerably higher than those for other clients, and such clients generally have far greater bargaining power in dictating the conditions for keeping their savings in a single bank. For rich clients, the calculation of interest is often proactive (anticipated calculation of interest) and interest is paid well before the expiry of the deposit maturity. Since it is still not clear what the level of tax base is, planned revenues from this tax are very doubtful.

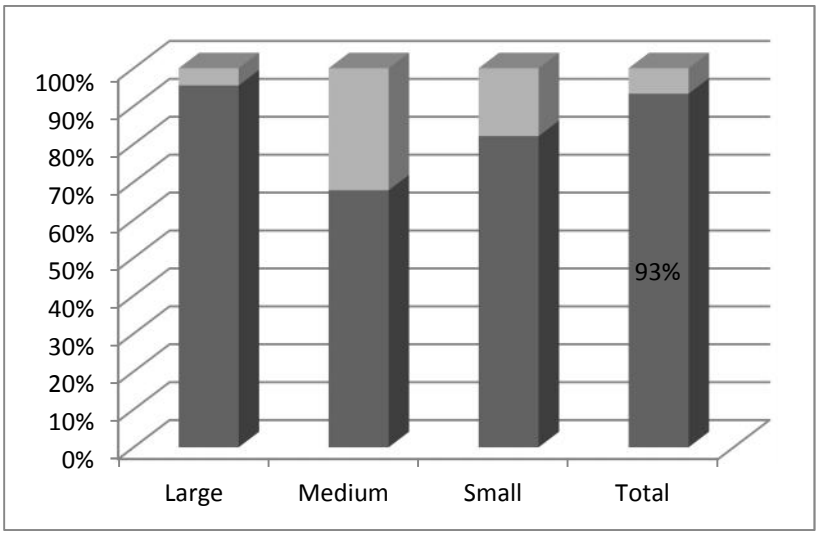
Potential interest payments before the introduction of taxation could be a good decision of banks to avoid a liquidity crisis in the first year of application of taxation, but negative consequence would appear in profitability indicators, except if higher cost of interest expenses banks will substitute with higher interest on loans or higher fees for banking services.

3.2. The role of deposits in bank's level of liquidity

After a brief insight into the structure of the Croatian banking system from the aspect of key factors that constitute sources of funding, it would be useful to consider to what extent deposits affect bank's liquidity. There are numerous financial ratios that measure bank's level of liquidity but, for the purpose of this paper, we will focus on just one indicator that relates to the bank's main role and responsibility: accepting deposits from the public and giving loans to the debtors. The indicator that measures the ratio between the bank's total loans and the amount of deposits is known as Loan to Deposit Ratio (hereinafter: LTD ratio). According to the level of this indicator, practices of lending and deposit activities of different banks can be easily recognized. There is actually no optimal level of this ratio and each bank has to choose the level at which it will, the most efficiently, maximize its profits. When the ratio is lower than 1, it means that the bank's lending activities can be completely covered by the bank's amount of deposits. Decision about placing all the collected funds into loans (where this indicator would be close to one) may lead to a potential liquidity risk because bank has not used the opportunity to diversify funds into non-credit placements as well. The relation between the amounts of deposits and granted loans should be always coordinated with respect to two important factors: maintaining sufficient liquidity and at the same time achieving adequate profits. There have been many researches done on the topic of relationship between liquidity and profitability and the results were varying. However, it can be said in general that this relationship depends largely on a bank's business model and the state of economy (Bordeleau & Graham, 2010).

Having in mind previously defined classification of banks into three peer groups (large, medium-sized and small banks), LTD ratio was analysed for each of the group respectively. For the group of large banks, it can be concluded that almost the entire amount of collected deposits was directed for granting loans. As it was mentioned before, such distribution may endanger the level of liquidity when the portfolio of assets is not sufficiently diversified. Peer group of medium-sized banks shows the lowest level of LTD ratio which means that deposits are obviously directed to some other types of assets beside loans. In the peer group of small banks, the LTD ratio is slightly higher. Considering the most significant impact of the big banks, the average LTD level for the whole banking system was 93.3%.

Figure 5. The level of LTD ratio by peer groups



Source: Financial statements of banks

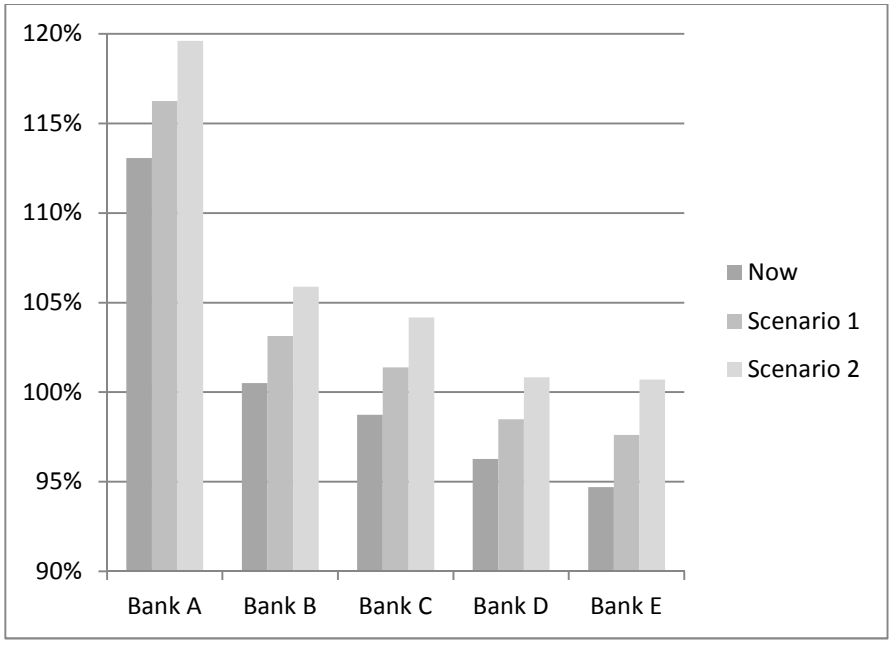
It is considered that banks dominantly rely on deposits as sources of funding (particularly on retail deposits) and preliminary analysis has confirmed such belief. Although a stable source of funding, deposits (as sources of funding) can become potentially volatile in case of financial disturbances and potential economic crisis. From the perspective of current situation in the Croatian economy, it can be stated that average income has gradually weakened and there will remain less disposable funds with the intention for saving. Furthermore, a current downward trend in interest rates on deposits leads to a reduction of interest in such an investment, especially when the financial system gradually evolves and offers new investment opportunities.

Considering the above mentioned circumstances as well as the assumption of amending the tax regulation (meaning the introduction of tax on income from savings), it raises the question of long-term viability and stability of this type of funding sources. It may be assumed that the withdrawal of retail deposits would produce the strongest impact on individual liquidity of banks and on banking system liquidity as well.

For the purpose of this paper, usual form of liquidity shocks will not be simulated, but in the example of LTD ratio (as one of the liquidity ratios) it will be shown value changes if there are disturbances in the sources of funding. It is reasonable to assume that the realization of some of the previous circumstances could lead to the deposit outflows. In the following two scenarios, it is assumed that the introduction of taxes on retail savings could result with the outflow of term deposits by 5% or 10%.

In present situation there are six banks with the value of LTD ratio greater than 100%. Assuming the outflow of retail term deposits by 5% (scenario 1), there will appear one more bank whose LTD ratio will be greater than 100% and due to the realization of scenario 2, there will appear another two banks whose granted loans would potentially exceed the amount of deposits. It can be assumed that the realization of these two scenarios would probably deteriorate other liquidity indicators and that the individual banks would probably confront the liquidity problems. Therefore, frequently mentioned diversification of investment in assets is extremely important, in order to prevent endangerment of the stability of individual financial institutions and financial environment in general by the introduction of tax on the income from savings.

Figure 6. The effects of term deposit outflow on LTD ratio



Source: Financial statements of banks

As it was shown in Figure 4, the highest level of LTD ratio was recorded in the group of large banks. Taking into account the fact that in the group of large banks is the biggest concentration of high

amount retail term deposits (which are at the forefront to be taxed), potentially greatest changes in LTD indicator can be expected in those banks.

4. Conclusions

Announced taxation of interest is a good starting point to explore the correlation between the taxes and their impact on individual depositors in banks and consequently on the financial stability of banks and of the whole banking system. The paper shows that taxes together with social security contributions represent the most abundant source of budget revenues and therefore any changes in taxes may have significant repercussions from the aspect of taxpayers. In that sense, in paper was considered the level of tax burden in Croatia compared to its economic peer countries in CEE region. The analysis shows that from the investor's perspective, tax environment in Croatia is unfavourable. Despite of this, the introduction of a new tax is not necessarily problematic, but it is much more important a stable tax environment and on the other side control of public expenditures.

Analysis of the sources of funding shows that deposits have the greatest impact on medium-sized and small banks and due to the costs of funding and operational costs, those banks are more sensitive to potential outflows which would be reflected to their liquidity and profitability. Potential spill-over effects could occur if banks decide to transfer their interest expenses to the debtors through the increase of interest rates on loans. Although the effects of interest taxation may individually affect certain bank in terms of relation between sources of funding and granted loans, it is unlikely to expect serious distortions in banking system that would result from this new form of taxation.

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