FINANCIAL PERFORMANCE ANALYSIS OF BANKS IN THE REPUBLIC OF NORTH MACEDONIA: AN OVERVIEW

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Abstract: *The purpose of this study is to analyse financial performance of banks which operate in the Republic of North Macedonia. The study examines historical data of the banking system which consist of fifteen banks. Several financial indicators and ratios are examined, including the well-known ones, Rate of return on average assets (ROAA), Rate of return on average equity (ROAE), Profit (loss) of operation/Total regular income, thus showing that the financial performance of banks is more than satisfactory. Banks are analysed by the group classification and differences are found between them. The banking system has generated quite considerable net interest income and large banks have performed much better than medium and small-sized banks.*

Key words: *interest rate, banks, financial performance.*

1. Introduction and literature review

The role of banks in the economic development from the perspective of businesses, but also of households (physical persons) or other borrowers is indisputable. Even more so, in cases or countries where companies or households under the circumstances of the underdevelopment of the financial market and the lack of other alternative funding sources, banks are considered as the sole main financing source. This moment puts banks in such a role, as businesses, households or other borrowers seek (borrow) financial resources, whereas banks lend to them, i.e. banks intermediate between those who have surplus to those who have shortage.

If we take a look at the empirical data published by the National Bank of the Republic of North Macedonia (hereafter NBRNM), it can be noticed that, although interest rates have decreased over the years, financial intermediation (household loans) has not changed to the same extent.

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Theoretically and practically, businesses are in many cases unable to carry out their business activities based solely on their own financial resources, i.e. financing through owners' or shareholders' equity. The case is similar to households who need to make investments, whether in the short or long term, and that cannot be done only through personal savings.

From the point of view of financial theory and practice, it is well known that businesses use financial loans (debt) as a tool to finance liquidity shortages or investment growths, i.e. financial leverage. Financial debt is a burden on companies especially when they pay high interest rates and fail to generate enough sales to repay the loan on time. This is exactly the moment when banks need to stimulate the business development and to support households, thus increasing financial intermediation at the same time. The stimulation should be based on lower effective interest rates and the banking system should be more risk-sharing with businesses.

Figure 1 shows the dynamics of the total bank loans given to households. The data are given in monthly term periods and in million of denars. There is no doubt that borrowers, whether they are companies, households, non-financial subjects, non-profitable subjects, government etc., will borrow more if loan interest rates are lower. This is proved by empirical data in the case of households' loans where the trend line is positive (see Figure 1) as a result of declining loan interest rates (see Figure 2).
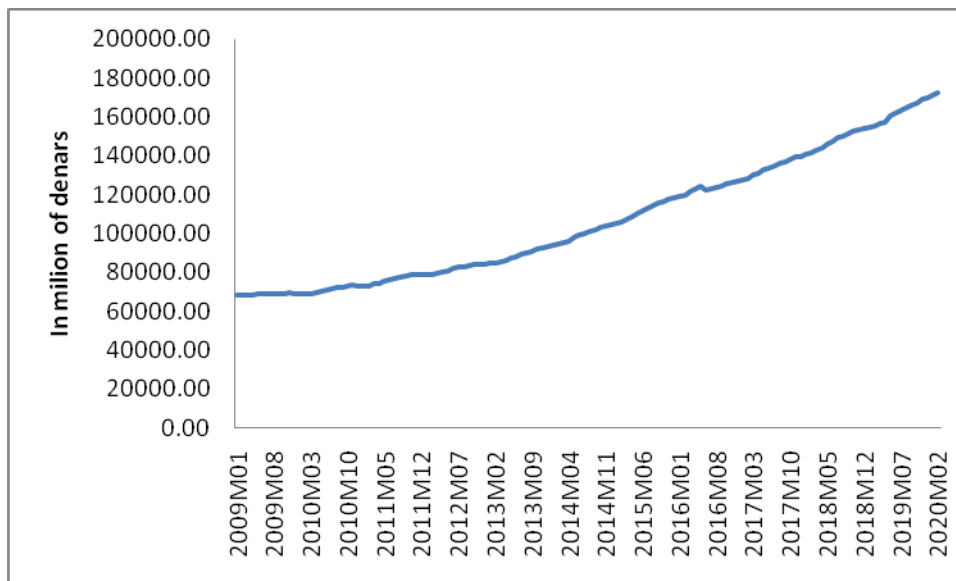

Fig. 1. *Total household loans*
Source: *NBRNM, Statistical Web Portal, processed by the authors*

The data above and some others that will be presented later will help financial information users better understand financial performance ratios. Of course, the financial performance analysis of banks has attracted the interest of various scholars which have applied certain methodologies, different samples/periods being examined.

For example, Sarlin and Eklund (2013) analysed the financial performance of European banks using a fuzzified Self-Organizing Map.

Mustafa (2014) examined the financial performance of Erbil Bank for Investment and Finance using financial ratios.

Chaki, Chauhan and Daryal (2019) analysed the financial performance indicators of banks for the period 2005 – 2018.

2. Data, Analysis and Discussions

The banks which actually operate in the Republic of North Macedonia have high ratio of the with foreign equity in total of equity. This ratio is even higher in the case of large banks. For example, the data as on 31 December 2019 show that the ratio for large banks is: 82%, for medium-sized banks it is: 69%, and for small banks it is: 57%; for the whole banking system, the ratio is: 75% (for more see: NBRNM). It seems that banks' shareholders from the perspective of profitability and the market have made satisfactory investments as the banking system is performing well.

Probably banks' shareholders have decided to invest in the country after realizing that it is worth investing in the banking system, thus generating a high level of profitability (rate of returns). But the fundamental question is how much the banking system helps the country's real development?

Therefore, in this section, some general economic and financial data are initially presented in order to better understand the selected indicators afterwards, mainly from the perspective of profitability, i.e. the financial performance of banks. Thus, in what follows we present: the weighted interest rates on the deposits received and the loans given in denars and foreign currencies. The data are presented in monthly term periods, in percentages, on an annual basis.
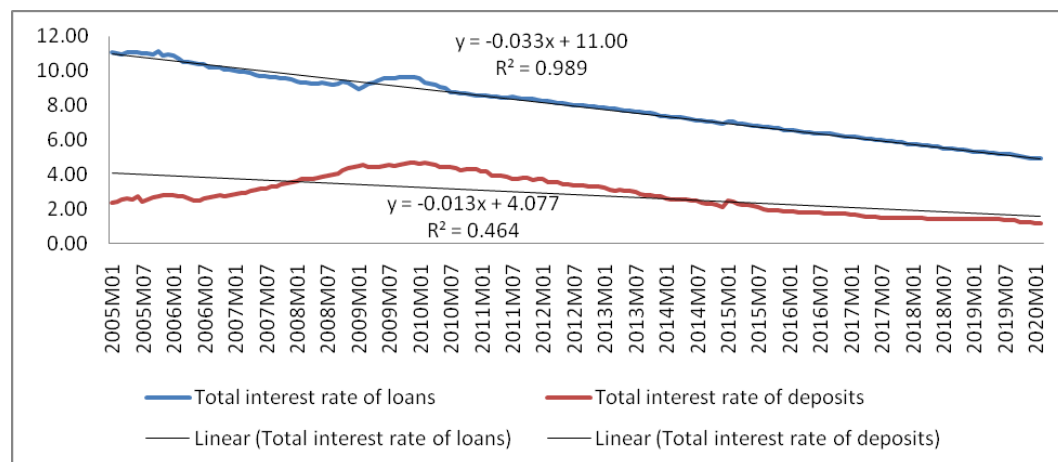

$y = -0.033x + 11.00$
$R^2 = 0.989$

$y = -0.013x + 4.077$
$R^2 = 0.464$

Fig. 2. *Total interest rate of loans and deposits, in %*
Source: *NBRNM, Statistical Web Portal, processed by the authors*

Figure 2 shows that both interest rates, loans and deposits, during the period 2005 – 2020 have decreased, but there is still a significant difference between them. Both trendlines show that interest rates have declined as the slop coefficients are negative, but the interest rate of deposits has declined slightly more than the interest rate of loans (see results: -0.013 versus -0.033).

If we calculate the average of both interest rates during this period, we will have the confirmation that the difference is really significant (7.95 versus 2.83). Thus, the margin spread between them (active and passive interest rates) indisputably represents a challenge that future government policies must engage in and not only for the benefit of banks, but also for the economic development of the country.

In addition, Figure 3 shows the trend line of GDP (real growth rates), the weighted interest rates on total extended denar credits (average for the period, in %, p.a.), the weighted interest rates on total accepted denar deposits (average for the period, in %, p.a.), and the bank and savings houses credits to the private sector (annual growth rates) for the period 1996 – 2019.

Figure 3 shows the disparities between GDP growth rates, on the one hand, and the interest rates, on the other hand. Still, as shown in Figure 2, this extended period proves that the weighted interest rates on total extended denar credits were much higher than the weighted interest rates on total accepted denar deposits. Whereas the weighted interest rates on total extended denar credits has the trendline equation as: $y = -0.764x + 22.29$, $R^2 = 0.932$, whereas the bank and savings houses credits to the private sector is as follows: $y = -0.534x + 20.08$, $R^2 = 0.112$. Despite the low R-square of the financial intermediation ratio (bank and savings houses credits to the private sector), the negative trend concerns business development and thus the overall economic development of country.
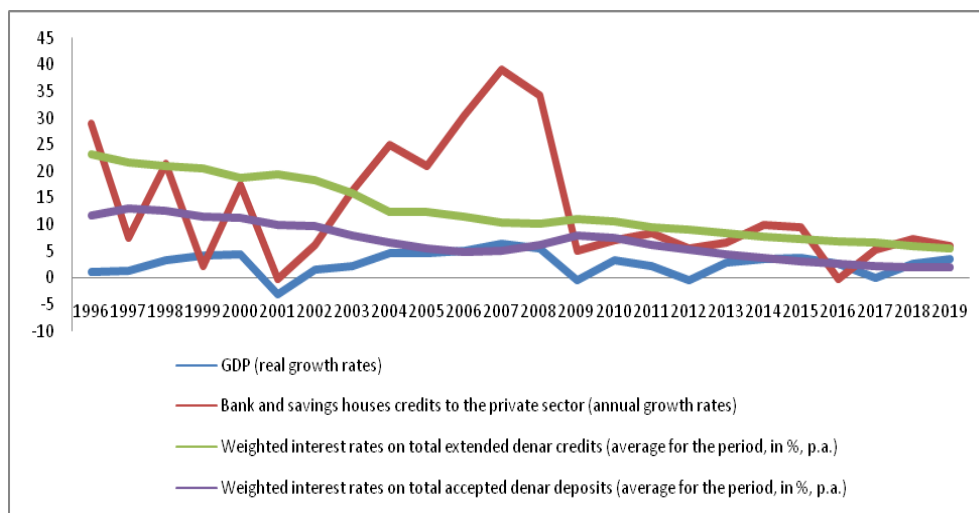

Fig. 3. *Selected economic-financial indicators*
Source: *NBRNM, processed by the authors*

Moreover, in the Republic of North Macedonia, there are 15 banks which operate and they are classified according to the NBRNM as follows (see Table 1).

Number of banks by group   Table 1

Group of large banks (assets higher than 34,8 billion denars on 30.9.2019 year)	Group of medium-sized banks (assets between 8,65 and 34,8 billion denars on 30.9.2019 year)	Group of small banks (assets lower than 8,65 billion denars on 30.9.2019 year)
Five banks	Seven banks	Three banks

Source: *NBRNM*

Thus, in general, there are more medium-sized banks in the Republic of North Macedonia. But they do not perform in the same way from the perspective of banking business, as we will demonstrate with the following indicators by comparing data for the last two years (2019 versus 2018, the third quarter). Table 2 shows the selected indicators of profitability and efficiency of the banking system and by group of banks.

Selected indicators   Table 2

Indicators	9.2018				9.2019			
	Banking system	Large banks	Medium-size banks	Small-size banks	Banking system	Large banks	Medium-size banks	Small-size banks
Rate of return on average assets (ROAA)	2.2%	2.8%	0.3%	0.8%	1.5%	2.0%	2.0%	0.8%
Rate of return on average equity (ROAE)	19.5%	25.2%	2.7%	7.9%	13.5%	17.5%	17.9%	8.3%
Cost-to-income ratio	45.7%	39.1%	68.6%	69.0%	50.0%	43.7%	42.3%	67.8%
Non-interest expenses/Total regular income	54.2%	46.7%	81.1%	77.2%	60.7%	53.3%	52.0%	76.8%
Staff expenses/Total regular income	20.2%	17.7%	27.8%	33.2%	22.5%	19.7%	18.8%	34.6%
Staff expenses/Operating costs	44.2%	45.3%	40.5%	48.1%	44.9%	45.1%	44.5%	51.0%
Impairment losses of financial and non-financial assets/Net interest income	18.2%	13.6%	35.6%	27.8%	24.0%	20.1%	19.7%	28.9%
Net interest income /Average assets	3.2%	3.4%	2.7%	3.5%	2.9%	3.0%	3.0%	3.2%
Net interest income/Total regular income	63.7%	63.5%	65.7%	58.7%	66.0%	66.5%	66.9%	58.5%
Net interest income /Non-interest expenses	117.5%	136.0%	80.9%	76.0%	108.8%	124.6%	128.8%	76.3%
Non-interest income/Total regular income	44.8%	44.1%	46.9%	49.5%	44.6%	43.2%	42.7%	50.4%
Profit (loss) of operation/Total regular income	42.5%	52.3%	7.2%	13.7%	34.1%	43.0%	44.6%	15.4%

Source*: Selected from NBRNM*

Even if the data are not annual, they still show that the banking system is performing well in terms of profitability. If we look close to the data, high rates of return on average equity (ROAE) are obvious, which is an argument for good performance and for a high level of profitability (return). But, also several other ratios indicate the same and closing with the last one, i.e. profit (loss) of operation/total regular income which is 34.1%.

The ratio of profit (loss) of operation/total regular income which indicates 34% or 43% in the previous year shows the high level of profitability that the banking system has generated.

Another finding in the following table, alongside many other discussions that can be raised for each indicator, is that several systematic differences can be found between banks according to the group classification. Thus, probably the bank size is significant with respect to the profitability level.

Figure 4 shows the ratio of net interest income/total regular income for the period 2004 – 2019. As it can be noticed, the banking system generates income mainly from the interest, the average ratio for this period being 63.1%. On average, medium-sized banks have performed slightly better regarding this ratio, followed by large banks and small banks.
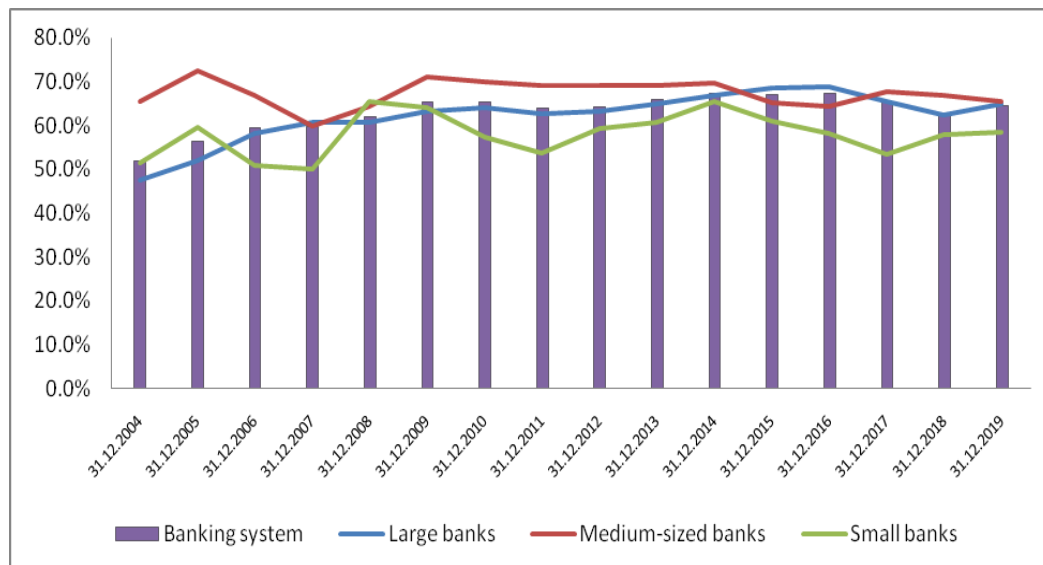

Fig. 4. *Net interest income/Total regular income*
Source: *NBRNM, processed by the authors*

In addition to the traditional ratios for measuring the financial performance of banks, in what follows we present the net interest income. Thus, Figure 5 shows the net interest income calculated as the difference between interest income and interest expense for the period 2004 – 2019. The banking system during this period has significantly increased the profitability measured by this indicator, and it can be written with the trendline equation as: y = 792.9x + 4200, R² = 0.942 (Hint: Graph 5 presents the

banking system as an average for the whole period in order to compare results, whereas the trendline is calculated alongside it).

Moreover, Figure 5 shows that still the higher net interest income is generated by large banks, followed by medium-sized and then small banks. The straight horizontal line of the banking system shows the average net interest income during the analysed period 2004 – 2019.

As it can be noticed, the net interest income has a significant positive trendline which is expressed as: $y = 676.1x + 1867$, $R^2 = 0.958$; over the last years, large banks have generated a net interest income higher even than the average amount of the whole banking system.

Medium-sized banks, too, have a positive trendline expressed by equations as: $y = 139.4x + 1504$, $R^2 = 0.440$, whereas small banks have a negative trendline such as: $y = -22.68x + 828.3$, $R^2 = 0.203$.
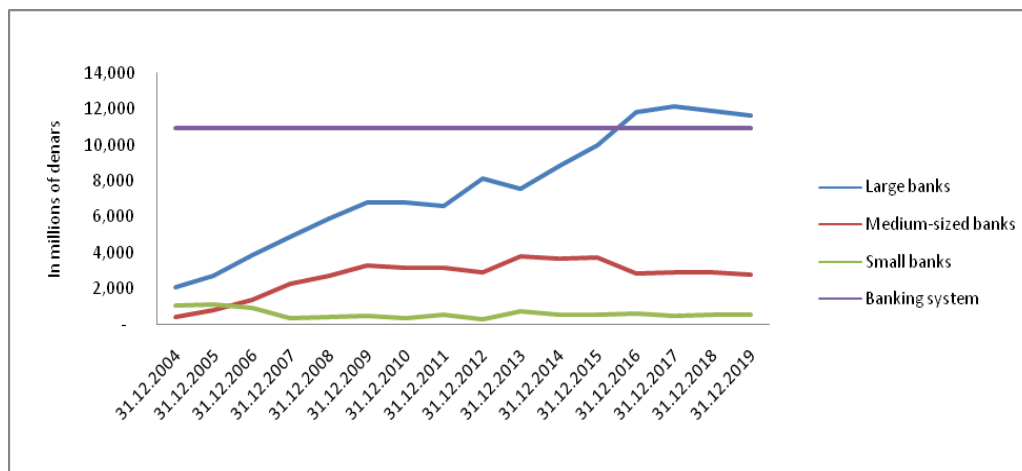

Fig. 5. *Net interest income*
Source: *Data selected from NBRNM, processed by the authors*

In addition to, *Two-sample t test* is performed for the net interest income by comparing banks's size such as: large versus medium, large versus small, and medium versus small-sized banks group.

Results showed that there is significant difference (95% confidence level) between large and medium-sized banks. Large banks have generated much higher net interest income compared with medium-sized banks *(t = -5.7)* and even much more than small-sized banks *(t = -8.5)*. On the other hand, medium-sized banks have performed much better than small-sized banks regarding this indicator as proved with the mean difference statistic *(t = -8)*.

3. Conclusions

This study aimed to analyse and present some profitability ratios of banks which operate in the Republic of North Macedonia.

The study provided empirical evidence which shows that the financial performance differs as a result of the bank size and that the profitability of the banking system is more than satisfactory.

Banks have generated a high level of profitability and this profitability comes among other factors, from the difference of active and passive interest rates. The difference between loans (credits) and deposits interest rate was in function of banks profitability, but perhaps not in the economic development of the country.

The future economic policies should work more to better synchronize the monetary policy and the real economic growth. Such policies should lead to such interest rates that would further develop the business sector. Thus, the financial intermediation and the ratio of loans to the private sector will generally increase.

The study was focused on the profitability side (financial performance) and further research will add information with respect to the ratios of financial position (balance sheet) and cash flow statement.

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