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THE PROFITABILITY INDICATORS OF COMMERCIAL BANKS IN THE REPUBLIC OF UZBEKISTAN AND THEIR MODERN STATE

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Abstract:

The current article is devoted to the profitability of the commercial banks of the Republic of Uzbekistan. Hence, the main purpose of the given article is to investigate and analyze the current state, development directions and prospects of the profitability indicators in commercial banks. In addition, the article presents several imperative recommendations, facilitating to raise the efficiency of commercial banks in Uzbekistan.

Keywords: *The return on assets (ROA), the return on equity (ROE), the return on investments (ROI), the return on fixed assets (ROFA), profitability, rentability, "DuPont model", Net Profit (NP), Average asset value (Ā), Equity (E), Earnings before taxes (EBT), Earnings before interest and taxes (EBIT), Sales (S), Investments (I), Equity multiplier (EM), Leverage ratio, Net interest margin (NIM), Earnings assets rate (EAR), Net non-interest income (NNII), Assets (A), Loan loss provisions (LLP), Taxes (T), Operating costs (OC)*

INTRODUCTION

Uzbekistan is the most populous country of Central Asia whose economy and banking system have a huge potential. Except industrial factories and the powerful agricultural sector, Uzbekistan has a good perspective in retail sector. Approximately 34 million people live in the Republic, the remarkable part of whom are the users of banking and financial services. Hence, 32 banks, acting in Uzbekistan have all resources to realize their own strategic plans. However, commercial banks have not only many opportunities to broaden their performance, but also the banking system of the country has several issues which should be adjusted in order to achieve full stability in the whole system. Such problems as inflation, a big disparity between the exchange rates of soum and foreign currencies, non-performed loans, the shortage of financial resources, the total or partial disuse of several banking services and products are continuing to affect the efficiency of commercial banks, reducing the profitability of them. Thus, the importance and necessity of this issue are the investigating and analyzing the indicators of the profitability of commercial banks and finding new methods of the calculation of profitability as well as realizing them in practice, simultaneously showing the current situation linked to the efficiency of banks, namely, it is vital to analyze and investigate the situation and perspectives of the profitability of commercial banks so that the results of this research will make contribution to developing the banking system of Uzbekistan.

THE THEORETICAL BASIS

Before we begin to discuss the analytical part of this article, it is import to draw your attention to some theoretical aspects, that is to say, we should know what the words **"profitability, rentability"** exactly mean.

According to the etymological dictionaries, **rentability (profitability)** is a comparative indicator, showing the economic efficiency of factories. To put it another way, it shows how the economic subjects use their resources and assets when they form their own profit.

Moreover, in accordance with the opinions given by G.V.Savitskaya: "**Profitability** is a relative indicator that determines the efficiency of business" [1].

Furthermore, Eugene F. Brigham and Michael C. Ehrhardt gave the definition for profitability: "**Profitability** is the net result of a number of policies and decisions" and "profitability ratios are the ratios that show the combined effects of liquidity, asset management, and debt on operations" [2].

In addition, the definition given by James C. Van Horne and John M. Wachowicz, Jr. is as follows: "**Profitability ratios** are of two types – those showing profitability in relation to sales and those showing profitability in relation to investment. Together, these ratios indicate the firm's overall effectiveness of operation" [3].

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Not only is profitability important for the ratings of economic subjects, but also it is the indicator, showing the quality of risk management. It can be proven by the definition given by Young Tan & Christos Floros and it is as follows: "**Profitability** is supposed to have an impact on the risk-taking behavior undertaken by the banks. The higher profitability of banks reflects the fact that they have a good system of risk management, credit checking and risk monitoring which is expected to reduce the bank risk" [4].

What is more, Marinela Geamănu gave the following opinions about the importance of profitability: "**Profitability** means obtaining an income from production sale that should exceed expenses. As a consequence, profitability mirrors the efficiency of an enterprise's whole economic activity.

Profitability is one of the most important forms of economic efficiency" [5].

As for local scientists, T. Karaliyev and R. Qurbonov described profitability as: "**Profitability** is the rate of the efficiency of economic subjects" [6]

Analyzing all of the above mentioned thoughts, we can present personal definition of profitability, more precisely: "Profitability is the indicator, showing how the economic agents use resources which they have in the formation of profit".

When it comes to the theory, there are many methods, points of view and the models of calculation in the international practice and several of them are used in the banking system of Uzbekistan, but the others not. For instance, the commercial banks of Uzbekistan usually calculate such profitability indicators as Return on Assets (ROA), Return on Equity (ROE) and others. However, there are a great number of other indicators and models like Return on Investment (ROI), Return on Fixed Assets (ROFA) and others, especially, in international practice, many banks usually use factor analyses which are the special models, helping to estimate and analyze the profitability. One of them is "DuPont model" which can show what kinds of factors influence the changes in profitability and we will study it more in detail in the analytical part of the current article.

Every indicator had the way of calculating and the first one which we should example is Return on Assets:

$$ROA = \frac{NP}{\bar{A}} \qquad (1)$$

ROA – The Return on Assets
NP – Net Profit gained during a period
Ā – Average asset value

This indicator shows how much profit falls on one unit of assets or how much profit is gained by using the assets which economic subjects have.

The next indicator is called Return on Equity (ROE) whose mathematical form is as follows:

$$ROE = \frac{NP}{\bar{E}} \qquad (2)$$

ROE – The Return on Equity
NP – Net Profit gained during a period
E – Equity

The indicator shown above means how much profit falls on one unit of equity, more precisely, it presents the relationship between profit and equity.

Another profitability indicator which should be mentioned is the Return on Investments (ROI), showing the relativity between profit and fixed assets:

$$ROI = \frac{NP}{\bar{I}} \qquad (3)$$

ROI – The Return on Investments
NP – Net Profit gained during a period
I – Investments

All these indicators are linked to the profitability of banks and the higher they are, the better results banks will have, that is to say, the profitability of banks will rise, as the indicators get higher. Hence, the next section of the current article is devoted to the analysis of the banking system of Uzbekistan in which we will investigate the current state of the profitability in several commercial banks.

THE ANALYSIS AND RESULTS

It is essential to investigate the current state of the whole banking system, before we begin to analyze banks themselves, as the results of this investigation can facilitate the process of the analysis of banks, showing the whole situation in macro level.

According to the reports presented by the Central bank of the Republic of Uzbekistan on January 1 of 2021, the net profit of the whole banking system accounted for 5,642 billion soums which was bigger than the figures illustrated in 2020 on the same date almost by 1,000 billion soums. It means that profitability of the banking system has increased. As it has been mentioned above, commercial banks use several indicators in order to calculate profitability and they are presented in the table below

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Table 1

The profitability indicators of banking system in Uzbekistan (%)[1]

Indicators	01/01/2017	01/01/2018	01/01/2019	01/01/2020	01/01/2021
The Return on Assets (ROA)	2.00	1.87	2.05	2.23	2.2
The Return on Equity (ROE)	17.95	17.13	16.20	16.73	10.3

It is apparently seen from the table that the return on assets (ROA) underwent a slight decrease at the beginning of 2021 in comparison with the same date of the last year, more accurately, the return on assets (ROA) declined from 2.23% to 2.2% which is a little negative situation. The lowest rate of the ROA was observed in 2018 which was equal to 1.87%.

Moreover, ROE decreased remarkably over the period from 2017 to 2021, more accurately, the figure illustrated in 2017 accounted for 17.95% which was bigger than the indicator illustrated in 2021 almost by 8%.

As for the individual indicators of banks, there is the analysis of Joint-Stock Commercial "Mikrokreditbank" calculated by means of the reports announced by the bank and in accordance with them, the indicators needed to calculate the profitability of the bank are as follows:

Table 2

The information about the total assets, equity and net profit of Joint-Stock Commercial "Mikrokreditbank"[2]

Indicators	12/31/2016 (in thousand soums)	12/31/2017 (in thousand soums)	12/31/2018 (in thousand soums)	12/31/2019 (in thousand soums)
Total assets	1,333,645,114	1,807,253,962	2,942,920,000	5,571,529,073
Total equity	187,880,947	602,397,053	696,121,420	1,660,014,674
Net profit	20,506,721	63,872,130	14,906,497	16,378,893

Using these indicators, the profitability indices can be calculated, namely:

$$ROA_{2019} = \frac{NP_{2019}}{\frac{A_{2019} + A_{2018}}{2}} = \frac{16{,}378{,}893{,}000}{\frac{5{,}571{,}529{,}073{,}000 + 2{,}942{,}920{,}000{,}000}{2}} = 0.0038 \text{ or } 0.38\%,$$

$$ROA_{2018} = \frac{NP_{2018}}{\frac{A_{2018} + A_{2017}}{2}} = \frac{14{,}906{,}497{,}000}{\frac{2{,}942{,}920{,}000{,}000 + 1{,}807{,}253{,}962{,}000}{2}} = 0.006 \text{ or } 0.63\%,$$

$$ROA_{2017} = \frac{NP_{2017}}{\frac{A_{2017} + A_{2016}}{2}} = \frac{63{,}872{,}130{,}000}{\frac{1{,}807{,}253{,}962{,}000 + 1{,}333{,}645{,}114{,}000}{2}} = 0.0406 \text{ or } 4.06\%$$

[1] The table was prepared by the author based on central bank reports
[2] The table was prepared by the author based on central bank reports

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It is obviously seen from the calculation that ROA remarkably decreased from 4.06% to 0.38 % over the three years and it should be confessed that it is a little negative situation for the bank, that is to say, it means that despite the increase in the capacity of assets, the net profit of the bank did not have a remarkable rise.

When it comes to ROE, it is equal to:

$$ROE_{2019} = \frac{NP_{2019}}{\frac{E_{2019} + E_{2018}}{2}} = \frac{16{,}378{,}893{,}000}{\frac{1{,}660{,}014{,}674{,}000 + 696{,}121{,}420{,}000}{2}} = 0.0139 \text{ or } 1.39\%,$$

$$ROE_{2018} = \frac{NP_{2018}}{\frac{E_{2018} + E_{2017}}{2}} = \frac{14{,}906{,}497{,}000}{\frac{696{,}121{,}420{,}000 + 602{,}397{,}053{,}000}{2}} = 0.0229 \text{ or } 2.29\%,$$

$$ROE_{2017} = \frac{NP_{2017}}{\frac{E_{2017} + E_{2016}}{2}} = \frac{63{,}872{,}130{,}000}{\frac{602{,}397{,}053{,}000 + 187{,}880{,}947{,}000}{2}} = 0.161 \text{ or } 16.16\%,$$

ROE of the bank as well as ROA significantly decreased over the period from 2016 to 2019, more accurately, ROE accounted for 16.16% (in 2017) which was approximately eleven times as big as the figure presented in 2019. The main reason for that situation was the small upward trend in the net profit as compared with the capacity of equity which experienced a remarkable increase during the three years.

Consequently, we can observe a decrease in the return on equity. Furthermore, the decrease in these indicators means that although the equity and assets of the bank rose fast, the profit did not increase substantially.

In addition, in accordance with the report presented by Joint-Stock Commercial "Mikrokreditbank", the capacity of investments comprised 341.9 million soums at the end of 2018 and as compared with the figure demonstrated at the end of 2019, it was smaller by 116.7 billion soums, which was enormous indicator and it means that the operations of the bank linked to investments rose tremendously during the year.

Hence, the Return on Investments for the year 2019 is as follows:

$$ROI_{2019} = \frac{NP_{2019}}{\frac{I_{2019} + I_{2018}}{2}} = \frac{16{,}378{,}893{,}000}{\frac{117{,}112{,}381{,}000 + 341{,}924{,}000}{2}} = 0.278 \text{ or } 27.88\%$$

As is shown in the calculation above, ROI was equal to 0.278 or 27.88%, which was positive indicator for the bank in comparison with the other indicators and it shows that the efficiency of the usage of investments is in normal state.

In spite of these estimations, the simple formulas cannot show and describe the full situation, as we are not able to see and estimate all factors which affect the indicators. That is why, many foreign banks use a factor analysis so as to investigate all factors. One of these analyses is "DuPont Model". The model was created by Donald Brown, who worked for E. I. du Pont de Nemours and Company (also known as DuPont) and the model was used so as to put in order the financial state of General Motors, a 23-percent share of which was bought by DuPont.

There are three formulas of "DuPont model" and they are as follows

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Table 3

The various forms of "DuPont model"[3]

1	**The two-factor "DuPont model":**	**NP** – Net Profit gained during a period
	$ROA = \frac{NP}{S} * \frac{S}{\bar{A}}$	**Ā** – Average asset value
2	**The three-factor "DuPont model":**	**E** – Equity
	$ROA = \frac{NP}{S} * \frac{S}{\bar{A}} * \frac{\bar{A}}{E}$	**EBT** – Earning before taxes
3	**The five-factor "DuPont model"**	**EBIT** – Earnings before interest and taxes
	$ROA = \frac{NP}{EBT} * \frac{EBT}{EBIT} * \frac{EBIT}{S} * \frac{S}{\bar{A}} * \frac{\bar{A}}{E}$	**S** – Sales

The formulas illustrated above are usually used in factories and they cannot be suitable for banks, as the financial reporting of factories differs from the bank's.

Hence, the model has a special form for banks:

$$ROE = \frac{NP}{\bar{A}} * \frac{\bar{A}}{\bar{E}} = ROA * EM \qquad (4)$$

ROE – The Return on Equity
NP – Net Profit gained during a period
Ā – Average asset value
Ē – Average equity value
ROA – The Return on Assets
EM – Equity multiplier (Leverage ratio)

We can simplify this model in order to facilitate estimations and the more detailed form is as follows:

$$ROE = (NNII / A - LLP / A + NIM * EAR - T / A - OC / A) * EM \qquad (5)$$

ROE – The Return on Equity
EM – Equity multiplier (Leverage ratio)
NIM – Net interest margin
EAR – Earning assets rate
NNII – Net non-interest income
A – Assets
LLP - Loss loan provisions
T – Taxes
OC – Operating costs

As can be seen from the formula given above, the scheme of the calculation of ROE consists of several elements which are calculated separately and represent the factors, influencing ROE. Investigating the changes in these factors, banks can find the reasons why ROE decreases or rises. For instance, the scheme given below can show how every factor can impact the final result and how every of them is necessary, more precisely, ROE consists of the multiplication between ROA and EM. Moreover, EM includes relationship between the quantity of the assets of a bank and the equity. What is more, ROA itself has many factors: Net interest margin (NIM), Earning assets rate (EAR), Net non-interest income (NNII), Assets (A), Loan loss provisions (LLP), Taxes (T), Operating costs (OC), Interest income (II), Interest expenses (IE) and others. All of them form ROE in the last stage of calculations, but separately, they can show us what raise or reduce the final results. For example, if the taxes which a bank must pay tremendously rise, it can cause the reduction in ROA. As a result, it evokes the reduction in ROE. Furthermore, the increase in Operating costs (OC) as well as Loan loss provisions (LLP) can reduce the rate of ROE. On the contrary, the decrease in these indicators can raise ROE. In accordance with this method, banks can find or choose the optimal strategy to raise or improve their own efficiency.

[3] The table was prepared by the author based on Joseph F. Sinkey, Jr.'s "Commercial bank financial management: in the financial services industry", New York: Macmillan: 6th edition London: Collier Macmillan- 1018 p.

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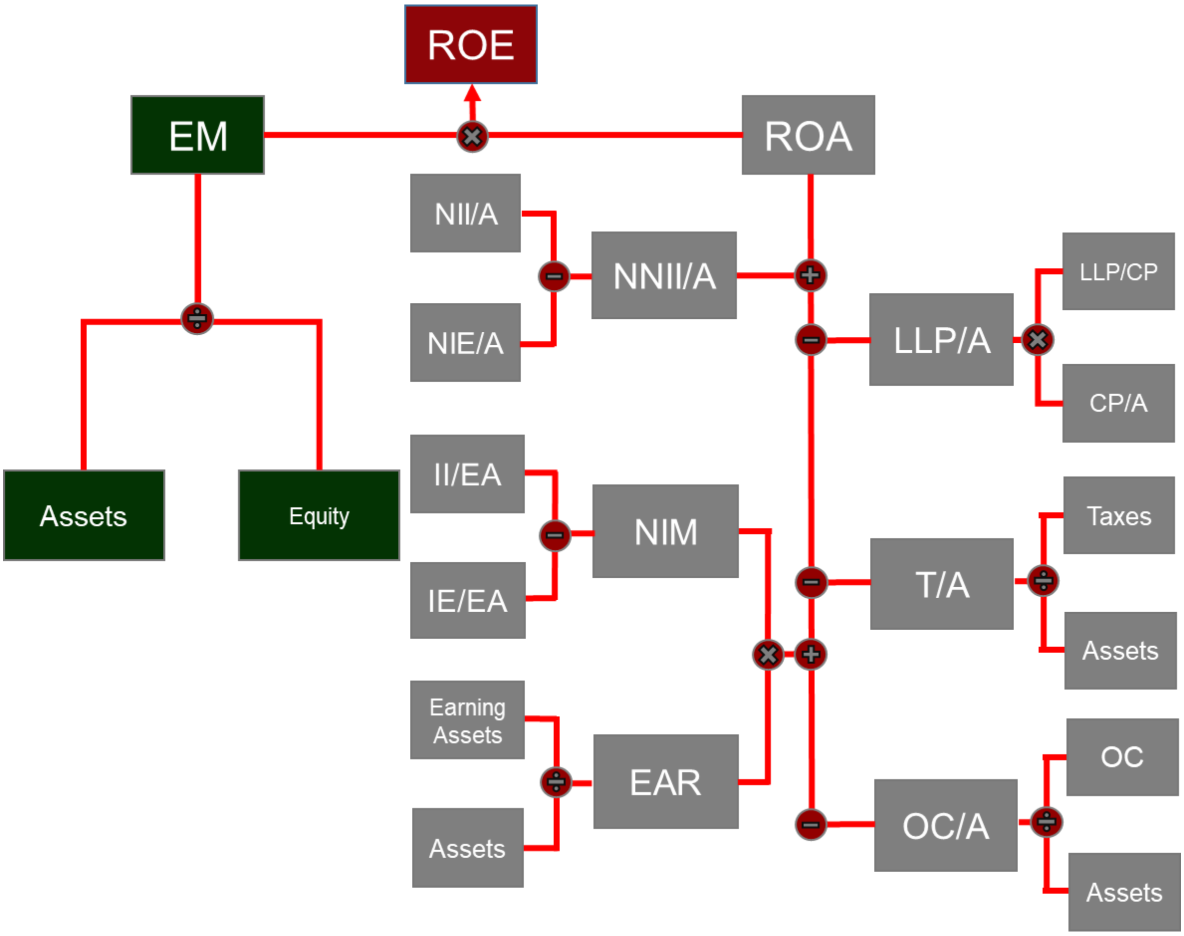

Picture 1. **The schematic illustration of "DuPoint model"**[4]

It is also important to assert that all these theories should be tested in real life and with real statistics, that is to say, there are several estimations in which we used "DuPont Model" and we investigated ROE of Joint-Stock Commercial "Agrobank", using the statistics presented in the annual report for December 31 of 2020:

1) $NNII = \dfrac{NII - NIE}{A} = \dfrac{1{,}225{,}832{,}753{,}000 - 833{,}993{,}593{,}000}{18{,}487{,}891{,}328{,}000} = 0.021$

2) $\dfrac{LLP}{A} = \dfrac{94{,}390{,}802{,}000}{18{,}487{,}891{,}328{,}000} = 0.005$

3) $\dfrac{T}{A} = \dfrac{13{,}332{,}389{,}000}{18{,}487{,}891{,}328{,}000} = 0.00072$

4) $\dfrac{OC}{A} = \dfrac{722{,}433{,}215{,}000}{18{,}487{,}891{,}328{,}000} = 0.039$

5) $NIM * EAR = \dfrac{II - IE}{EA} * \dfrac{EA}{A} = \dfrac{(2{,}267{,}082{,}559{,}000 - 1{,}540{,}320{,}058{,}000)}{16{,}140{,}996{,}548{,}000} * \dfrac{16{,}140{,}996{,}548{,}000}{18{,}487{,}891{,}328{,}000} = 0.0393$

6) $ROA = NNII - LLP / A - T / A - OC / A + NIM * EAR = 0.01558$

[4] The picture was prepared by the author

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7) $EM = \dfrac{18{,}487{,}891{,}328{,}000}{4{,}627{,}088{,}370{,}000} = 3.9955$

8) $ROE = ROA * EM = 0.01558 * 3.9955 = 0.0622$ or 6.2%

As you can observe in the calculations above, ROE accounts for 6.2% and the ROA is equal to 1.5%. Despite the average rates of ROE, the rates of ROA is a lot lower than ROE which requires from the bank much attention to be improved.

RECOMMENDATIONS AND CONCLUSION

It is obviously seen from the examples and statistics illustrated by us can show that there are several issues linked to the rates of profitability in the commercial banks of Uzbekistan and there are several factors which affect these indicators.

The first of all, it is important to mention about soft loans in the banking system, as this type of loans is not usually repaid in many cases. Hence, they require provision which can directly affect the profitability. When the capacity of loss loan provision rise, it causes the decrease in both ROA and ROE.

Another factor which should be mentioned is the shortage of financial resources. Banks usually cannot carry out active operations because of the shortage of resources. To put it another way, banks can encounter transformation risk, if the rate of earning assets is not enough. As a result, their degrees of income can decrease.

Last but not least, the rate of inflation also affects the profitability of banks, as banks have to adapt to the high rates of inflation and it can discourage clients from using banking products and services

Taking into account all of the above mentioned statistics, theories and estimations, it can be concluded that there are some issues linked to the profitability of commercial banks in Uzbekistan. However, all of them can be solved and banks and banking system have all resources for this. In addition, according to the investigations above, there are some recommendations which can be useful to raise the indicators of the profitability of commercial banks in Uzbekistan:

1) It is necessary to shorten the capacity of soft loans in the credit portfolio of banks;

2) Moreover, banks should optimize their own strategies for taxes, as taxes have a huge influence on the profitability indicators of banks;

3) The rate of inflation should be controlled strictly;

4) Banks should make new marketing strategies to attract new clients and others.

5) It can be efficient to use CRM and underwriting systems in order to find, analyze and estimate risks;

In conclusion, the banking system of the Republic of Uzbekistan has its own specific aspects and they should be taken into account, when it comes to the profitability of banks. Besides, it is noteworthy that Uzbekistan is a developing country and it has got the same problems as the other developing countries have. It is normal for developing countries to have some issues linked to profitability and we hope that these investigations and recommendations given in this article will be useful to solve them.

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