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FINANCIAL STABILITY OF ESTONIAN BANKING SYSTEM IN MODERN CONDITIONS AND ITS ROLE IN THE NATIONAL ECONOMY

This article is devoted to Estonian banking system. Its condition was analyzed with the financial indicators using the methodology of the IMF and Basel III. This study has also revealed the impact of the banking system on the condition of the national economy. It was proved, that the priority task of socio-economic development of Estonia should be to optimize the financial system on the basis of securing optimal norms, rules, institutional framework.

Keywords: banking, profitability, liquidity, capital adequacy, regression analysis, Estonia.

Urgency of the research. In today's conditions of the world economy and the movement of capital, the leading role is assigned to the banking sector as an important part of the national economy. Through their financial activities banks can provide both a positive and a destructive impact on a number of indicators of countries' economic development. However, if in many developed countries the development of the banking system had already been taken place over a long period of time, Estonian banking sector in its present form is a relatively new element of the financial landscape of Europe. That means that before gaining independence in 1990 the country did not have an autonomous national banking system and it was impossible to talk about the existence of Estonian experience in managing a banking system that brings together private lending institutions. That is why the assessment of financial stability of the banking system of the country and its role in the national economy is an urgent problem.

Actual scientific researches and issues analysis. The renowned scholars' sustainable research devoted to the role of the banks in the national economy has begun since the twentieth century. Thus, I. Fisher studied the influence of banks on the growth of money supply in the process of lending to the economy. J. Schumpeter formulated a thesis about the impact of banking on the level and growth of national income. The Keynesian theory is represented by the model of the macroeconomic equilibrium of IS-LM, which allows us to find such a ratio of interest rates and income levels, which at the same time achieves equilibrium in the commodity and money markets [1, p. 272]. Also the historically important and positive role of bank capital in the development of economic relations was repeatedly noted by K. Marx. In the scientific work «The Capital» he described the mechanisms for supporting the "productive forces of the capitalist society" with a particular role assigned to banks with their "free capital" [2].

Modern economists are also actively engaged in studying the issues of the banking sector's impact on economic growth. So, having got acquainted with the works of the contemporary researchers, such as M. Slovpov [3, p. 55–69], E. Zlyvko [4, p. 4], I. Lomachynska [5, p. 247–252], it can be concluded that the existing relations between the banking system and economic growth may depend on the development of the economies of the countries, indicators of financial depth, financial magnitude and others.

Experts from international economic and financial organizations, in particular the World Bank, the International Monetary Fund (IMF), are also intensively conducting research on this topic.

Uninvestigated parts of general matters defining. All research on this topic for Estonia ends in 2001–2004, and therefore needs further study.

The purpose of the article. The main purpose of this work is to determine the peculiarities of functioning of Estonian banking system, as well as to analyze its impact on the national economy.

The statement of basic materials. Estonian banking sector is relatively small, highly concentrated, with a high share of foreign capital. Its assets make up 117% of the country's GDP. Eesti Pank (the Bank of Estonia) is an independent central bank. As Estonia is a part of the euro area, the Bank's main tasks are to assist in defining the monetary policy of the European Community and in implementing the monetary policy of the European Central Bank. Eesti Pank is also responsible for the management and administration of official currency reserves of Estonia, as well as for control of overall financial stability and support of reliable and well-functioning payment systems. Eesti Pank is responsible for the circulation of cash in Estonia [65].

Estonian large banks work as universal banks covering a wide range of market segments, while smaller banks focus on a certain range of services. In 1992 there were 42 banks operating in Estonia. Over the next few years, the number of banks had shrunk mainly due to the mergers and acquisitions. Today in Estonia there are 15 banks, including 6 domestic and 9 foreign banks (branches and subsidiaries). However, the total assets of domestic banks make up only 8.68% of the consolidated bank assets [6].

Most of the banks controlled by foreign capital are owned by Nordic banking groups, which makes Estonian banking sector dependent on the economy and banking sectors of the Nordic countries (Denmark, Finland, Norway and, to a greater extent, Sweden). The market is mainly distributed between Swedbank, SEB Bank, Nordea Bank and Danske Bank. LHV Bank is the largest bank based in local capital, it has 3.8% of the assets of the banking sector. Banks serve 2.2 million customers through 83 branch offices. Estonian clients are served by 1.8 active current accounts per capita and 1.25 active online accounts per one resident. Estonian banks have issued 1.4 bank cards per inhabitant, 80% issued cards are debit cards and 20% are credit cards. About 60% of retail payments were initiated by bank cards and more than 99% of payment orders have been executed electronically since 2009. Only 4% of the population receives income in full or in part in cash [6].

For the analysis of the Estonian banking sector stability, number of indicators were selected in accordance with the methodology for assessing the financial stability of the IMF and Basel III.

Adequacy and availability of capital determine the resistance of financial institutions to abrupt changes in the state of their balance sheets. The most common indicator of capital adequacy is the ratio of regulatory capital to risk-weighted assets [8, p. 67]. In Estonia this indicator exceeds the normative value of 6% during the whole period under review, which is much higher than in neighboring countries (in Lithuania and Latvia) (see Figure 1).

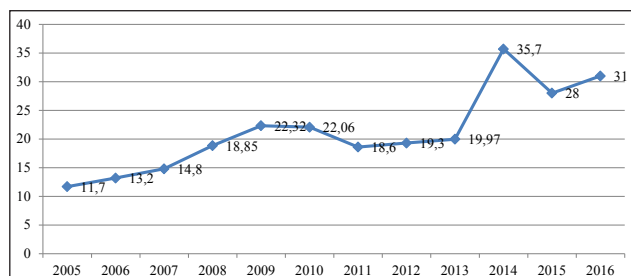


Fig. 1. Bank regulatory capital to risk-weighted assets in Estonia in the period of 2005–2014, %

Source: [9]

Thus, the average of this indicator for Estonia in 2005–2016 was 17.45% with a minimum (11.5%) in 2004 and a maximum (35.7%) in 2014. Even during the recession, which led to significant losses of borrowed resources in 2009–2010, the capital adequacy of banks in Estonia was high, which was largely a positive result of the previous anti-crisis measures that provided high capital buffers.

The ratio of bank nonperforming loans to total gross loans identifies the quality problems of assets in a loan portfolio [8]. Following the dynamics of the indicator, the significant deterioration in the quality of the bank loan portfolio of Estonia during the crisis period of 2008–2009 can be noted (see Figure 2).

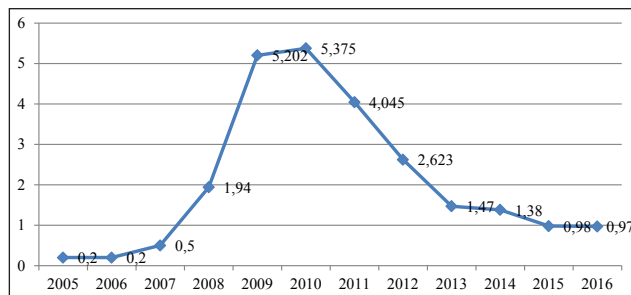


Fig. 2. The ratio of bank nonperforming loans to total gross loans in Estonia in the period of 2005–2016, %

Source: [10]

But despite this, the indicator was the best in the region, and starting in 2011, the ratio of bank nonperforming loans to total gross loans began to decline. In 2016 it reached a mark of 0.97%. That means that the quality of the loan portfolio remains high.

In 2011 the adoption of the operational base of monetary policy in the euro area significantly changed the structure of liquid assets. The volumes of liquid assets influenced not only on changes in deposits, but also the changes in the operating environment. Thus, as a result of convergence within the euro area, the requirements of minimum reserves of banks were decreasing gradually during the second half of 2010: from 15% to 2% in early

2011. In January 2012 the requirement for minimum reserves was reduced to 1%. Reducing the reserve requirement led to the issuance of a significant amount of mandatory reserves, which were partially exchanged for call bids to the commercial banks (mainly parent companies). Although some banks reduced their total liquid assets by returning funds to their parent banks, their total amount remained virtually unchanged. After the European Central Bank made a negative interest rate on its deposit in June 2014, there was practically no change in the structure of liquid assets. To avoid negative interest rates, banks now have only the minimum required central bank reserve. This means that portfolios of liquid securities and claims to other banks increased at the expense of assets previously held by the central bank [11, p. 30–43].

In recent years the growth of liquidity of banking assets (see Figure 3) can be observed. In 2014–2015 their share increased to 21.82% and 25.24% respectively.

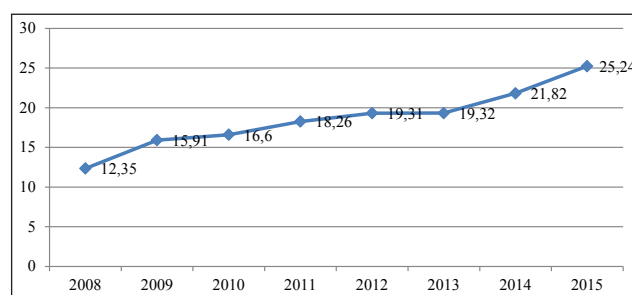


Fig. 3. The ratio of liquid assets to total assets in Estonia in the period of 2008–2015

Source: [10]

All banks operating in Estonia met the requirements for the liquidity ratio (LCR) set out in Directive IV. At the end of January 2015 individual figures for banks fluctuated from 113% to 511%.

Estonian banks are considered to be the most profitable in the Eurozone and the European Union. According to the European Central Bank, Estonian banks outperform other European banks in terms of return on assets (ROA) and return on equity (ROE) [12].

In 2016 the profitability of banks was slightly lower than a year earlier, but was still high. Estonian banks earned more than €357 million net profit in 2016. The profitability of the assets of the banking sector of Estonia was one of the highest in the euro area over the past five years. Revenue was backed up by a growth in net interest income due to low interest expense, an increase in the loan portfolio and an increase in the average interest margin earned on loan portfolios [21].

Banks now have deposits of 16.3 billion euros and manage their loan portfolios of 17.7 billion euros. The growth of demand for deposits in the real sector in recent years has enabled banks operating in Estonia to provide their financing mainly through domestic deposits of individuals. Cash flows from internal loan repayments and growth in real sector deposits are sufficient to finance current credit turnover [6].

With regard to the size of loans issued, by 2014 it tended to decline (see Figure 4). This can be attributed to the deterioration in corporate financial performance due to the weak export demand and the rapid increase in the cost of labor. Investment activity was weak, and therefore the companies' demand for loans did not increase. However, in recent years the situation has improved.

The potential of loans to companies and households is supported by both improving liquidity and at the expense of low loan servicing costs and the rapid growth of household incomes [13].

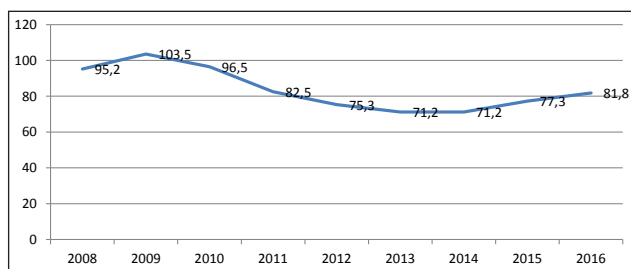


Figure 4. Loans to the private sector in the period of 2008–2016, % of GDP

Source: [13]

Average interest rates on the new loans did not change in 2016. The average size of long-term corporate loans issued in December 2016 was equal to 2.2%. Average interest rates on new residential loans also remained virtually unchanged (2.2%) [6].

Thus, according to the results of the evaluation of financial stability indicators, we can speak about the decent state of the banking system of Estonia at the present stage. But in order to determine its impact on the country's economy, a regression model based on the Barro regression was constructed. For the analysis, statistical data was compiled over the past 20 years (from 1995 to 2015) [10].

The annual growth rate of GDP per capita (Y) was chosen as indicator of economic growth and was selected as a dependent variable. As the independent variables in the model the following indicators were chosen: bank lending to GDP (X1); share of total bank assets to GDP (X2); capital investment to GDP (X3). X1 indicates the importance of the banking sector (financial depth) in the economy. Thus, this indicator should answer the question, like whether the financial depth of the banking sector affects the rate of growth of GDP per capita, and if so, then how much.

Indicator X2 is also referred to as an indicator of the scale (если тут имеется в виду масштаб или уровень, то лучше сказать scope/level) of the banking sector. It shows how many resources which can affect economic growth this sector owns.

Thus, the joint contribution of these indicators should answer the question: how significant is the impact of the financial depth and scale of the banking system on the development of the country's economy.

X3 (which shows the dynamics of investment processes in the economy) was added to the model to consider the sustainability of the first two indicators.

Thus, after the certain calculations, we have received the following equation of the banking sector's influence on the economic well-being of Estonia:

$$Y = -8,889 - 0,362 \cdot X1 + 0,503 \cdot X2 - 0,155 \cdot X3 \quad (1)$$

According to the model's evaluation, we can conclude that it can be used, since the R2 is 0.880 that means that the model is significant at the level of 88%.

Other model indicators point to its adequacy. All coefficients of t-statistics are higher than the t-criterion.

Concluding with regard to the financial depth of the banking sector (X1), it can be said that it has a reverse relationship and stands in the first place among the influential indicators in the country's model.

As a rule, an increase in the volume of lending positively effects on the growth of GDP. The availability of borrowed funds for business and the population gives them the opportunity to increase investment and consumer activity, which increases the scale of production. But overly high debt, on the contrary, threatens to reduce production due to the need to distract a significant amount of funds to pay interest and debts. For different countries and at different periods of time, the optimal level of debt varies. In the Baltic States the ratio of lending to GDP is very high and averages over 67% over the past 8 years. Therefore, it has a negative impact on the growth of the economy and has a reverse dependence in the model.

According to the obtained models, the scale indicator (X2) has a positive value for Estonia. The high significance of this factor means that Estonian banking sector has sufficient resources to use financial and credit mechanisms to stimulate economic growth.

Conclusions. To sum up, we can say that the banking sector of Estonia is quite stable. Banks of the country are characterized by sufficient security of issued loans; there has been an improvement of the quality of the loan portfolio and the growth of liquidity of banking assets in recent years. Banks in Estonia are considered to be the most profitable in the Eurozone and in the European Union in terms of return on equity and assets.

Capitalization in the banking sector is at a high level, and rapid deposit growth had provided sufficient funding to gradually increase lending volumes. Despite the weak external demand, unchanged economic activity supported corporate revenues and stimulated the labor market. The financial situation of households and enterprises in Estonia has also been improved, as their debt has decreased and their financial assets have grown. As a result, Estonia's economy has become more resistant to potential external shocks and has become a solid foundation for balanced lending growth. However, according to the results of the constructed regression model, there is a negative impact of significant lending volumes, but the state of financial and credit mechanisms of the country is still capable of stimulating economic growth.

Other risks for financial stability in Estonia are taking place primarily due to the uncertainty caused by the sovereign debt crisis in Europe and low projections for the growth of the euro area. However, financial markets have maintained their high confidence in the leading Nordic banks (in particular, to Scandinavian banks that dominate in the Baltic countries) and contributed to the strengthening of Estonian banking sector in recent years. At the same time the weakened economic position of the euro zone may adversely affect the ability to repay loans in the northern region due to the reduction of external demand. In addition, the parent banks' high dependence on market financing makes them vulnerable to potential inconvenience in financial markets. And thus the banking system of Estonia becomes vulnerable too. Therefore, the priority task of socio-economic development of the country should be to optimize the financial system on the basis of securing optimal norms, rules, institutional framework. But achievement of certain tasks will be possible under the conditions, if Estonia maintains its macroeconomic stability.

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**ФІНАНСОВА СТІЙКІСТЬ БАНКІВСЬКОЇ СИСТЕМИ ЕСТОНІЇ
У СУЧАСНИХ УМОВАХ ТА ЇЇ РОЛЬ У НАЦІОНАЛЬНІЙ ЕКОНОМІЦІ**

Резюме

У статті йдеться про банківську систему Естонії. Проаналізовано її стан за допомогою фінансових показників відповідно до методик МВФ і Базеля 3. Виявлено вплив банківської системи на стан економіки. Доведено, що першочерговим завданням соціально-економічного розвитку Естонії має стати оптимізація фінансової системи на основі закріплення оптимальних норм, правил, інституційних рамок.

Ключові слова: банківська діяльність, рентабельність, ліквідність, достатність капіталу, регресійний аналіз, Естонія.

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**ФИНАНСОВАЯ УСТОЙЧИВОСТЬ БАНКОВСКОЙ СИСТЕМЫ ЭСТОНИИ
В СОВРЕМЕННЫХ УСЛОВИЯХ И ЕЕ РОЛЬ В НАЦИОНАЛЬНОЙ ЭКОНОМИКЕ**

Резюме

Статья посвящена банковской системе Эстонии. Проанализировано ее состояние с помощью финансовых показателей по методике МВФ и Базеля 3. Вывявлено влияние банковской системы на состояние национальной экономики. Доказано, что первоочередной задачей социально-экономического развития Эстонии должна стать оптимизация финансовой системы на основе закрепления оптимальных норм, правил, институциональных рамок.

Ключевые слова: банковская деятельность, рентабельность, ликвидность, достаточность капитала, регрессионный анализ, Эстония.