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PAPER

Assessment of the Level of Financial Development of the Visegrad Group Countries in Comparison with the Eurozone

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Abstract The purpose of the article is to explore the level of financial development of the Visegrad group countries in comparison with the Eurozone. In order to achieve the study's goal, the structure of the banking systems of countries and changes in assets in specific categories of financial institutions were analyzed, and it was also revealed what policies countries are pursuing to improve banking systems in general.

As for the general level of elaboration of the banking sector in Poland, it remains less developed relative to the members of the Visegrad Group, as well as the nations of the Eurozone as a whole. This is indicated by the lower ratio of banking assets to the country's GDP. The largest share in the structure of the financial system of the Visegrad Group countries is represented by credit institutions. Investment and pension funds and insurance companies are represented to a lesser extent.

As for the loan-to-GDP ratio, this indicator is declining in Poland over the entire period from 2018 to 2020, while in the Czech Republic, Hungary, and the Eurozone countries, there is a noticeable increase. In the ratio of deposits to GDP, growth is observed in all countries, including the Eurozone as a whole.

Despite the risks of stagflation, compared to previous financial crises, the capital stocks and liquidity of the financial institutions of the countries of the Visegrad group have become much stronger and are better prepared to withstand new shocks (such as the current crisis around Ukraine) and their consequences.

Keywords: Visegrad group countries, Eurozone, financial development, banking sector.

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1. Background of the Study

The worldwide spread of the epidemic infection COVID-19 has led to a global recession and destabilized the development of financial markets in many countries. Under IMF estimates, the fall in world GDP in 2020 was the most significant since the Great Depression. An acute enlargement in unemployment accompanied the crisis in several nations, significant industry effects, a decrease in investment activity, and deterioration in the credit quality of borrowers and bank portfolios. The situation in global financial markets, despite some stabilization, remains unstable. Under these conditions, regulators worldwide are implementing large-scale maintenance measures (fiscal, monetary, and financial) to limit the economic damage from the pestilence. Liquidity and capital reserves accumulated for the past decade in the financial frame make it possible to execute countercyclical measures. Nonetheless, implementing arrangements may not be enough to restore global growth quickly.

Market stabilization since the end of March 2020 was facilitated by large-scale anti-crisis programs implemented in many Central European countries. This list includes measures to support financial markets: lowering rates by central banks; measures to ensure liquidity (expansion/implementation of asset purchase programs, expansion of operations to provide liquidity); measures aimed at limiting excessive exchange rate volatility; weakening macro-prudential regulation (countercyclical measures to free up capital shock-absorbers, loosening reserves, etc.); lending support (providing preferential loans to financial entities that increase lending to SMEs). The announcement of state support arrangements granted significant support to the financial markets (direct financing of specific industries, tax deferral/abolition, and provision of guarantees for SME loans). However, the consequence of the pandemic was a significant increase in public debt and budget deficits in many countries, which will limit the possibility of applying fiscal politics in crises in the times to come.

2. Brief Literature review

The study of the evolution of pecuniary elaboration in Central and Eastern Europe developing countries attracts the attention of a large number of scientists. In particular, Tarullo (2019), Kotarsky et al. (2019), Mursalov (2020) and Farkas (2017), Chumachenko et al. (2021), Dominese et al. (2020, 2021), Lomachynska et al. (2020), Malyarenko (2021), Maslii et al. (2018, 2019) studied the development of economies and financial systems, the models of banking regulation and monetary policy of different European nations.

Sironi (2018) studied the extension and changes in banking regulation during and beyond the worldwide slump in 2008-09. The study showed that next to the economic and financial slump, several reforms were carried out to increase the steadiness of countries' banking systems, which in turn led to a significant reduction in the risks associated with bank failures, as well as to stabilize the world financial network. Alterations have also led to a significant increase in share capital and improved quality (the world's 30 largest banks have raised more than $1 trillion in capital from 2009 to 2016). As a result, the average capital to total assets ratio increased from 5% to over 7%, partly due to a reduction in assets. The increase in the volume and quality of bank funds, together with the rise of liquidity, has clearly led to a reduction in the probability of default of large banking groups in the future and encouraged banks to take unnecessary risks.

Bulatova et al. (2019) also noted the high rentability and financial depth of the world's largest financial institutions and discovered a considerable increase in the stability of the global financial scheme post the worldwide financial slump. However, in her work, she also noted the growing dependence of the global economy on the volume of bank financing, as well as increasing the share of bank assets in the structure of world pecuniary assets (the banking sector accounted for more than 50% of all financial assets in 2018). At the same time, the share of developing countries in world assets has increased significantly (from pre-crisis 16% to 30% in 2018).

3. Investigating data from Visegrad countries' financial systems

Compared to the banking systems of Visegrad Group and other EU countries, the Polish banking system remains relatively stable and resilient even during a period of significant turmoil in the global economy. During the pandemic, Polish banks paid considerable attention to supporting their clients (at their own expense and with state assistance). Thus, Polish banks have demonstrated high performance and contributed considerably to helping individual clients and the entire national economy. Polish banks reacted to the economic slump much earlier than the rest of the EU members by imposing a moratorium on loans.

The year 2012 was marked by the fact that Poland made significant progress in developing macroprudential policy. From early 2011, the KNF supervisor began dispatching declarations to banking executives, motivating them to hold superior (than the ordinary 8% TCR) CARs (4%) with an eye to be profitable and gain dividends (M. Czaplicki, 2021). Though the declarations were not obligatory under state law, the power and rule of the KNF, as well as the anxiety of more common and rigorous observational control, served as the basis of a permanent shift in the behavior of banks. These applications were sent up to 2017 when the "dividend bumper" was officially approbated and diminished to 1.5% (starting in 2018) through implementing a formal 3% reserve for systematic peril. Previously, in the autumn of 2015, KNF presented Tier 3 (separate) capital surcharges for the chance of foreign value mortgages kept by some banking groups (afterward changing annually). Simultaneously, Parliament adopted a new act for banks representing a new CRD IV/CRR mode in Poland.

Launched in 2016, a capital reservation reform has been implemented (with a transitional stage until 2019). In 2017, FSC (macroprudential policy oversight body) introduced other important buffers for financial institutions, which have been further adjusted (from the point of view of grade and destination). In response to the pandemic-led stagnation, the Treasury has canceled the systemic bumper on the reference of the FSC. All these changes indicate the dynamic use of capital adjustment to reach financial steadiness. Simultaneously, banks have reacted to regulatory changes by either reducing back on regulating their capital levels (by issuing Tier 2 debt or maintaining profits). Meanwhile, some significant adjustments were introduced in the risk-weighting system, including most notably the implementation of a 150 percent risk-weighting for foreign currency-adopted mortgages (May 2017) and lower-risk weights associated with the fulfillment of the CRR pandemic fix.

The Czech financial system was significantly affected by the consequences of the 2020 pandemic (the annual fall in GDP was 5.5%). Relative to last year, both housewifery consumption (-5.2%) and overall fixed capital formation (-8.5%) slumped harshly. Total government expenses were the largest contributor to national GDP growth (2.9%). Monetary policy, however, reacted most quickly to the escalation of the economic recession. In opposition to high inflationary pressure, which prompted the central bank to raise the 14-day repo rate to 2.25% in the middle of the first quarter, since March, the rate has been reduced by 0.25% (EBF (2022)). The board of the CB was identically determined to lower capital requests and simplify mortgage moderation. Through multiple support steps and falling tax revenues, there was a deficit in public finances, which made up to 6.2% of GDP. Public debt raised to 38% of GDP (on 7.8%), and in the scope of the expected recession of the deficiency in the 2021 electoral year, it followed to the relatively mild debt drag set by the Fiscal Responsibility Law at the level of 55% of GDP.

State restrictions to combat the influence of the COVID-19 crisis have also affected the banking segment in the Czech Republic. However, despite this, Czech banks proceeded to be the backbone of the financial steadiness of the struggling economy. Despite the depression in many profitability indicators, banks remained liquid and profitable, and the portion of idle loans stayed at a comparably acceptable level, notwithstanding that it enlarged towards year-end. Moreover, banks have maintained serial adequate capital grades in line with the recommendations of the CNB, reinforced by unpaid dividends in 2020.

In Hungary, a 4% drop in GDP was recorded in 2020 relative to the antecedent year. State and the CB have taken special economic and fiscal arrangements to support financial institutions and regenerate the economy as a whole. Also mentioned is the moratorium on payments, which is the most extended measure in the EU. These measures effectively contributed to a pretty prompt restoration of the economy and the banking system in the second half of 2020. There was also a relatively increased capital accumulation in the year's first half. The overall balance of the banking segment enlarged by 22% compared to the antecedent year. 49.7% of the total loan portfolio of the banking segment was provided to non-financial corporations, 34.3% - to households and organizations closely related to households, and 16.3% - to the foreign sector. The cost of deposits in the banking segment, excluding transactions between banks as a whole, enlarged markedly in 2020 (by 23.2%).

Slovakia also suffered in the aftermath of the crisis. The GDP indicator in 2020 decreased by 4.8% compared to 2019. However, the negative aftermath of COVID-19 has reduced thanks to fiscal and monetary policy measures and financial stabilization.

Table 1. The ratio of assets to national GDP in the countries of the Visegrad group and the Eurozone in the period 2014-2020 (in %)

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Poland	121.9	128.6	132.8	132.1	128.7	124.3	137.3
Czech republic	164.4	153.7	160.3	175.4	172.1	167.5	178.9
Slovakia	118.1	120.3	124.3	128.4	126.8	128.7	141.6
Hungary	131.0	131.4	130.9	129.6	124.8	124.3	147.0
Eurozone	493.8	482.7	487.2	494.6	482.4	507.4	570.3

Source: Compiled by the authors based on (NBP, 2022).

Compared to 2019, the ratio of assets of the domestic financial system to GDP increased from 124% to 137% at the end of 2020, which was largely influenced by the government's bank support policy, as well as the fall in Poland's GDP (Table 1). The same situation was observed in the countries of the Visegrad Group. However, it should be noted that the level of financial intermediation remained quite low. In the Czech Republic, for example, the ratio of assets of the domestic financial system to GDP was 178.9%, which is even higher than in 2019 - 167.5% (this is due to the decline in GDP in 2020).

An analysis of the financial setup in diversified countries in the context of the evolution of their economies shows that some sectors of the Polish financial system, including the banking sector, remain underdeveloped. The Polish financial setup is characterized by a comparably low capitalization of the stock market and the low value of individuals segment debt securities issued, including corporate and bank bonds (EBF, 2020).

As of the end of 2020, there were 30 commercial (eight of which were state-owned, five private, and seventeen with foreign capital) and 530 cooperative banks, plus 36 filiations of credit institutions in Poland. In compliance with national legislation, most cooperative banks participate in two institutional protection systems. Only 10 run the business alone (EBF, 2022). In the Czech Republic, as of 2020, there were 49 officially licensed banks. They are divided into 4 large, 5 medium, 10 small banks, 25 banking groups with foreign capital, and 5 building companies. At the same time, 12 banks are owned by domestic owners (2 of them are also owned by the state). The Hungarian banking system composed of 41 institutions. They are, in turn, divided into 21 commercial, 8 filiations of foreign, 5 mortgage, 4 building communities, and 3 specialized banks. The banking system of Slovakia is presented by 27 financial institutions. Universal and corporate banks represent the lion's share of them. Also, 4 are specialized banking establishments (3 building communities and one bank state-owned). A distinctive feature of the banking sector in Slovakia is the high proportion of banks with foreign capital (about 93%). Only 4 banks are managed by domestic shareholders (3) and by the state (1).

The largest share in the structure of the financial system in Poland and the Visegrad Group countries as of 2020 (Fig. 1) is represented by credit institutions. In particular, in Poland, their representation is 73.5%, while in Hungary and the Czech Republic, this figure is slightly higher (78% and 80.7%, respectively). Investment funds, insurance companies, and pension funds are represented to a lesser extent. The largest share of pension funds in the overall structure is recorded in the Czech Republic (10.1%), while in Poland, this figure is only 4.7%. As for investment funds, their share in the structure of the Polish financial system is 9.5 % (the second indicator among the countries of the Visegrad group after the Czech Republic - 10.8%).

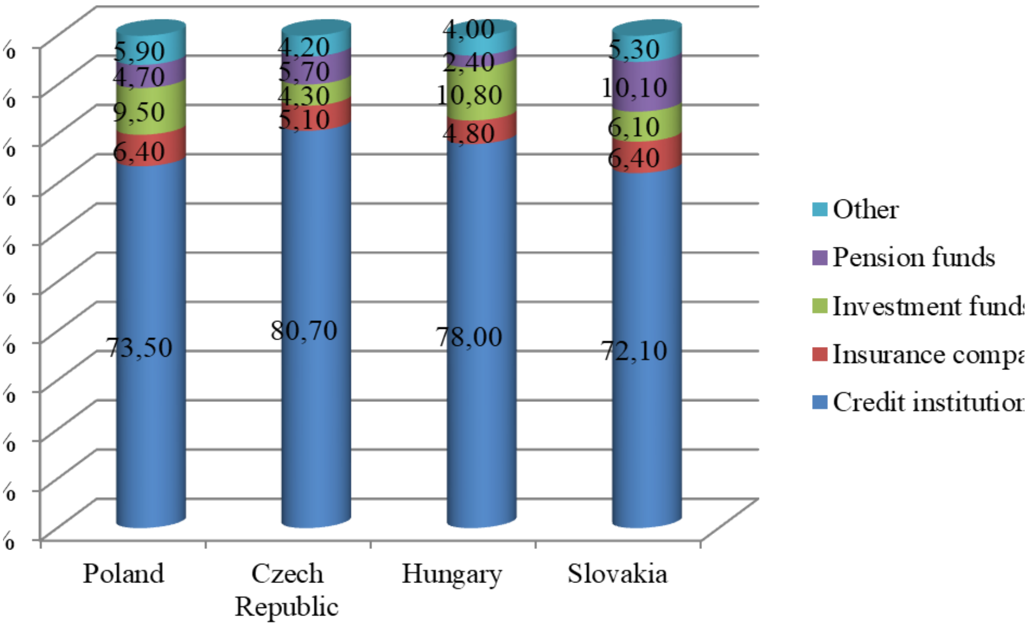

Figure 1. Structure of financial systems in Poland and the Visegrad Group countries in 2020 (in %)

Source: Compiled by the authors based on (NBP, 2021).

As for the general level of development of the banking sector in Poland, it remains less developed relative to the countries of the Visegrad Group (in particular the Czech Republic and Hungary), as well as the countries of the Eurozone as a whole. This is indicated by the lower ratio of banking assets to the country's GDP (Table 2). For example, the total asset ratio of commercial and cooperative banks and their branches in 2020 was 100.5% (increasing since 2019), while in Hungary this figure was 112.8%, and in the Czech Republic - 141%. The overall average asset-to-GDP ratio in the Eurozone was 309.2%.

Table 2. The ratio of assets, loans, and deposits (commercial and cooperative banks) to national GDP of the Visegrad group and the Eurozone in the period 2018-2020 (in %)

	Assets/GDP			**Loans/GDP**			**Deposits/GDP**		
	2018	**2019**	**2020**	**2018**	**2019**	**2020**	**2018**	**2019**	**2020**
Poland	89.2	87.6	100.5	49.5	48.2	47.3	54.3	55.0	61.2
Czech Republic	136.7	133.5	141.0	50.4	49.5	52.4	66.5	66.0	75.1
Hungary	93.3	92.6	112.8	31.4	32.4	36.6	40.0	39.6	48.8
Euro Area	266.1	270.8	309.2	87.4	86.8	95.1	89.7	86.9	100.8

Source: Compiled by the authors based on (NBP, 2021).

As for the loan-to-GDP ratio, this indicator is declining in Poland over the entire period from 2018 to 2020 (47.3% in 2020), while in the Czech Republic, Hungary, and the Eurozone countries, there is a noticeable increase. In the ratio of deposits to GDP, growth is observed in all countries (61.2% in 2020 in Poland, 75.1% in the Czech Republic, 48.8% in Hungary, and 100.8% in the Eurozone countries). The banking sector of Slovakia (in comparison with the national GDP) is one of the smallest compared to the rest of the EU countries (so it is not listed in the table). The funding of Slovak banks is mainly based on deposits from local customers. There is an increase in loans to deposits ratio, mainly due to the growth of credit. It is also worth noting that the reduction in consumption led to an increase in the savings of consumers and bank customers. Deposits from individuals increased by 8%, while deposits from legal entities increased by 9%.

Table 3. Total number of assets of certain categories of financial institutions in the period 2014-2020 (PLN billion)

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Commercial banks	1393.9	1455.3	1547.8	1603.4	1704.6	1790.0	2117.2
Cooperative and affiliating banks	135.4	139.7	158.2	173.4	182.1	201.8	221.2
Credit unions	13.7	12.3	11.3	10.2	9.6	9.4	9.5
Insurance companies	178.5	180.3	184.3	198.4	191.8	193.0	203.6
Investment funds	218.9	272.5	275.4	302.8	293.4	304.6	302.2
Open pension funds	149.1	140.5	153.4	179.5	157.3	154.8	148.6
Brokerage houses	7.9	7.6	6.2	6.8	6.6	6.6	9.9
Total	2097.4	2208.2	2336.6	2474.5	2545.4	2660.2	3012.2

Source: Compiled by the authors based on (NBP, 2022).

According to Table 3, the largest number of assets among all categories of banks in Poland was occupied by commercial banks (2117.2 billion PLN in 2020); their assets increased throughout the study period (by 65% compared to 2014). Assets of cooperative and affiliated banks are also growing, but they are almost 10 times less than the assets of commercial banks (221.2 billion in 2020). Credit unions account for 9.5 billion PLN (the number of assets steadily declined between 2014 and 2019, but there is a slight increase in 2020). Among other financial sector institutions, investment funds have the largest assets (the indicator grows from 2014 to 2017 and then fluctuates from 293.4 billion PLN in 2018 to 302.2 billion PLN in 2020). Assets of insurance companies are growing; in 2020, they amounted to 203.6 billion PLN.

Thus, it is worth noting that the share of non-banking financial institutions in the Polish banking system remains quite low, while the share of commercial and cooperative banks is growing (which is explained by the rather important role played by the banking segment in the Polish economy).

Table 4. Change in assets in certain categories of financial institutions in the period 2014-2020 (in %)

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Commercial banks	9.2	4.4	6.4	3.6	6.3	5.0	18.3
Cooperative and affiliating banks	4.6	3.2	13.2	9.6	5.0	10.8	9.6
Credit unions	-26.7	-10.0	-8.4	-9.7	-5.9	-2.1	1.1
Insurance companies	6.5	1.0	2.2	7.7	-3.3	0.6	5.5
Investment funds	12.3	24.5	1.0	10.0	-3.1	3.8	-0.8
Open pension funds	-50.2	-5.7	9.2	17.0	-12.4	-1.6	-4.0
Brokerage houses	-8.1	-4.2	-17.4	8.6	-2.9	0.0	50.0
Total	0.1	5.2	5.8	5.9	2.9	4.5	13.2

Source: Compiled by the authors based on (NBP, 2022).

Analyzing Table 4, we can conclude that the assets of commercial banks are growing throughout the entire period of 2014-2020 (a significant decrease in growth rates was observed only in 2015 and 2017). In 2020, the growth of assets of commercial banks amounted to 18.3%, which is a record high. The assets of cooperative banks are also growing (the largest increase was recorded in 2016); in 2020, the figure was 9.6%. Credit union assets have been declining throughout 2014-2019, but in 2020 they grew by 1.1% compared to the previous year.

The growth of insurance companies' assets fluctuates throughout the period. In 2017, it was 7.7%, but in 2018 there was a decrease of 3.3% (the only year when there was a decrease in assets). In 2020, the assets of insurance companies grew by 5.5%. There is also a rather volatile change in the assets of investment funds. In 2015, the growth was 24.5%, while in 2016, it was only 1%. Negative values are observed in 2018 and 2020 (-3.1 and -0.8, respectively). Assets of open pension funds are declining throughout the study period (except for 2016-2017) due to the negative balance of cash flows from the ODS to the social insurance institution and the fall in the price of units of account. Brokerage firm assets declined in 2014-2016 and 2018, but in 2020 the most significant increase was recorded - 50%.

Speaking about the capitalization of the stock market in Poland, it should be noted that in recent years there has been a decrease of 2% in 2019 and 3.2% in 2020;

the reason is the change or delisting of shares of some companies. So, in 2019, the capitalization of the stock market amounted to 1113.5 billion PLN, and in 2020 it was already 1068.7 PLN. Table 5 shows the capitalization of domestic companies in the Visegrad countries.

Table 5. Capitalization of home firms in the countries of the Visegrad group and the Eurozone in the period 2014-2020

	Capitalization of domestic firms (in billion EUR)						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Poland	140.7	123.2	128.1	163.1	136.3	131.3	120.8
Czech Republic	22.6	23.5	22.2	26.9	23.6	23.4	21.8
Hungary	12.0	16.2	21.3	26.3	25.2	29.4	22.8
Euro area	6298.0	6774.6	7081.8	7936.6	6869.5	8436.8	8886.6
	Capitalization of domestic firms (in % to GDP)						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Poland	34.9	29.2	30.6	34.2	27.6	24.4	24.0
Czech Republic	14.5	14.1	12.6	14.0	11.2	10.4	10.1
Hungary	11.5	14.9	18.9	21.3	18.6	20.1	16.8
Euro area	62.5	65.1	66.0	71.0	59.2	70.4	78.0

Source: Compiled by the authors based on (FESE, The World Bank, 2022)

According to it, the capitalization of domestic firms on the Polish stock exchange peaked in 2017 (PLN 163.1 billion, or 34.2% of GDP), but since 2018 capitalization has been declining (EUR 136.3 billion in 2018 and EUR 120.8 billion in 2020). It should be noted, however, that Poland has managed to maintain its strong market position in the region, as shown by lower capitalization figures in the Czech Republic and Hungary, where the capitalization of home companies as of 2020 was only 21.8 billion EUR (or 10.1% of GDP) in the Czech Republic and 22.8 billion (or 16.8% of GDP) in Hungary. In general, in the countries of the Eurozone, the capitalization of home companies is growing, and in 2020, this figure amounted to 8886.6 billion EUR (or 78% of GDP, which is much higher than in 2018 - 6869.5 billion EUR and 59% of GDP).

Table 6. Liquidity ratio of home firms in the countries of the Visegrad group and the Eurozone in the period 2014-2020

	Liquidity ratio (in %)						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Poland	40.5	44.3	36.4	37.5	36.2	35.0	62.5
Czech Republic	19.1	20.9	23.8	16.3	19.2	14.4	15.7
Hungary	50.6	42.8	35.7	36.1	42.3	31.8	48.7
Euro area	74.1	80.2	64.8	61.2	70.5	49.8	58.2
	Total number of listed firms						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Poland	902	905	893	890	890	851	806
Czech Republic	23	25	25	23	23	54	55
Hungary	48	45	42	41	41	43	45
Euro area	6748	6900	6723	6962	6962	6986	7077

Source: Compiled by the authors based on (The World Bank (WBI), 2022).

The liquidity of the Polish stock market has increased significantly compared to previous years (Table 6). Thus, in 2019 this indicator was only 35%, which was higher than the stock markets in the Czech Republic (14.4%) and Hungary (31.8%) but significantly lower than in the Eurozone (49.8%). The situation changed significantly in 2020 when the figure was 62.5%, which was higher than in the Visegrad countries and the Eurozone. The increased interest primarily influenced this in equity trading among individual investors (their share in trading in shares of companies traded on the WSE Main Market increased from 12% in 2019 to 25% in 2020). It is also worth noting that in 2020, stock indices showed high volatility amid the instability associated with the COVID-19 crisis. However, the WIG broad market index did not change significantly.

Thus, we can make a general conclusion that the results of Poland's banking and financial sector in 2020 were seriously affected by the pandemic crisis (the Polish market, in particular, reflects the general trends taking place in the global economy). In order to avoid possible negative economic consequences in the first half of 2020, the MPC, the NBP body responsible for setting monetary policy, reduced the required reserve ratio for banks by three percentage points to 0.5 percent and also increased the percentage rate on this reserve. As a result of this reduction, the value of funds available to banks increased by PLN 41.3 billion. In addition, in May 2020, the base interest rate in Poland was reduced to a record level of 0.1%. Moreover, in March 2020, the NBP began buying selected debt securities on the stock market as part of structured operations on the open market. Towards mid-2020, the market value of treasury bonds and bonds guaranteed by the Polish State Treasury purchased by the NBP was PLN 90.7 billion.

In 2021-2022, both the banking sector and the Polish economy as a whole need to solve the economic aftermath of the pandemic. In the short term, Poland's banking market will affect the final decision made to issue loans in Swiss francs and potential costs for calculations or legal proceedings in these cases. It will be essential to control the solvency of borrowers after the expiration of the moratorium on loans and the termination of state support. Also, the banking sectors of the Visegrad Group countries should prepare for the consequences of Ukraine's current situation. However, despite the risks of stagflation, compared to previous financial crises, the capital stocks and liquidity of the financial institutions of the countries of the group have become much stronger and are better prepared to withstand new shocks and their consequences.

5. Conclusions

Systematizing the results obtained, we can draw the following conclusions:

As for the general level of elaboration of the banking sector in Poland, it remains less developed relative to the members of the Visegrad Group (in particular, Hungary and the Czech Republic), as well as the nations of the Eurozone as a whole. This is indicated by the lower ratio of banking assets to the country's GDP. The largest share in the structure of the financial system of Visegrad Group countries as of 2020 is represented by credit institutions. In particular, in Poland, their representation is 73.5%, whereas, in Czech Republic and Hungary, this figure is slightly higher (78% and 80.7%, respectively). Investment and pension funds and insurance companies are represented to a lesser extent. The largest share of pension funds in the overall structure is recorded in the Czech Republic (10.1%), while in Poland, this figure is only 4.7%.

As for the loan-to-GDP ratio, this indicator is declining in Poland over the entire period from 2018 to 2020 (47.3% in 2020), while in the Czech Republic, Hungary, and the Eurozone countries, there is a noticeable increase. In the ratio of deposits to GDP, growth is observed in all countries (61.2% in 2020 in Poland, 75.1% in the Czech Republic, 48.8% in Hungary, and 100.8% in the Eurozone countries). The banking sector of Slovakia (in comparison with the national GDP) is one of the smallest compared to the rest of the EU countries. The funding of Slovak banks is mainly based on deposits from local customers. There is an increase in loans to deposits ratio, mainly due to the growth of credit. It is also worth noting that the reduction in consumption led to an increase in the savings of consumers and bank customers. Deposits from individuals increased by 8%, while deposits from legal entities increased by 9%.

The share of non-banking financial institutions in the Polish banking system remains relatively low, while the share of commercial and cooperative banks is growing (which is explained by the rather influential role played by the banking segment in the

Polish economy). The liquidity of the Polish stock market has increased significantly compared to previous years. Thus, in 2019 this indicator was only 35%, which was higher than the stock markets in the Czech Republic (14.4%) and Hungary (31.8%) but significantly lower than in the Eurozone (49.8%). The situation changed significantly in 2020 when the figure was 62.5%, which was higher than in the Visegrad countries and the Eurozone. This was primarily influenced by the increased interest in equity trading among individual investors.

The Polish banking sector needs to solve the economic aftermath of the pandemic. It will be essential to control the solvency of borrowers after the expiration of the moratorium on loans and the termination of state support. Also, the banking sectors of the Visegrad Group countries should prepare for the consequences of Ukraine's current situation. However, despite the risks of stagflation, compared to previous financial crises, the capital stocks and liquidity of the financial institutions of the countries of the group have become much stronger and are better prepared to withstand new shocks and their consequences.

References

Bulatova, O., & Marena, T. (2019). World Banking System: Post-Crisis Recovery? *Journal of European Economy*, *18*(3), 321-337. https://doi.org/10.35774/jee2019.03.321

Czaplicki, M. (2021). Measuring The Restrictiveness Of (Macro)Prudential Policy: The Case Of Bank Capital Regulation In Poland. *Journal of Banking Regulation*. https://doi.org/10.1057/s41261-021-00164-2.

Chumachenko, D., Derkach, T., Babenko, V. (2021). Development Prospects of Banking Sector in Central and Eastern European Countries in Terms of Financial Integration. *Studies of Applied Economics*, *39*(7). https://doi.org/10.25115/eea.v39i7.4949

Dominese, G., Yakubovskiy, S., Tsevukh, J. (2020). Impact of International Migration Flows on the European Union and Ukraine. *Journal Transition Studies Review*, *27*(2), 83-98. https://doi.org/10.14665/1614-4007-27-2-007.

Dominese, G., Rodionova, T., Tsviakh, A. (2020). Comparative Analysis of the Return on Foreign Investments of the United States, Germany and Japan. *Journal Global Policy and Governance*, *9*(2), 17-27. https://doi.org/10.14666/2194-7759-9-2-002

Dominese, G., Yakubovskiy, S., Rodionova, T. (2021). Determinants of the government bond yields of Italy, Spain, Portugal and Greece. *Journal Global Policy and Governance*, *10*(1), 23–34. https://doi.org/10.14666/2194-7759-10-1-002

Farkas, B. (2017). Market Economies of the Western Balkans Compared to the Central and Eastern European Model of Capitalism. *Croatian Economic Survey*, *19*(1), 5-36. https://doi.org/10.15179/ces.19.1.1

FESE (2022), Statistics. https://www.fese.eu/.

European Banking Federation. (2020). *Banking in Europe: EBF Facts & Figures 2020*. https://www.ebf.eu/wp-content/uploads/2020/11/EBF_043537-Banking-in-Europe-EBF-Facts-and-Figures-2020.pdf.

European Banking Federation. (2022). *Czech Republic's banking sector: Facts & Figures*. https://www.ebf.eu/czech-republic/.

European Banking Federation. (2022). *Hungary's banking sector: Facts & Figures*. https://www.ebf.eu/hungary/.

European Banking Federation. (2022). *Poland's banking sector: Facts & Figures*. https://www.ebf.eu/poland/.

Kotarski, K. (2019). Monetary Policy in a Highly Euroized Economy. In Z. Petak & K. Kotarski (Eds.), *Policy-Making at the European Periphery* (147-168). Palgrave Macmillan Cham

Lomachynska, I., Babenko, V., Yemets, O. (2020). Impact of the Foreign Direct Investment Inflow on the Export Growth of the Visegrad Group Countries. *Studies of Applied Economics*, *38*(4). http://dx.doi.org/10.25115/eea.v38i4.4007

Malyarenko, T. (2021). China's Belt and Road Initiative in the Contested Eastern Neighborhood: A Case Study of Ukraine. *Lex Portus*, *7*(2), 39-63. https://doi.org/10.26886/2524-101X.7.2.2021.3

Malyarenko, T., Wolff, S. (2021). Introduction "Belt and Road Initiative in the South Caucasus and Eastern Europe: Trade, Policy, Regulations". *Lex Portus*, *7*(2), 7-10. https://doi.org/10.26886/2524-101X.7.2.2021.1

Maslii, N., Zakharchenko, N., Butenko, V., Savastieieva, O., Butenko, T., Shyriaieva, L. (2018). Modern technologies of detection and prevention of corruption in emerging information society. *Problems and Perspectives in Management*, *16*(1), 58-67. https://doi.org/10.21511/ppm.16(1).2018.06.

Maslii, N., Demianchuk, M., Skribans, V. (2019). Bifurcation Points Analysis Application in Economic Studies. *ICIBE 2019*, 359-364. https://doi.org/10.1145/3364335.3364405.

Mursalov, M. (2020). Banking Regulations and Country's Innovative Development: the Mediating Role of Financial Development. *Marketing and Management of Innovations*, *4*, 168-180. http://doi.org/10.21272/mmi.2020.4-13.

NBP. (2022). *Financial System, Financial System Development Reports*. https://www.nbp.pl/homen.aspx?f=/en/systemfinansowy/rozwoj.html.

NBP. (2021). *Financial System in Poland 2020*. https://www.nbp.pl/en/systemfinansowy/fsd_2020.pdf.

Sironi, A. (2018). The evolution of banking regulation since the financial crisis: a critical assessment. BAFFI CAREFIN Centre Research Paper No. 2018. http://dx.doi.org/10.2139/ssrn.3304672.

Tarullo, D. K.(2019). Financial Regulation: Still Unsettled a Decade after the Crisis. *Journal of Economic Perspectives*, *33*(1), 61-80. https://www.aeaweb.org/articles?id=10.1257/jep.33.1.61.

The World Bank. (2022). *Market capitalization of listed domestic companies - EU*. https://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS?locations=EU.

The World Bank. (2022). *World Development Indicators*. https://databank.worldbank.org/source/world-development-indicators.