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The Impact of Basel III on the Banking System and Economic Development in Eastern European Countries

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ABSTRACT

The article gives an assessment of banking activity regulation based on the implementation of Basel III requirements, which have become a response on the part of supervisory bodies to the prevention of crisis events. This was reflected in the toughening of requirements for capital and liquidity, which in turn required the revision of banking activity management methods. Basel III requirements are nonmonetary management methods oriented to restriction processes in the economy and financial system. In accordance with Basel III requirements, banks shall increase their capital safety margin and liquidity cushion and strengthen the control and monitoring of banking indicators. Banks will be forced to have a large stock of immediately available funds, increase their capital base and form a capital buffer. All this should have a positive impact on the banking system's stability and banks' capability to withstand financial shocks. However, it will also entail a reduction in banks' free resources and a possible drop in the volume of bank operations, especially in the credit sector, which in turn will lead to a slowdown in economic growth. The objective of the study is to identify the influence of Basel III nonmonetary regulation methods on the banking system's stability and economic growth.

The study has been carried out based on financial accounting of banks in countries of Eastern Europe. The main outcomes of the study include identification of factors influencing economic growth, identification of the positive and negative impact of Basel III, determination of a relationship between GDP growth rates and fulfilment by banks of new regulations on capital and liquidity, and development of recommendations on the easing of nonmonetary regulation of banking activity in countries of Eastern Europe.

Keywords: Capital adequacy, bank liquidity, capital safety margin, financial leverage, economic growth, economic stability

INTRODUCTION

Transition towards regulation of banking activity based on Basel III requirements was caused by the consequences of the global financial and economic crisis of 2007-2009, which endangered the financial system's stability in many countries. Banks were forced to form a large volume of accumulations to cover bad debts and could not deal with absorption of losses. This means that the system of banking regulation and supervision existing at that time did not fully reflect the banking sector risks during the periods of economic and financial shocks. The banking sector in most Eastern European countries within the period of 2009 to 2012 was loss-making. Thus, the maximum losses of the banking sector in Romania were fixed in 2011 and amounted to 800 mln RON (National Bank of Romania, statistical data). The year 2011 was also the most loss-making for Hungary, where the banking sector had suffered losses of nearly 300 mln HUF (Central Bank of Hungary, statistical data). The banking sector in the Baltic countries – Lithuania, Latvia and Estonia – had maximum losses in 2009. Estonian commercial banks suffered losses of 600 mln EUR in 2009 (Eesti Pank, statistical data; Estonian Financial Supervision Authority, statistical data), while losses in the banking sector of Lithuania and Latvia within the same period exceeded 1 bln EUR (Bank of Lithuania, statistical data; Bank of Latvia, statistical data; Securities Commission of the Republic of Lithuania; Latvian Financial and Capital Market Commission, statistical data). Although the banking sector of such Eastern European countries as Poland, Czechia, and Slovakia during the crisis and post-crisis periods was in general loss-free, many banks of these countries also incurred losses and faced problems with risk management. A similar situation was also observed in other European countries. All this necessitated reviewing the bank regulation, which was reflected in Basel III requirements. With the objective of increasing the banking sector's stability, reducing the systemic risk and prevent systemic crises in future, Basel III toughens the requirements for capital adequacy and liquidity and implements a financial leverage ratio.

THEORETICAL FRAMEWORK

The Basel III Accord introduces new requirements to bank capital adequacy and liquidity. The new requirements of the Basel Committee will be fully implemented in the banking system in 2019. Under the agreements the minimum requirement for common equity, the highest form of loss absorbing capital, will be raised to 4.5% after the application of stricter adjustments. Implementation of new minimum requirements began in January 2013. Banks had to meet the new minimum requirements in relation to risk-weighted assets. The minimum common equity and Tier 1 requirements were phased in between 1 January 2013 and 1 January 2015. On 1 January 2013, the minimum common equity requirement grew to 3.5%. The Tier 1 capital requirement grew from 4% to 4.5%. On 1 January 2014, banks had a 4% minimum common equity requirement and a Tier 1 requirement of 5.5%. On 1 January 2015, banks had a 4.5% common equity

requirement and a 6% Tier 1 requirement. The indicator of the capital conservation buffer was introduced in banks' practice on 1 January 2016. The capital conservation buffer indicator will be increased from 0.625% in 2016 to 2.5% in 2019. The total capital requirement remains at the existing level of 8.0%. The difference between the total capital requirement of 8.0% and the Tier 1 requirement can be met with Tier 2 and higher forms of capital (BCBS, 2010).

Acknowledging the necessity of an increasing level of bank liquidity risk management and control, the Basel Committee on Banking Supervision (BCBS) developed a new version of Basel III. It provides for the introduction of uniform requirements for the maintenance of a sufficient amount of liquid resource reserve in order to prevent, in future periods of crisis, a high level of insufficiency of financial resources. In this case, commercial banks are offered two new ratios which regulate the condition of liquid assets: LCR (Liquidity Coverage Ratio) and NSFR (Net Stable Funding Ratio) (Konovalova, Zarembo 2015).

The stability of a bank depends on its capital, its quality and size. A bank's capital is a mandatory and integral part of its financial resources, and its development in the form of core capital is a required step even before establishing a commercial bank (Saksonova 2006). Practically every stage of a bank's business is directly or indirectly linked to the capital at the bank's disposal and its value. A bank's capital serves as one of the determinants in the evaluation process of its stability. In case of sudden capital adequacy problems, a bank may lose its competitiveness (Greuning, Brajovic-Bratanovic 2009). The main function of a commercial bank's capital is generation of income and profit respectively, and to provide for a possibility to cover unexpected operating losses (Chorafas 2004). American researchers H. Schooner and M. Taylor, in their book Global Bank Regulation: Principles and Policies, offer an identical definition, but in addition to this they stress the possibility of using capital of a commercial bank to cover possible losses caused by credit risk (H. Schooner, M. Taylor 2009).

Liquidity and liquidity risk management are the key factors for the safety of business operations in any commercial bank (Bertham 2011). Recently, many banks are facing the problem of liquidity strain when severe competition in attracting deposits forces banks to find other sponsors (Rose 2002). Unreasonable liquidity is the first sign of financial instability (Schinasi 2011). For some financial companies, the problem is not just liquidity, but also that there is a threat to their solvency (Allen 2013). Liquidity risk is a term widely used now in the popular press, but the truth is that few practitioners or academics seem to understand this risk well. Perhaps this is not surprising, since until just a few years ago, there was very little work being done to analyse this risk factor (Chacko, Evans, Gunawan, Sjoman 2011). Together with the development of the finance market, opportunities and risks in liquidity management of commercial banks will also experience a correlative increase. This shows the importance of planning liquidity needs by methods with high stability and low cost in order to provide for business operations of commercial banks in the growing global competition (Kochubey, Kowalczyk 2014). Liquidity risk is difficult to measure and depends on so many factors that a capital requirement is unsuitable to prevent it (Ruozi, Ferrari 2012).

Basel III regulation is meant to improve banks' capital solvency, liquidity quality and risk management. It overcomes the limits of Basel II and provides a more accurate capital definition

with new leverage and liquidity ratios and two capital buffers. Under Basel III, banks are facing severe regulation challenges. In terms of capital adequacy, the capital definition is stricter while the risk weighting is higher for counterparty credit risk. Consequently, banks need to reduce their risk exposure and increase high-quality capital. This is difficult since reducing risk exposure would have a negative impact on profitability and reduce investors' appetite for banks. In terms of liquidity, banks are encouraged to invest in liquid assets and increase stable funding, including customer deposits. However, a big issue during a sovereign crisis is the low appetite for long-term debt in banks and thus high related funding costs. Deposits are a good source of stable funding which may be pursued by banks. However, the fierce competition for deposits and other stable funding will push up the funding cost, leading to lower profitability (Fang Yuting, Xie Yuanyuan andLegland Patrick, 2012)

ANALYSIS OF THE CAPITAL SAFETY MARGIN IN THE BANKING SECTOR OF EASTERN EUROPEAN COUNTRIES IN ACCORDANCE WITH BASEL III REQUIREMENTS

During the supervisory monitoring period (2011-2012), banks had to prepare for the implementation of new, more severe requirements for core capital (CET 1 – Common Equity Capital Ratio) and Tier 1 capital (T1C – Tier 1 Capital Ratio) and to find possibilities for establishment of a capital buffer. Since 2013, a staged implementation of new capital ratios has begun, which must be fully completed by 2019. How did they prepare for this innovation and how are Basel III requirements being implemented in the banking sector of Eastern European countries? Let us examine the behaviour of various capital ratios and their fulfilment by banks of countries such as Poland, Czechia, Slovakia, Hungary, Romania, Lithuania, Latvia and Estonia (Figures 1-2).

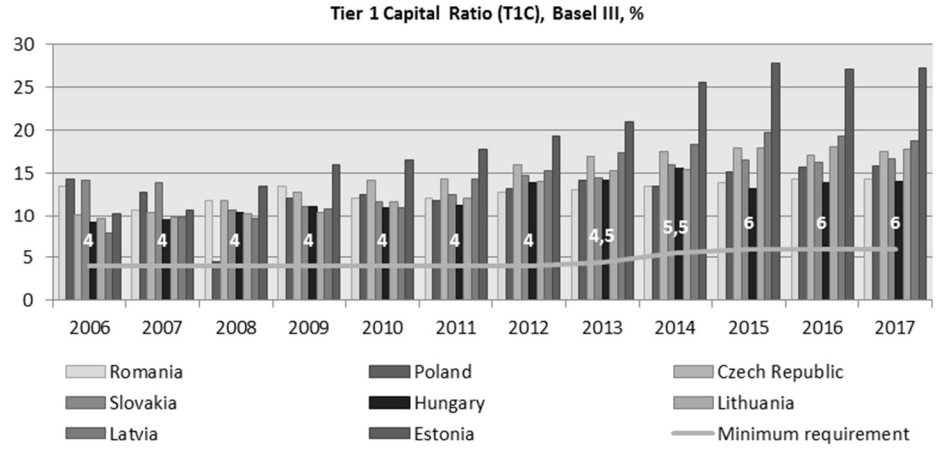

Figure 1. Tier 1 capital ratio in the banking sector of Eastern European countries, Basel III *(calculated by the author)*

(Source: Narodowy Bank Polski, statistical data; Czech National Bank, statistical data; Narodna banka Slovenska, statistical data; Central Bank of Hungary, statistical data; National Bank of Romania, statistical data; Securities Commission of the Republic of Lithuania, statistical data; Latvian Financial and Capital Market Commission, statistical data; Estonian Financial Supervision Authority, statistical data; HelgiLibrary, Banking, statistical data)

Analysis of capital adequacy ratio behaviour in the banking sector of Eastern European countries within the decade of 2006 to 2015 has demonstrated that the strongest and most protected banks during the crisis period were in Czechia, Slovakia and Romania. Their capital (both Tier 1 and total equity) adequacy between 2007 and 2009 consistently exceeded 10%. Polish and Hungarian banks also held strong enough positions (their total capital base in the most dramatic year, 2009, was above 11%). However, in 2008 the Tier 1 capital adequacy ratio in the Polish banking sector was the lowest – 4.5% (at that time the norm was 4%). But Polish banks managed to withstand the crisis events and demonstrated their stability by ensuring overall capital adequacy due to the increase in Tier 2 capital elements. Banks of Eastern European countries were the most vulnerable during the crisis period. In addition, while the Estonian banking sector somehow stayed afloat by providing a relative adequacy of its capital base, banks of Lithuania and Latvia were very threatened and hardly covered ever-growing losses during the crisis and post-crisis periods. It should also be noted here that the banking sector of the Eastern European countries analyzed (including the Baltic States) in the crisis period observed at that time effective minimum capital requirements according to Basel II, but this was not enough to withstand the financial shocks. That is, the regulation based on Basel II was unable to prevent the onset of the financial crisis, which was largely associated with the high-risk credit policy of banks in previous years.

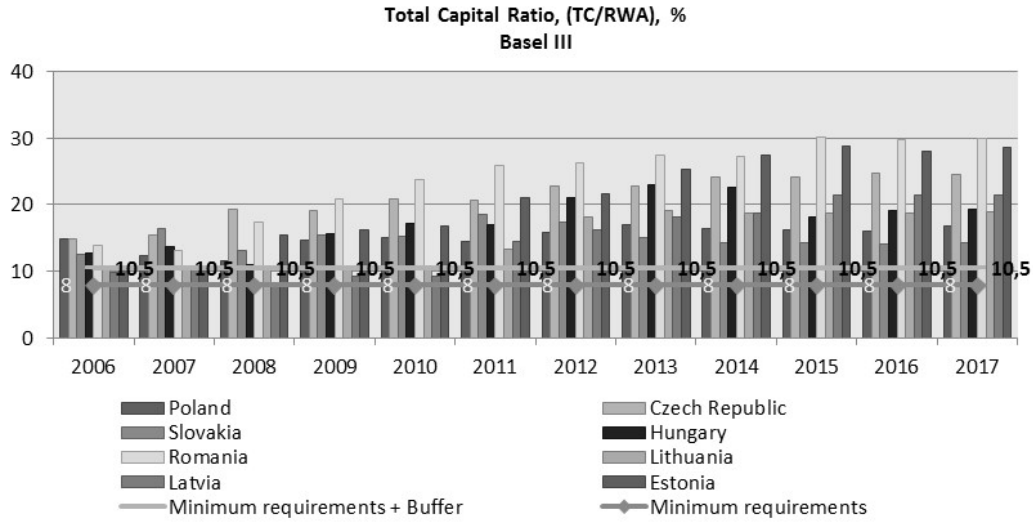

Figure 2. Total capital ratio in the banking sector of Eastern European countries, Basel III *(calculated by the author)*

(Source: Narodowy Bank Polski, statistical data; Czech National Bank, statistical data; Narodna banka Slovenska, statistical data; Central Bank of Hungary, statistical data; National Bank of Romania, statistical data; Securities Commission of the Republic of Lithuania, statistical data; Latvian Financial and Capital Market Commission, statistical data; Estonian Financial Supervision Authority, statistical data; HelgiLibrary, Banking, statistical data)

The preparatory period for the transition to Basel III was characterised in Eastern European countries not so much by the growth in capital volume as by the improvement in its quality. Thus, it is evident from Fig. 3 that most banks had considerable capital growth rates just in the pre-crisis and crisis periods, which is explained by the banks' endeavour to withstand the growing risks. The considerable slowdown in capital growth rates in the banking sector of Latvia, Lithuania and Estonia during the period of 2009-2010 was caused by great losses incurred by the banks of these countries, which resulted in reduction of equity capital and its adequacy. The slowdown in capital growth rates in Slovakia (2011-2012) and in Hungary (2014-2015) is associated with the subordinated debt substitution and subsequent transition to better-quality and more stable elements of equity capital. It should be noted that many banks of Eastern European countries grew their capital even before implementation of Basel III requirements (Fig. 1 – 2) and are currently paying more attention to the quality of capital in its management. This means that the capital structure in banks is changing for the benefit of its stable component: core capital (CET 1 – Common Equity Capital) and Tier 1 capital (T1C – Tier 1 Capital). As is evident from Fig. 1, Tier 1 capital and its adequacy ratio have been growing rapidly since 2011. The highest Tier 1 capital adequacy growth rates are observed in Estonian banks. In 2015, Tier 1 capital adequacy in the Estonian banking sector was 27.8%. All other analyzed banks of Eastern European countries have a good Tier 1 capital safety margin (Fig. 1). It should be noted that Romanian banks are operating in conditions of a broad gap between Tier 1 capital adequacy and core capital adequacy. This means that the Romanian banking sector has a high share of Tier 2 capital compared to the most stable capital elements and Romanian banks will still have to consolidate their capital base. It should also be noted that if Basel III requirements had been implemented in 2006 or during the crisis period, the banking sector in the Baltic countries could not have met them in full. Fulfilment of Basel III requirements at that time by Baltic countries would only have been possible without formation of a capital buffer. At the same time, such Eastern European countries as Poland, Czechia, Slovakia, Hungary and Romania were ready for a complete fulfilment of Basel III requirements even in the crisis period. Let us now examine how strong and stable the capital base of commercial banks in Eastern European countries was within the period of 2006 to 2017. To assess the stability of commercial banks, the concept of "capital safety margin" is introduced, which is defined as an excess of the actual capital tier above the minimum requirement established by a supervisory body. Assessment of the "capital safety margin" in the banking sector of Eastern European countries includes an analysis of complete fulfilment of requirements for establishment of a capital buffer (+ 2.5%) in accordance with Basel III (Fig. 4).

Thus, as a result of the analysis, it was found that banks had the minimum

capital safety margin during the crisis period. The Latvian banking sector appeared to be especially vulnerable. During the period of 2006 to 2010 Latvian commercial banks had a negative safety margin in accordance with Basel III; therefore, the transition to the new standards became especially complicated for Latvia. However, by 2011 the Latvian banking sector already had a positive capital safety margin and demonstrated its consistent upward trend. Stable, progressive and even behaviour characterises the capital safety margin of Czech banks. The capital base of Czech banks had adequate safety, and they were ready to withstand the financial shocks during the crisis period. In the Romanian banking sector the safety margin is largely ensured at the expense of Tier 2 capital, while banks of Poland, Czechia, Slovakia, Hungary and Estonia meet the capital safety margin mostly due to the increase in the share of equity capital. Implementation of Basel III requirements will result in the modification of banks' resource base with an increasing share of capital items therein.

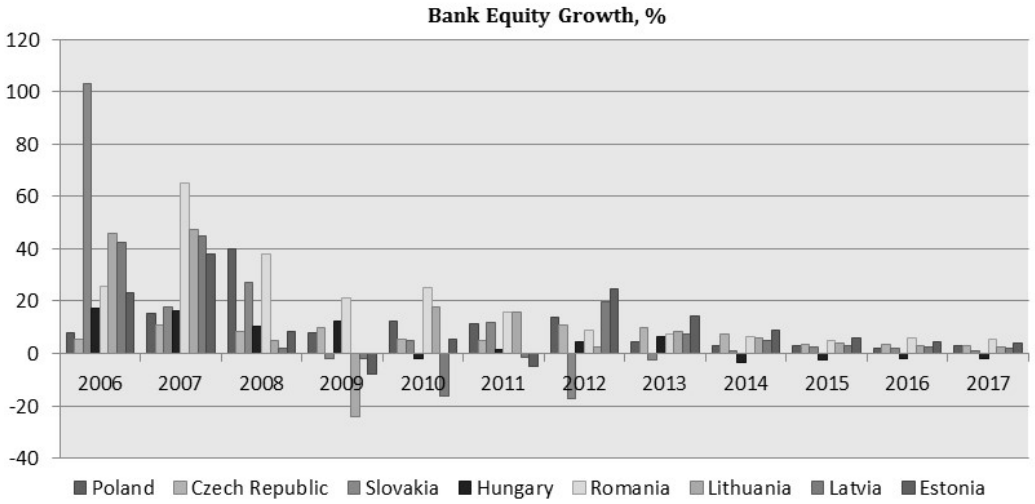

Figure 3. Bank equity growth in the banking sector of Eastern European countries *(prepared by the author)*

(Source: Narodowy Bank Polski, statistical data; Czech National Bank, statistical data; Narodna banka Slovenska, statistical data; Central Bank of Hungary, statistical data; National Bank of Romania, statistical data; Securities Commission of the Republic of Lithuania, statistical data; Latvian Financial and Capital Market Commission, statistical data; Estonian Financial Supervision Authority, statistical data; HelgiLibrary, Banking, statistical data)

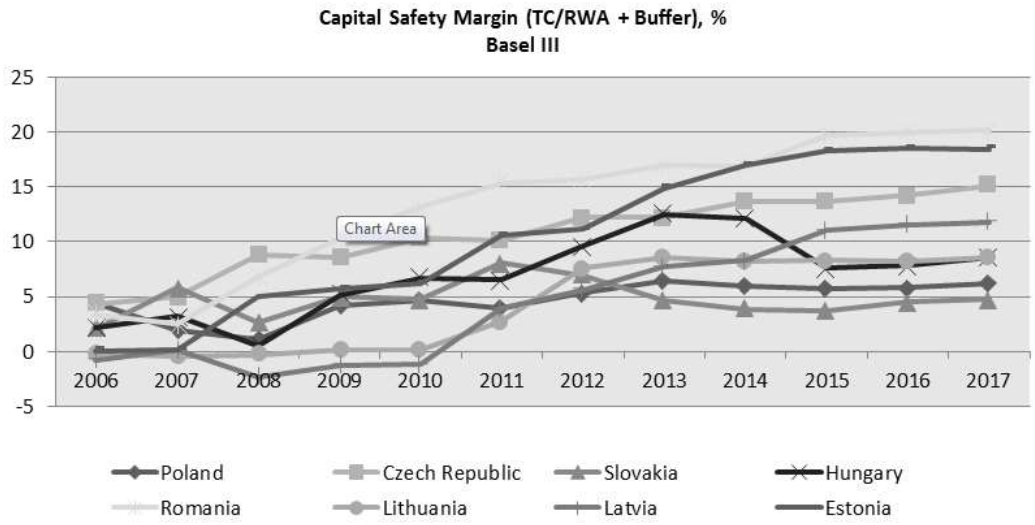

Figure 4. Capital safety margin in the banking sector of Eastern European countries *(calculated by the author)*

(Source: Narodowy Bank Polski, statistical data; Czech National Bank, statistical data; Narodna banka Slovenska, statistical data; Central Bank of Hungary, statistical data; National Bank of Romania, statistical data; Securities Commission of the Republic of Lithuania, statistical data; Latvian Financial and Capital Market Commission, statistical data; Estonian Financial Supervision Authority, statistical data; HelgiLibrary, Banking, statistical data)

ASSESSMENT OF LIQUIDITY AND FINANCIAL LEVERAGE RATIOS

Along with capital adequacy ratios, Basel III introduces uniform requirements for the availability of liquid assets stock in banks, which should be adequate for the prevention of a severe shortage of monetary resources during a crisis period. In this regard, two ratios are implemented that regulate the condition of the liquid assets: the short-term (30-day) liquidity ratio / liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). In accordance with the liquidity coverage ratio (LCR), the bank's stock of liquid assets in a crisis situation must cover the predicted money outflow for a 30-day period. This measure is aimed at providing banks with the required liquidity level in conditions of extreme deposit withdrawals or difficulties with obtaining interbank loans on the currency market. The liquidity coverage ratio (LCR) was introduced on 1 January 2015 with a 60% initial minimum level. A further yearly 10% increase of this ratio is provided for, reaching 100% of the minimum amount by 1 January 2019. The other liquidity ratio – the net stable funding ratio (NSFR) – aims to form a 100% coverage of the bank's long-term assets at the expense of sustainable liabilities with a one-year horizon period. This ratio will be implemented in banking practice as of 1 January 2018. It should be noted that Basel III requirements in relation to liquidity are aimed at an increase in banks' stability during periods of

economic decline. Analysis of liquidity ratios in the banking sector of Eastern European countries has demonstrated that in 2015 the short-term (30-day) liquidity ratio (liquidity coverage ratio – LCR) was fulfilled by banks in excess of the minimum 60% requirement and many banks of Eastern European countries were well prepared long before implementation of the ratio and had 100% stock of liquid assets for coverage of money outflow for a 30-day period. Implementation of the net stable funding ratio (NSFR) will be more problematic since many banks, including in Eastern European countries, are operating in conditions of considerable transformation of short-term resources into long-term investments because of a shortage of long-term resources and therefore are exposed to a high risk of unbalanced liquidity. Therefore, banks operating in conditions of high risk of unbalanced liquidity will need to change their structure of liabilities towards an increase in their stable component and/or reduce the share of risk assets by the beginning of 2018.

Figure 5. Liquidity ratios in the Polish banking sector, %
(calculated by the author)
(Source: Narodowy Bank Polski, statistical data; HelgiLibrary, Banking, statistical data; Blażej Kochanski, 2014)

Let us consider the degree of the Polish banking system's readiness for the transition to the liquidity standards in accordance with Basel III. As is evident from Fig. 5, the Polish banking system from 1996 to 2007 had a consistent excess of the liquidity coverage ratio (LCR) with high volatility (60% to 346%). However, since 2007 the fluctuation range of this ratio has decreased to 10-30%. Assessing the degree of readiness to observe the net stable funding ratio (NSFR) which will be implemented in 2018, it should be noted that during the crisis period Polish banks were not ready to observe this ratio (shortage of stable financing sources at the disposal of banks). However, starting in 2010, a sustained upward trend appeared

in this ratio with fluctuations of 1% to 12%. Therefore, it can be concluded that Polish banks at the present time are sufficiently prepared and meet the liquidity requirements in accordance with Basel III.

And what about the new financial leverage ratio? Since financial leverage is defined as a ratio of common equity to aggregate assets and off-balance-sheet liabilities (without risk adjustment), it can be expressly said that this ratio will have the biggest impact with regard to banks having considerable off-balance-sheet items and a big share of assets with a low risk level. Banks using the internal rating-based system (IRB) for credit assessment may also be negatively affected by this ratio since they will have a lower share of risk-bearing assets in total asset volume compared to banks assessing credit risk based on external ratings. Financial leverage does not reflect the level of risk and only shows the general ratio.

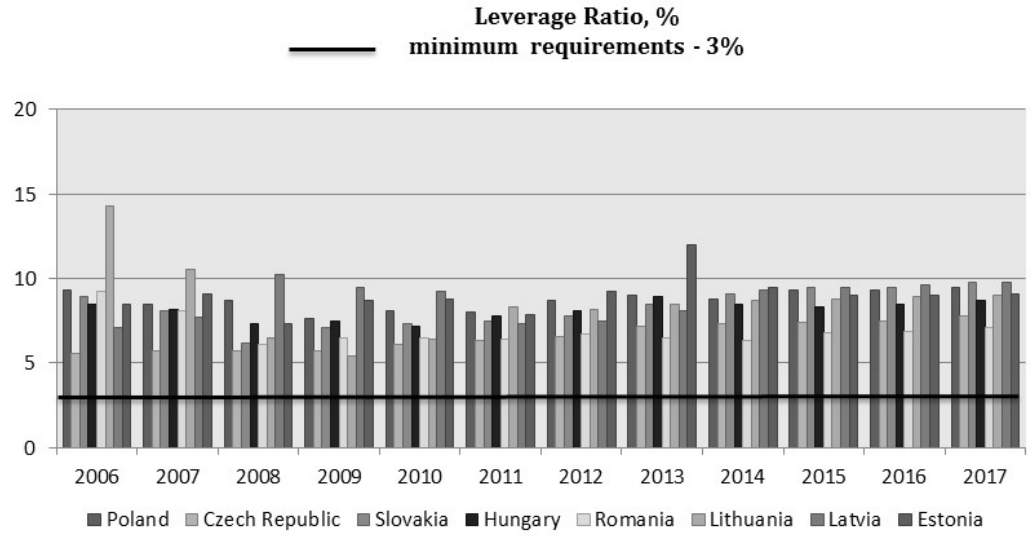

Figure 6. Leverage ratio in the banking sector of Eastern European countries, % *(calculated by the author)*

(Source: Narodowy Bank Polski, statistical data; Czech National Bank, statistical data; Narodna banka Slovenska, statistical data; Central Bank of Hungary, statistical data; National Bank of Romania, statistical data; Securities Commission of the Republic of Lithuania, statistical data; Latvian Financial and Capital Market Commission, statistical data; Estonian Financial Supervision Authority, statistical data; HelgiLibrary, Banking, statistical data)

Thus, the financial leverage ratio will be the same for both banks carrying out a conservative or moderate policy and banks pursuing a high-risk aggressive policy. Although certain banks of Eastern European countries experienced problems when achieving the required level of this ratio, for the whole of the system the aggregate financial leverage ratio is observed and has a strong reserve (Fig. 6).

Thus, a 3% limit of the financial leverage is generally observed in all the analyzed Eastern European countries during the period of 2006 to 2017. In 2017, the highest financial leverage level (more than 9%) was achieved in the banking sector of Poland, Slovakia, Latvia and Estonia.

THE IMPACT OF BASEL III STANDARDS ON THE BANKING SYSTEM STABILITY AND ECONOMIC GROWTH OF EASTERN EUROPEAN COUNTRIES

Undoubtedly, the increasing requirements for capital and liquidity reduce the probability of banking crises and increase the banking system's soundness. Thus, according to the results of the model of the Bank for International Settlements, an increase in the capital liquidity ratio of just 1% (from 7% to 8%) reduces the probability of a crisis occurring by more than one-third (Kosmidou Kyriaki, 2008). Furthermore, the lower the initial capital level, the higher the effect of crisis probability reduction. Implementation of liquidity standards and particularly the net stable funding ratio (NSFR) helps to increase the banking system's stability in the long run.

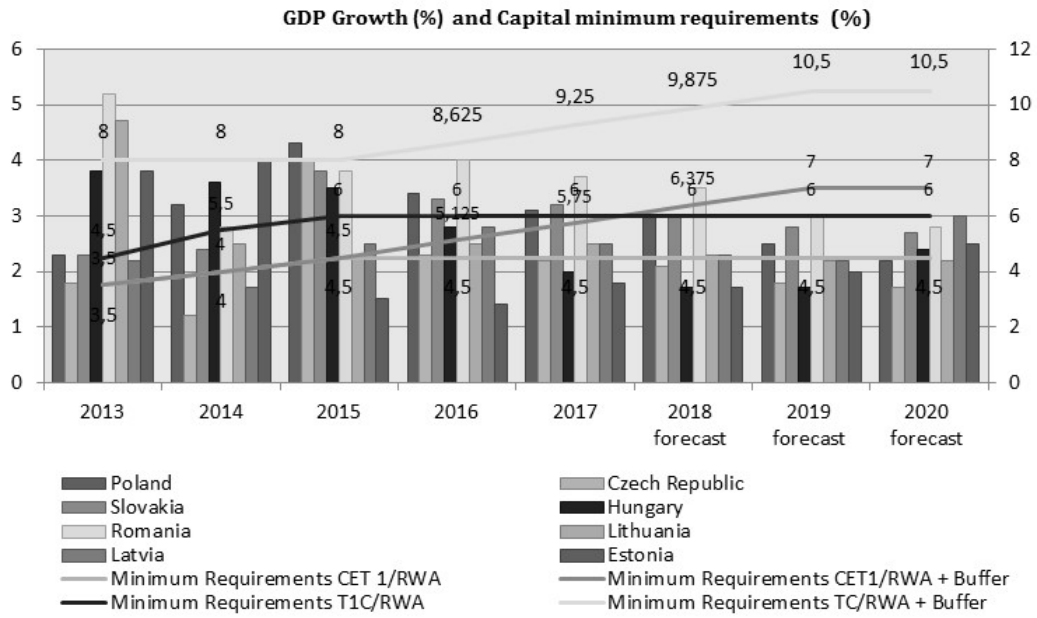

Figure 7. Dependence between changes in the minimum capital requirements and GDP growth rates (prepared by the author)

(Source: Statistical & Forecast data Trading Economics; Basel Committee on Banking Supervision, Basel III)

All these measures are aimed at restraining the range of the credit boom in periods of economic growth and restricting a sharp decline in the volume of credit operations during a recession. However, this effect of non-monetary regulation will be accompanied by a slowdown in economic growth. Why? When improving the quality of capital items and increasing the specific weight of equity capital in bank resources and also when increasing the share of liquid assets

and reducing the volume of transformation of short-term resources, a reduction in the banking activity may take place, which in turn will lead to a slowdown in economic growth. The reason for a slowdown in GDP rates will be that while maintaining the previous level of assets banks will be required to have greater capital, but when increasing their assets with a rising share of risky assets, banks will be obliged to increase the volume and share of equity in the total capital. As a result, the cost of resources will increase, which may lead to a reduction in the efficiency of banking activity, namely, to a reduction in the rates of return on assets and on capital. A reduction in return on capital will entail a reduction in the dividend payments and in the attractiveness of bank shares for investors. As a result, inflow of financial resources into the economy will decrease and this in turn will negatively affect the growth indicators. Let us consider what impact the implementation of minimum capital requirements under Basel III had and will have in future on economic growth (Fig. 7).

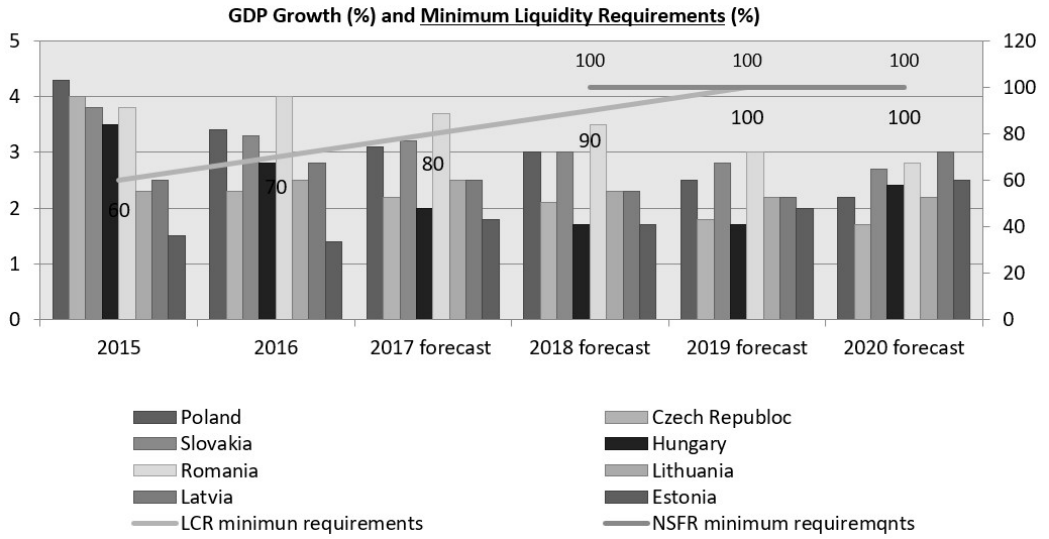

Figure 8. Dependence between changes in the minimum liquidity requirements and GDP growth rates (prepared by the author)

(Source: Statistical & Forecast data Trading Economics; Basel Committee on Banking Supervision, Basel III)

During the period from the beginning of implementation of minimum capital requirements (2013) until their full introduction (2019), the increase in the ratios is accompanied by a slowdown in GDP growth rates (both actual and predicted). A forecast of GDP growth rates until 2020 is presented by experts of "Trading Economics". It is evident from Fig. 8 that upon the increase in the ratios of minimum capital requirements, a slowdown in GDP growth rates takes place in Eastern European countries, which confirms conclusions and forecasts made by experts and analysts of the OECD and the IMF.

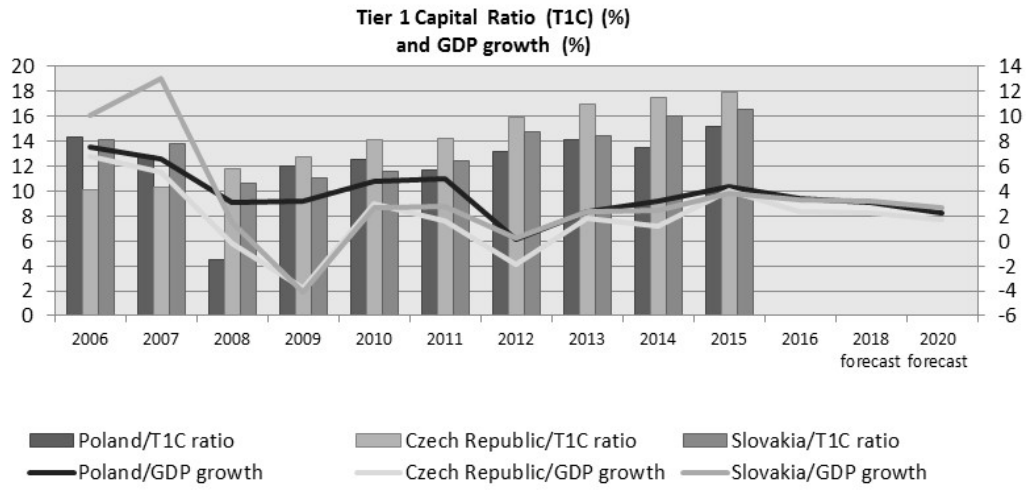

Figure 9. Dependence between the T1C ratio and GDP growth rates in Poland, the Czech Republic and Slovakia *(prepared by the author)*

(Source: Czech National Bank, statistical data; Narodna banka Slovenska, statistical data; Polish Financial Supervision Authority, statistical data)

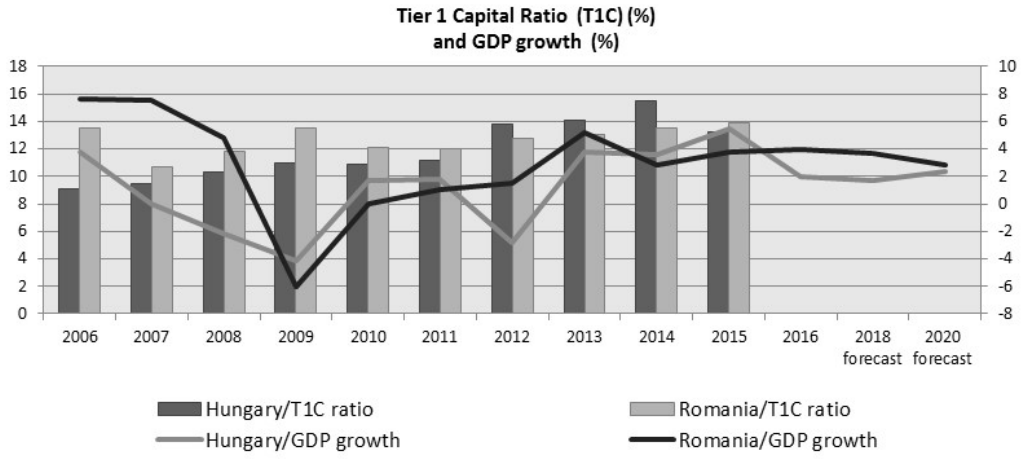

Figure 10. Dependence between the T1C ratio and GDP growth rates in Hungary and Romania *(prepared by the author)*

(Source: Central Bank of Hungary, statistical data; National Bank of Romania, statistical data)

Since Basel III first of all puts forward requirements for an increase in the share of stable capital elements, in the analysis of the impact on economic growth it is expedient to consider the relationship between Tier 1 capital adequacy and GDP growth rates (Fig. 9-11). It is evident from the diagrams that a

significant drop in GDP growth rates in Eastern European countries was observed twice during the last decade: in the financial crisis period (2007-2009) and also in the period of supervisory monitoring (2011-2012) recommended by Basel III, when banks had to prepare for the implementation of new, more severe requirements in relation to capital. Thus, it can be concluded that Basel III requirements are nonmonetary methods of regulation oriented on the one hand towards the stability and sustainability of the banking system and on the other hand towards the constraint of economic growth rates, i.e. nonmonetary restriction. Experts of "Trading Economics" predict that GDP growth rates will also slow in future since the effect from implementation of Basel III requirements is only beginning. Thus, according to expert evaluations, it is expected that a slowdown in GDP growth rates will be more tangible in such economically strong Eastern European countries as Czechia, Poland, and Slovakia. Thus, for example, while in 2015 the GDP growth rate in Poland was 4.3%, according to forecasts of "Trading Economics", the GDP growth rate in Poland will slow to 2.2% by 2020. In Czechia, a slowdown to 1.7% in GDP growth rates is expected by 2020 compared to 4% growth in 2015. But in Slovakia the GDP growth rate of 3.8% in 2015 will slow to 2.7% by 2020. In other Eastern European countries, a slowdown in GDP growth rates will be less considerable. It should also be noted that the severization of requirements for capital will not only be associated with a slowdown in GDP growth rates but will also lead to a reduction in GDP volatility and in the fluctuation range within the business cycle (Fig. 9-11).

What will the new liquidity standards bring? According to expert evaluations, the implementation of liquidity standards as well as the increasing capital requirements will also lead to a reduction in GDP growth rates. According to the results of a study carried out by the Microenvironment Analysis Group and the agency "Trading Economics" (Statistical & Forecast data Trading Economics), banks' increase in the level of liquid assets of 25% and extension of bank liabilities' maturity in order to maintain the net stable funding ratio can lead to a reduction in annual GDP growth rates of 0.08% ("Trading Economics", Statistical & Forecast data Trading Economics).

Estimates of the Bank for International Settlements confirm this conclusion: an increase in the net stable funding ratio by 1 percentage point leads to a downward deviation of GDP from the basic level of 0.08% (Bank for International Settlements, statistical data).

Another consequence of implementation of additional liquidity standards may be a reduction in the volumes of bank crediting and overall deterioration of bank operation efficiency. The thing is that said measures hamper the process of transformation of assets and liabilities, which is a necessary element of dynamic bank management policy. This may entail a deterioration of ROE and ROA ratios.

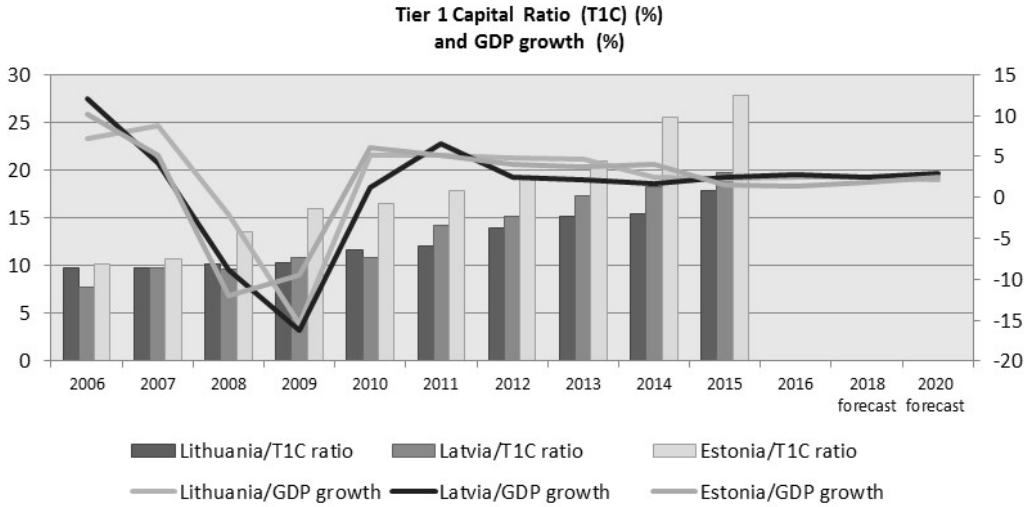

Figure 11. Dependence between the T1C ratio and GDP growth rates in Lithuania, Latvia and Estonia *(prepared by the author)*

(Source: Securities Commission of the Republic of Lithuania statistical data; Latvian Financial and Capital Market Commission statistical data; Estonian Financial Supervision Authority statistical data)

The impact on economic growth of implementation of new liquidity requirements under Basel III is shown in Fig. 8. After implementation in 2015 of the liquidity coverage ratio (LCR) and with its subsequent rise, a slowdown is also expected in GDP growth rates. Implementation starting from 2018 of the net stable funding ratio (NSFR) will also adversely affect economic growth in general. According to forecasts of "Trading Economics", by 2019 (the target deadline for full compliance with Basel III) a slowdown in growth rates may be maximal within a 5-year period (2015-2019).

How to withstand possible negative consequences of heavy Basel III regulation? It appears that a negative impact of Basel III nonmonetary regulation on economic growth can be reduced or prevented by methods of monetary policy oriented at money-and-credit expansion. However, it will only be possible in those Eastern European countries that have retained their monetary independence and their national currency (such as Poland, Czechia, Hungary, and Romania). In Eastern European countries that are members of the euro area, realization of such countermeasures will be strongly restricted or impossible since the legal minimum reserve ratio and ECB refinancing rate are currently on a zero level while the ECB deposit rate is negative. Good opportunities for prevention of Basel III's negative impact due to a reduction in the legal reserve ratio may be used by Romania with its effective legal reserve ratio of 8% (National Bank of Romania, statistical data; Trading Economics", Statistical & Forecast data Trading Economics), Poland with its effective legal reserve ratio of 3.5% (Narodowy Bank Polski, statistical data; Trading Economics", Statistical & Forecast data Trading Economics), and Czechia and Hungary with their effective legal reserve ratio of 2% (Czech National Bank, statistical data; Central Bank of

Hungary, statistical data; Trading Economics", Statistical & Forecast data Trading Economics). Possibilities of downward manoeuvring with the refinancing rate in these countries will be insignificant since currently the refinancing rate in Romania is 2.5% (National Bank of Romania, statistical data), while in Poland it is 1.5% (Narodowy Bank Polski, statistical data), in Hungary it is 0.9% (Central Bank of Hungary, statistical data), and in Czechia it is only 0.75% (Czech National Bank, statistical data). Nevertheless, Poland, Czechia, Hungary and Romania will be capable to a greater degree of withstanding a slowdown in their economic growth through realization of monetary policy than such Eastern European countries as Slovakia, Lithuania, Latvia and Estonia.

CONCLUSION

Bank regulation based on Basel III requirements may have both positive and adverse aspects and consequences.

The positive aspects and consequences are as follows:

Growing requirements for capital and liquidity will increase the borrowing power and solvency of banks and, therewith, the sustainability of the entire banking sector. The banking system and economy in general will be more resistant to financial shocks. Regulation based on Basel III will also contribute to a reduction in systemic risk and prevention of systemic crises in future.

The negative aspects and consequences are as follows:

An increase in the capital of banks as well as an improvement of its structure and quality will lead to growing expenditures of banks, which in turn may entail growth in credit rates and reduction of banking activity. As a result, economic growth will slow. Reduction of banking activity will have an adverse impact on the profitability of the banking business. At the same time, it may affect the involvement of banks in high-risk transactions.

Proposals for increasing banks' stability and mitigation of strict Basel III requirements are as follows:

1. Use possibilities to increase the core capital by means of share issuance for public offering and to be offered to existing shareholders.
2. With the increase in the profit of commercial banks, use the possibility to increase the equity capital from internal sources of the commercial bank, for example, by means of capitalisation.
3. To reduce the credit risk, which has the greatest impact on capital adequacy ratios, the quality of credit portfolio management should be improved by strengthening the credit monitoring and introducing stricter evaluation requirements for borrowers' creditworthiness.
4. To achieve consistency between a bank's risks and capital required to cover them, commercial banks, as they accumulate historical data, must develop and approve risk evaluation methods based on internal ratings.
5. It is advisable to do regular stress-testing, undergo simulations of problematic situations, and verify banks' liquidity, solvency and durability against various stress situations.

6. Commercial banks should perform short-term liquidity planning in accordance with cash flows based on the requirements of Basel III.
7. The negative impact of Basel III nonmonetary regulation on economic growth can be reduced or prevented by methods of monetary policy oriented at money-and-credit expansion.
8. Good opportunities for prevention of Basel III's negative impact due to reduction in the legal reserve ratio may be used by Romania with its effective legal reserve ratio of 8%, Poland with its effective legal reserve ratio of 3.5%, and the Czech Republic and Hungary with their effective legal reserve ratio of 2%.

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