ASSESSMENT OF THE PROFITABILITY INDICATORS OF ARMENIAN COMMERCIAL BANKS AND THE FORECAST OF POSSIBLE SCENARIOS TO INCREASE PROFITABILITY

Anna Ashot Bayadyan[A]

ABSTRACT

Purpose: The main purpose of the study is the comparative analysis of total capital, total assets, net profit, return on assets (ROA), return on equity (ROE) and net interest margin (NIM) of 17 commercial banks operating in Armenia for several years are presented, the advantages and disadvantages of the banks with high and low results in the above-noted indicators have been briefly commented on.

Theoretical framework: Currently, the banking system of Armenia is the most developed one in comparison with other sectors of the economy, as the processes of attracting deposits, providing loans and fulfilling the standards set for commercial banks are regulated in line with the world experience. The object of study is operational environment of the banks.

Design/methodology/approach: The profitability indicators are considered to be the most basic tool for assessing the efficiency of operations carried out by commercial banks. Methodological tools of the study methods were interest income, interest expense and average annual return on profitable assets, which were analyzed separately.

Findings: The relevance of this scientific problem decision is that the negative consequences the COVID-19 pandemic within the business environment of the Armenian banking system have been studied.

Research, Practical & Social implications: In the context of new economic relations, the banking system holds an important part in ensuring the economic growth and economic development of any country, including the Republic of Armenia. Possible ways to increase the profitability of the Armenian banking system were suggested in this study, the existing challenges of the banking system were identified.

Originality/value: Based on the results of the research of the profitability indicators of the RA banking system and the conclusions drawn, several ways of increasing the profitability of banks were proposed.

Doi: https://doi.org/10.26668/businessreview/2023.v8i5.1746

AVALIAÇÃO DOS INDICADORES DE LUCRATIVIDADE DOS BANCOS COMERCIAIS DA ARMÊNIA E A PREVISÃO DE POSSÍVEIS CENÁRIOS PARA AUMENTAR A LUCRATIVIDADE

RESUMO

Objetivo: O principal objetivo do estudo é a análise comparativa do capital total, dos ativos totais, do lucro líquido, do retorno sobre os ativos (ROA), do retorno sobre o patrimônio líquido (ROE) e da margem líquida de juros (NIM) de 17 bancos comerciais que operam na Armênia há vários anos.

Estrutura teórica: Atualmente, o sistema bancário da Armênia é o mais desenvolvido em comparação com outros setores da economia, pois os processos de captação de depósitos, concessão de empréstimos e cumprimento das normas estabelecidas para os bancos comerciais são regulamentados de acordo com a experiência mundial. O objeto de estudo é o ambiente operacional dos bancos.

[A] Associate Professor. Head of Postgraduate Division. Armenian State University of Economics. Armenian
E-mail: bayadyananna82@gmail.com Orcid: https://orcid.org/0000-0002-3303-2215

Intern. Journal of Profess. Bus. Review. |Miami, v. 8 | n. 5| p. 01-19 | e01746 | 2023.

1

Projeto/metodologia/abordagem: Os indicadores de lucratividade são considerados a ferramenta mais básica para avaliar a eficiência das operações realizadas pelos bancos comerciais. As ferramentas metodológicas do estudo foram a receita de juros, a despesa de juros e o retorno médio anual sobre os ativos lucrativos, que foram analisados separadamente.

Conclusões: A relevância da decisão desse problema científico é que foram estudadas as consequências negativas da pandemia de COVID-19 no ambiente de negócios do sistema bancário armênio.

Implicações sociais, práticas e de pesquisa: No contexto das novas relações econômicas, o sistema bancário tem um papel importante na garantia do crescimento econômico e do desenvolvimento econômico de qualquer país, incluindo a República da Armênia. Neste estudo, foram sugeridas possíveis maneiras de aumentar a lucratividade do sistema bancário armênio e foram identificados os desafios existentes no sistema bancário.

Originalidade/valor: Com base nos resultados da pesquisa dos indicadores de lucratividade do sistema bancário da Armênia e nas conclusões tiradas, foram propostas várias maneiras de aumentar a lucratividade dos bancos.

Palavras-chave: Análise, Sistema Bancário, Desafios, Problemas, Indicadores de Lucratividade.

EVALUACIÓN DE LOS INDICADORES DE RENTABILIDAD DE LOS BANCOS COMERCIALES DE ARMENIA Y PREDICCIÓN DE POSIBLES ESCENARIOS PARA AUMENTAR LA RENTABILIDAD

RESUMEN

Objetivo: El principal objetivo del estudio es el análisis comparativo del capital total, los activos totales, los ingresos netos, la rentabilidad de los activos (ROA), la rentabilidad de los fondos propios (ROE) y el margen de interés neto (NIM) de 17 bancos comerciales que operan en Armenia desde hace varios años.

Marco teórico: En la actualidad, el sistema bancario de Armenia es el más desarrollado en comparación con otros sectores de la economía, ya que los procesos de captación de depósitos, concesión de préstamos y cumplimiento de las normas establecidas para los bancos comerciales están regulados de acuerdo con la experiencia mundial. El objeto de estudio es el entorno operativo de los bancos.

Diseño/metodología/enfoque: Los indicadores de rentabilidad se consideran la herramienta más básica para evaluar la eficiencia de las operaciones realizadas por los bancos comerciales. Las herramientas metodológicas del estudio fueron los ingresos por intereses, los gastos por intereses y el rendimiento medio anual de los activos rentables, que se analizaron por separado.

Conclusiones: La relevancia de resolver este problema científico radica en que se estudiaron las consecuencias negativas de la pandemia de COVID-19 en el entorno empresarial del sistema bancario armenio.

Implicaciones sociales, prácticas y de investigación: En el contexto de las nuevas relaciones económicas, el sistema bancario desempeña un papel importante para garantizar el crecimiento económico y el desarrollo económico de cualquier país, incluida la República de Armenia. En este estudio, se sugirieron posibles formas de aumentar la rentabilidad del sistema bancario armenio y se identificaron los retos existentes en el sistema bancario.

Originalidad/valor: A partir de los resultados de la investigación de los indicadores de rentabilidad del sistema bancario de Armenia y de las conclusiones extraídas, se han propuesto varias vías para aumentar la rentabilidad de los bancos.

Palabras clave: Análisis, Sistema Bancario, Retos, Problemas, Indicadores de Rentabilidad.

INTRODUCTION

International experience shows that when assessing the performance of commercial banks in both economically developed and developing countries, the main prerequisite is the analysis of income and expenses. Particular attention in the analysis should be paid to interest income and expenses of a commercial bank, which account for the largest share of total income and expenses. Therefore, commercial banks operating in the Republic of Armenia, under the supervision and control of the Central Bank, must ensure a high level of profitability in each

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

2

reporting period. And to be sure whether the bank is profitable or not, it is necessary to calculate a number of relative indicators.

The purpose of this study is to analyze the current level of profitability of the Armenian banking system, identify the expected challenges and submit proposals to increase the level of profitability of banks.

The rapid spread of COVID-19 in the first months of 2020 has had a major impact on the economies of many countries around the world.

In a number of countries, including Armenia, businesses have been forced to terminate or restrict operations for a long or indefinite period of time.

The above-noted facts have also had a negative impact on the Armenian banking system. Therefore, it is very important to regularly study the business environment of the banks in order to promptly respond to emerging problems, thereby determining the actuality of the selected topic.

Therefore, within the framework of the selected topic, the following problems were investigated and several recommendations were presented:

- To analyze the profitability of the RA banking system for the years 2018-2021.
- To carry out comparative analysis of total capital, total assets, net profit of 17 commercial banks operating in Armenia.
- To present results of ROE, ROA and NIM studies.

LITERATURE REVIEW

The most basic indicators for assessing the efficiency of operations carried out by commercial banks are the profitability ratios, which are calculated on the basis of taxable profit and net profit after tax. The latter, in particular, provide an opportunity to describe the financial stability of each commercial bank. Therefore, the research of this issue is always in the center of study both of Armenian and foreign researchers.

Commercial banks focus on service quality and develop more high quality strategies to satisfy customers (Shanmugam and Chandran, 2022).

Armenian economist, full member of ACCA R. Melikyan (Melikyan, 2020) in the study on ways to increase the profitability of the banking system, aimed to analyze the current profitability level of Armenian banking sector, to identify the challenges facing the banking sector in 2019-2020. We think R. Melikyan researched very important topic, since for obvious

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

3

reasons 2020 was very difficult year both for Armenian economy and for banking system as a whole.

According to data the profit of the banking system in 2021 is increased by about AMD 26 billion, or 44%. Although ROE has also increased to around 9% it is still quite a low for our country, taking into account that the country risk premium for Armenia is around 3,5% (CB of Armenia 2021).

In his research of profitability and vulnerability of Armenian banks expert of ASUE ''Amberd" Research Center N. Karapetyan (Karapetyan, 2017), referred to the assessment of profit value and profitability indicators of Armenian banking system in 2017, noting that these indicators are a solid basis for assessing the stability (vulnerability) of banks.

E.G. Knyazeva, T.V. Bakunova et al. (Knyazeva et al., 2019) noted that the profitability analysis is necessary in order to assess the efficiency of capital investment in the property of an enterprise, the ability to increase capital, potential changes in economic resources that the enterprise will control in the future, to characterize the results of resource management, to assess the feasibility of investments and the ability to meet the investment expectations of capital investors. One of the most important factors in assessing the stability of a bank is profitability.

Polish economist S. Kozak (Kozak, 2021) in his article assessed the financial stability of banks in the context of ongoing negative consequences of COVID-19 epidemic.

As a result of his research the author came to the conclusion, that the growth of problem loans by several percent has become a source of negative profitability of banks in the region.

Economist Greg Medcraft in his research noted that the impact of the COVID-19 pandemic has already brought major economic disruptions globally, which in turn have contributed to weaken credit conditions and certain asset valuations in the financial system. The combination of credit losses, increase in LLPs and weaker revenues could gradually reduce bank earnings and weaken bank ability to increase capital stock using profits generated internally. These challenges could prevail in particular for the banks located in countries with the highest expected rise in NPLs that are likely to face the most acute deterioration in their asset quality. Therefore, bank capital ratios are susceptible to deterioration unless banks take steps to reduce risk-weighted assets through deleveraging or strengthening their capital base using profits generated internally or by issuing equity shares, which would be challenging under current conditions in which bank equity valuations are historically low (Medcraft, 2021).

Analysis of the approaches of various authors to the banking system in the context of Covid-19 allowed us to develop our own vision of the sector.

MATERIALS AND METHODOLOGY

The research methodology includes the completeness of the methods used in collecting, calculating and analyzing the relevant data to determine the profitability of the banking system. The profitability analysis includes the comparison of the net profit received in 2018-2021, the results of the study of banks' ROE, ROA and NIM indicators (Handito et al., 2019).

(1) ROE=(Net Income)/Equity

> where:
> ROE - Return on Equity
> Equity = Asset – Liabilities

(2) ROA (Net Income)/(Total Assets)

> where:
> ROA – Return on Asset
> Total Assets = Shareholders Equity + Liabilities

(3) NIM= ((Investment Income – Interest Expenses))/(Average Earning Assets)

where:
NIM – Net Interest Margin. Profitability Measure based on interest earnings of individual banks (Banerjee, et al., 2022).

The research process was carried out in several stages, during which it was possible to clearly assess the level of profitability of commercial banks operating in Armenia in the context of the coronavirus epidemic.

The analysis was carried out on the basis of scientifically based complex, dynamic, quantitative methods. The vertical, horizontal comparative analysis used in the study gave a clear picture of net income, total assets, total capital, their profitability, interest income, interest expense, net interest margin and profitable assets of commercial banks in Armenia. This, in turn, made it possible us to make correct, valid assessments and appropriate conclusions and recommendations.

Due to the spread of the Covid-19 in Armenia, 2020 was a very difficult year for the economy, and consequently or the banking system. The real GDP had a decline of about 7.6% (BSTDB, 2020), the Armenian dram depreciated against the US dollar by about 9%, the interest rates in the market has stopped decreasing in recent years, and at the end of the year and the

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

5

beginning of 2021 there was a certain increase in interest rates. All this contributed to the growth of credit, liquidity, currency and other risks of the banking system of Armenian.

Taking into account the above, in order to make more visible the problems of possible ways to increase the profitability indicators of commercial banks in the Republic of Armenia in the context of Covid-19:

- A comparative analysis of all indicators of profitability of 17 commercial banks operating in Armenia was carried out using the corresponding tables and graphs.
- The problems of profitability of the banking system were presented.
- The need for timely and accurate financial analysis was taken into account.

The research is based on foreign sources of professional literature, studies of Armenian researchers, financial statements published by Armenian banks, Annual analytical report No. 105, 03.03.2021 of Arminfo agency, Annual reports published by Armenian banks, as well as various statistical and analytical materials developed by the RA Central Bank.

RESULTS AND DISCUSSION

2020 was the most difficult period for banks operating in Armenia over the years under study, largely due to the unexpected penetration of Covid-19 into the world, which brought great obstacles and difficulties in all areas. The banking system also did not stand aside. In the first half of 2020, Armenia was among the countries that were hit hard by the first wave of COVID-19, whose negative impact on the economy was recorded already in March 2020. On the positive side, the early spread of COVID-19 allowed the country to return to a near-normal business and operational environment as early as Q4 2020 without further restrictions and lockdowns. As a result, we saw positive trends in most sectors of the economy at the end of the 4th quarter, but the overall impact of the pandemic was significant until then. The Government and the Central Bank (CB of RA 2020) responded to the unfolding crisis with comprehensive measures, providing necessary support and comfort. The support program implemented by the government exceeded 160 billion drams, the number of beneficiaries of social programs was more than 1 million people, and the number of beneficiaries of economic programs was more than 70 thousand subjects.

To determine the profitability of banks, simply looking at absolute net profit figures isn't quite enough. It's also important to know how efficiently a bank is using its assets and equity to generate profits. For this reason, three key profitability ratios to look at when evaluating a

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

6

bank's performance are (Alharthi, 2016): Return on equity (ROE), Return on assets (ROA), Net interest margin (NIM).

Table 1. Changes in the net profit (loss) of the RA banking system in 2018-2021

Banks	Years			
	2018	2019	2020	2021
Ameriabank	10,502,444	12,114,968	9,000,204	19,416,065
Ardshinbank	8,214,210	9,900,962	3,106,958	13,653,953
ArmSwissBank	5,335,799	8,999,417	7,060,408	7,751,812
Artsakhbank	6,097,044	5,546,343	1,924,444	5,395,264
Inecobank	8,003,598	9,412,780	5,401,788	9,007,290
Armeconombank	2,031,566	3,178,343	5,723,019	3,089,986
HSBC Bank Armenia	555,153	1,875,472	2,277,028	3,225,050
AraratBank	2,259,803	2,439,052	1,385,186	1,699,157
Acba bank	6,982,653	7,381,700	1,838,945	10,161,756
Mellat bank	2,053,367	2,148,577	2,204,923	2,677,732
Converse Bank	4,895,217	5,424,014	2,553,286	4,126,909
IDBank	3,312,114	3,167,633	1,346,525	2,248239
Byblos Bank Armenia	1,233,658	1,534,730	1,426,590	1,183,132
Unibank	1,196,435	1,418,013	425,145	400,971
Evocabank	1,027,241	1,738,650	761,954	1,128,026
VTB Armenia Bank	(4,827,782)	(1,527,464)	2,197,481	1,569,296
ArmBusinessBank	3,332,520	3,269,358	1,809,186	537,224
Total	62,205,040	78,022,548	50,443,070	87,271,868

Sourse: Prepared by the author based on annual financial statements published by Armenian banks (2018-2021).

Although the banking system had sufficient liquidity and capital, the Central Bank provided additional guarantees of financial stability by shelving additional Basel III-related buffer requirements and declaring its readiness to step in and provide liquidity if necessary. Our banking system has also weathered this storm with strength and resilience from previous economic downturns and a prudent approach to risk management.

As can be seen from the Table 1 show that all Armenian banks have been operating at a profit in recent years. The exception was VTB Bank (Armenia), which operated at a loss in 2018-2019. In 2019, the situation was relatively normalized and the absolute deviation compared to 2018 was +3,300,318 thousand drams or 68.36%. This was significantly positively impacted by the growth of other comprehensive income in 2019, in particular, the change in the fair value of debt instruments measured through other comprehensive financial results in the amount of 442,163 thousand drams instead of - 567,689 thousand drams last year. In 2019, the item on personnel and other operating expenses decreased by 1.5 million drams compared to 2018. In the following years, the bank operated with profit. In 2021, Ameriabank stands out in terms of profit, amounting to 19.4 million drams, increasing by 10.4 million drams or 115.73% compared to 2020. The lowest net profit for the same period was in Unibank, amounting to 400,971 thousand drams.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

7

Figure 1. Share of net profit (loss) of the RA commercial banks in general banking system as of 2018-2021, (%)
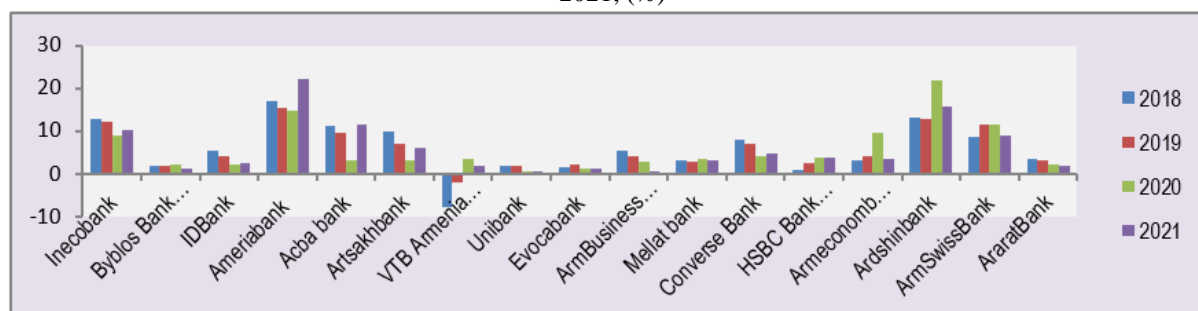
Sourse: Prepared by the author (2022).

Fugure 1 shows the real picture of the net profit of each bank in the general banking system of the Republic of Armenia. As the most problematic period was observed in 2020, with their positive results (10% and more) we can single out three banks: Ardshinbank - 21.68%, Ameriabank - 14.89% and Armswissbank - 11.68%. In 2021, Ameriabank took the first place in terms of net share in total profit, making 22.25% at that moment. In a challenging environment, the bank has managed to maintain its leading position in all key financial indicators, ensuring a stable growth of the loan portfolio.

Table 2. Changes in the total capital of the Armenian banking system as of 2018-2021

Banks	Years			
	2018	2019	2020	2021
Ameriabank	89,772,157	101,227,077	109,705,602	128,931,249
Ardshinbank	71,219,160	77,842,916	89,818,361	100,069,124
ArmSwissBank	46,003,094	59,724,401	64,047,097	59,447,710
Artsakhbank	35,944,581	41,685,356	43,556,929	48,771,217
Inecobank	51,704,704	56,283,617	58,314,249	59,125,905
Armeconombank	33,537,427	39,181,914	42,315,323	43,378,573
HSBC Bank Armenia	39,555,707	41,542,203	43,767,697	46,975,170
AraratBank	37,072,942	37,380,453	38,276,407	39,561,660
Acba bank	64,320,064	68,987,958	69,637,146	89,039,836
Mellat bank	36,309,754	38,557,089	40,698,754	43,322,102
Converse Bank	39,098,758	44,972,239	48,090,129	51,601,265
IDBank	43,620,082	44,167,759	44,439,067	46,387,383
Byblos Bank Armenia	27,145,573	29,712,649	29,516,207	29,887,036
Unibank	33,038,360	33,493,008	34,055,022	34,694,204
Evocabank	29,342,150	29,588,188	33,848,402	33,775,630
VTB Armenia Bank	50,466,478	48,416,846	49,823,239	50,502,724
ArmBusinessBank	42,947,106	52,076,879	55,291,756	52,680,040
Total	771,098,097	844,840,552	895,201,387	958,150,828

Source: Prepared by the author based on annual financial statements published by Armenian banks (2018-2021).

The total capital in the RA banking system increased year by year and in 2021 amounted to 958.1 million drams, which increased by 62.9 million drams or 7.03% compared to 2020.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

8

Compared to 2019, in 2020 only Byblos Bank which is registered a decrease of 196.4 million drams. This was largely due to a decrease in the provision for changes in the fair value reserve for investment securities, an increase in current accounts and customer deposits (Statement 2020).

The total capital of Armeconombank has been increasing year by year. In 2018, 33.4 million drams from Armeconombank's share premium, 2,524.1 million drams from non-distributed profit and 3,000.0 million drams from the main reserve was directed to the increase of the charter capital, as a result of which it amounted to 22,266.3 million drams, at the expense of which it the nominal value of a single common share increased by 3000 AMD and made 10,400 AMD against the previous 7400 AMD (AEB 2021).

After replenishment of the charter capital in 2020 ''Moody's Investors Service'', international rating agency upgraded the ratings of Armeconombank OJSC to Ba3 long-term partner risk rating and B1/NP long-term/ short-term deposit rating, both with stable outlook (AEB 2021).

The banking system once again proved its strong fundamentals and resilience, which was partially due to ove-cautious and risk-averse policies and rules of the Central Bank for proceeding periods.

For years our banking system had been building up sufficient financial strength, so that to maintain the right level of capital for balancing safety and returns, and this approach proved to be the right one in the most challenging times. The banks maintained double-digit growth on average by main financial indicators.

Figure 2. Share of total capital of commercial banks operating in the Republic of Armenia in the total banking system as of 2018-2021, (%)
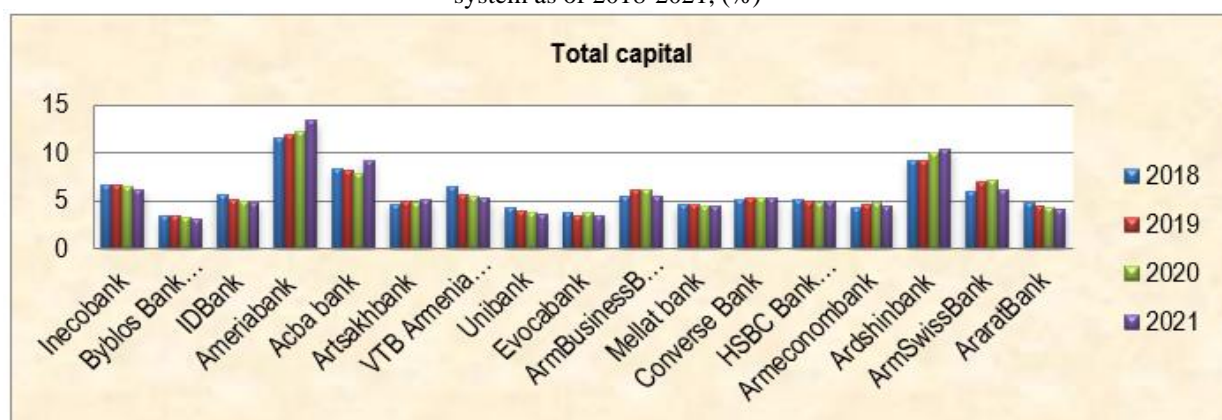
Sourse: Prepared by the author (2022).

According to chart 2, the share of total capital in all commercial banks during the years under review was fluctuating, which was significantly affected by the amount of profit for the reporting year. Ameriabank is the leader in terms of total capital, which has improved its position year by year. The next bank with the largest amount of capital is Ardshinbank. The share of the latter in total capital was 0.03% lower in 2019, and in the reporting period the share of the latter was 10.41%. The share of total capital in several banks has remained practically unchanged over the years under review.

Table 3. Changes in the total assets of the RA banking system as of 2018-2021

Banks	Years			
	2018	2019	2020	2021
Ameriabank	779,761,437	968,081,217	1,090,641,724	1,096,721,050
Ardshinbank	678,567,536	721,747,205	920,839,381	1,011,208,113
ArmSwissBank	235,049,300	282,661,302	387,058,414	400,425,154
Artsakhbank	155,683,176	181,564,422	190,622,273	198,592,270
Inecobank	293,271,987	339,113,468	387,775,479	426,503,916
Armeconombank	222,298,328	280,478,563	322,091,088	360,379,138
HSBC Bank Armenia	196,001,418	213,576,353	238,949,623	261,356,274
AraratBank	222,952,430	222,562,048	248,378,888	270,126,961
Acba bank	350,176,398	434,006,441	494,372,851	548,178,402
Mellat bank	53,826,306	64,659,778	77,617,829	83,192,255
Converse Bank	281,125,076	326,558,473	331,937,191	377,571,800
IDBank	125,908,907	150,763,757	177,130,045	198,015,500
Byblos Bank Armenia	94,273,423	111,468,810	103,115,844	101,174,303
Unibank	210,493,176	252,452,216	238,296,364	255,851,233
Evocabank	132,355,258	165,117,507	201,420,317	245,714,992
VTB Armenia Bank	288,888,265	308,344,905	333,764,944	361,585,152
ArmBusinessBank	642,891,155	782,178,515	898,914,941	883,832,722
Total	4,963,523,576	5,805,334,980	6,642,927,196	7,080,429,235

Sourse: Prepared by the author based on annual financial statements published by Armenian banks (2018-2021).

Ameriabank recorded the highest indicators for all studied years in terms of total assets. Even in 2020, having increased by AMD 122.5 million or 12.66% compared to 2019. In this regard, all banks have improved their overall asset ratios, with the exception of Byblos Bank. The latter decreased by 8.3 million drams or 7.49% in 2020 compared to 2019. The main reason was the decrease in loans to banks, other assets, investment securities. In terms of the banking system of the Republic of Armenia, the growth of total assets was registered year by year, the biggest change was in 2019 compared to 2018, increasing by 841.8 million drams or 16.96%.

Figure 3. Share of total assets of commercial banks operating in the Republic of Armenia in the general banking system as of 2018-2021 (%)
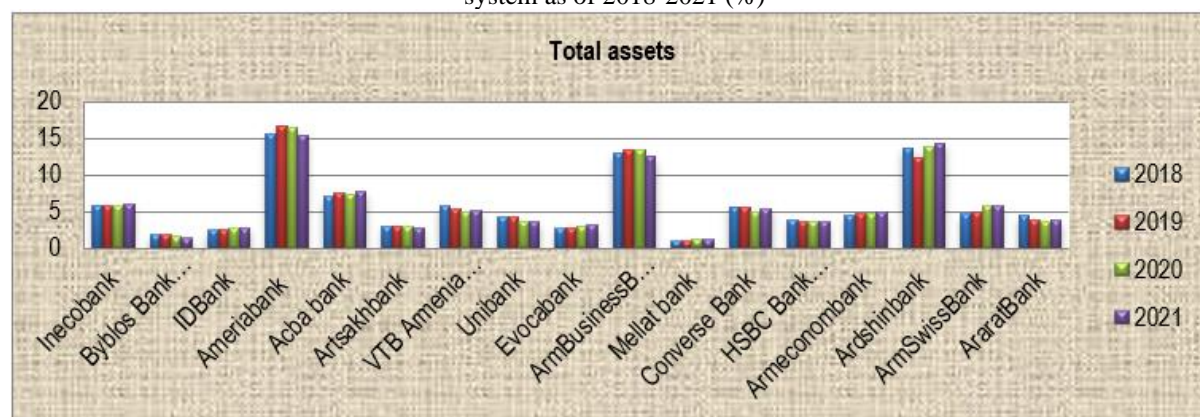
Sourse: Prepared by the author (2022).

According to Figure 3, Mellat Bank had the smallest share in the total assets of commercial banks operating in Armenia in the general banking system, making 1.1% in 2018-19, 1.2% in the period of 2020-2021. This is the result of the United States re-imposed all remaining secondary sanctions on Iran on 5 November 2018, that were previously lifted under the Joint Comprehensive Plan of Action (JCPOA) (Mellat Bank 2020). According to US Department of Treasury, Office of Foreign Assets Control (OFAC) designated more than 700 entities, individuals, aircraft, and vessels on the List of Specially Designated Nationals and Blocked Persons (SDN List). The list includes number of Iranian banks and their foreign and domestic subsidiaries, including "Bank Mellat Iran" OJSC. On 21 February 2020, Iran was placed on the FATF blacklist. Mellat Bank operating in Armenia did not escape the negative consequences of this fact and the longer term effects of recently implemented sanctions, as well as the threat of additional future sanctions, are difficult to determine. The financial statements reflect management's assessment of the impact of the US Sanctions and the Armenian business environment on the operations and the financial position of the Bank.

Table 4. Comparative analysis of ROA of Armenian commercial banks in 2018-2021, %

Banks	Years				Deviation (+,−) 2019 compared to 2018	Deviation (+,−) 2020 compared to 2019	Deviation (+,−) 2021 compared to 2020
	2018	2019	2020	2021	Absolutly, %	Absolutly, %	Absolutly, %
Ameriabank	1.35	1.25	0.83	1.77	- 0.10	- 0.43	+ 0.94
Ardshinbank	1.21	1.37	1.42	1.35	+ 0.16	+ 0.05	- 0.07
ArmSwissBank	2.27	3.18	1.82	1.94	+ 0.91	- 1.36	+ 0.12
Artsakhbank	3.92	3.05	1.01	2.72	- 0.86	- 2.05	+ 1.71
Inecobank	2.73	2.78	1.39	2.11	+ 0.05	- 1.38	+ 0.72
Armeconombank	0.91	1.13	1.78	0.86	+ 0.22	+ 0.64	- 0.92
HSBC Bank Armenia	0.28	0.88	0.95	1.23	+ 0.59	+ 0.07	+ 0.28

AraratBank	1.01	1.10	0.56	0.63	+ 0.08	- 0.54	+ 0.07
Acba bank	1.99	1.70	0.37	1.85	- 0.29	- 1.33	+ 1.48
Mellat bank	3.81	3.32	2.84	3.22	- 0.49	- 0.48	+ 0.38
Converse Bank	1.74	1.66	0.77	1.09	- 0.08	- 0.89	+ 0.32
IDBank	2.63	2.10	0.76	1.14	- 0.53	- 1.34	+ 0.38
Byblos Bank Armenia	1.31	1.38	1.38	1.17	+ 0.07	+ 0.01	- 0.21
Unibank	0.57	0.56	0.18	0.16	- 0.01	- 0.38	- 0.02
Evocabank	0.78	1.05	0.38	0.46	+ 0.28	- 0.67	+ 0.08
VTB Armenia Bank	-1.67	-0.50	0.66	0.43	+ 1.18	+ 1.15	- 0.23
ArmBusinessBank	0.52	0.42	0.20	0.06	- 0.10	- 0.22	- 0.14
Total	1.25	1.34	0.91	1.23	0.09	- 0.43	+ 0.32

Sourse: Prepared by the author based on annual financial statements published by Armenian banks (2018-2021).

According to Table 4, the highest rate of return on total assets in the Armenian banking system was recorded in 2019, amounting to 1.34%, and the lowest in 2020 - 0.91%.

ArmBusinessBank, Unibank, Evocabank, HSBC Bank Armenia, VTB Armenia Bank recorded a low ROA in all the years under review.

Figure 4. Total ROA of commercial banks operating in the RA in the banking system for 2018-2021 (%)
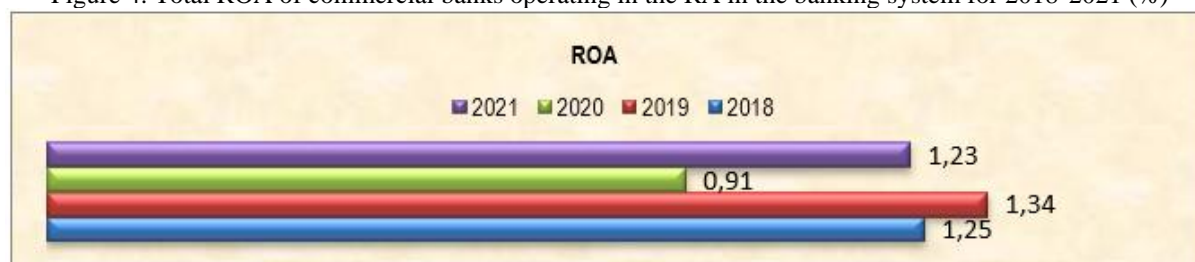
Sourse: Prepared by the author (2022).

The profitability of total assets in the Armenian banking system has slightly decreased in recent years. Artsakh Bank provided rather high indicators, except for 2020 (1.01%), in other years the rate was □3.5%. The ROA in Armbusinessbank and VTB Bank (Armenia) was incomparably low on 2021, respectively 0.06% and 0.43%.

Table 5. Comparative analysis of ROE of Armenian commercial banks in 2018-2021, %

Banks	Years				Deviation (+,−) 2019 compared to 2018	Deviation (+,−) 2020 compared to 2019	Deviation (+,−) 2021 compared to 2020
	2018	2019	2020	2021	Absolutly, %	Absolutly, %	Absolutly, %
Ameriabank	11.70	11.97	8.20	15.06	+ 0.27	- 3.76	+ 6.86
Ardshinbank	11.53	12.72	14.59	13.64	+ 1.19	+ 1.87	- 0.95
ArmSwissBank	11.60	15.07	11.02	13.04	+ 3.47	- 4.04	+ 2.02
Artsakhbank	16.96	13.31	4.42	11.06	- 3.65	- 8.89	+ 6.64
Inecobank	15.48	16.72	9.26	15.23	+ 1.24	- 7.46	+ 5.97
Armeconombank	6.06	8.11	13.52	7.12	+ 2.05	+ 5.41	- 6,4

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

12

HSBC Bank Armenia	1.40	4.51	5.20	6.87	+ 3.11	+ 0.69	+ 1.67
AraratBank	6.10	6.52	3.62	4.29	+ 0.42	- 2.91	+ 0.67
Acba bank	10.86	10.70	2.64	11.41	- 0.16	- 8.06	+ 8.77
Mellat bank	5.66	5.57	5.42	6.18	- 0.09	- 0.15	+ 0.76
Converse Bank	12.52	12.06	5.31	8.00	- 0.46	- 6.75	+ 2.69
IDBank	7.59	7.17	3.03	4.85	- 0.42	- 4.14	+ 1.82
Byblos Bank Armenia	4.54	5.17	4.83	3.96	+ 0.63	- 0.33	- 0.87
Unibank	3.62	4.23	1.25	1.16	+ 0.61	- 2.99	- 0.09
Evocabank	3.50	5.88	2.25	3.34	+ 2.38	- 3.63	+ 1.09
VTB Armenia Bank	-9.57	-3.15	4.41	3.11	+ 6.42	7.57	- 1.3
ArmBusinessBank	7.76	6.28	3.27	1.02	- 1.48	- 3.01	- 2.25
Total	8.07	9.24	6.75	9.11	+ 1.17	- 2.49	+ 2.36

Sourse: Prepared by the author based on annual financial statements published by Armenian banks (2018-2021).

Calculations show that the optimal (best) value of this indicator should not be less than 10-20%. At the same time, the amount of ROE is calculated not only in terms of equity, but also in terms of share capital.

From the point of view of the profitability of the total capital of the Armenian commercial banks, the indicators in some banks are quite worrying.

During 2018-2019, the ROE of Artsakh Bank was relatively high, respectively 16.96% and 13.31%. In 2020, the indicator sharply decreased by 8.89% compared to the previous year, the main reason for which was the decrease in the amount of net profit for the year by about 4 billion drams.

Figure 5. Total ROE of commercial banks operating in the Republic of Armenia in the banking system for 2018-2021, (%)

Sourse: Prepared by the author (2022).

Following the results of 2020, Armswissbank continued to maintain its leading position in the banking system of the RA in terms of ROE, as well as in terms of income per employee and profit per employee. Referring to the bank's activities in 2020, it should be noted that in 2020 the bank has ensured growth in assets, liabilities, total capital and other indicators, as well as strengthened its position in the banking system. In 2020, the Bank ranked 2nd and 3rd in terms of ROE and ROA, respectively, according to the annual analytical report No. 105, 03.03.2021 of Arminfo agency.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

13

Table 6. Comparative analysis of NIM of Armenian commercial banks in 2018-2021, %

Banks	Years				Deviation (+,−) 2019 compared to 2018	Deviation (+,−) 2020 compared to 2019	Deviation (+,−) 2021 compared to 2020
	2018	2019	2020	2021	Absolutly,%	Absolutly,%	Absolutly,%
Ameriabank	4.65	4.89	4.62	3.76	0.24	- 0.27	- 0.86
Ardshinbank	4.10	4.26	4.64	3.02	0.16	0.38	- 1.62
ArmSwissBank	3.84	3.43	3.20	2.23	- 0.41	- 0.23	- 0.97
Artsakhbank	6.13	6.01	6.28	3.64	- 0.12	0.27	- 2.64
Inecobank	7.64	8.39	7.21	5.0	0.75	- 1.81	- 2.21
Armeconombank	4.89	5.25	5.28	3.31	0.36	0.03	- 1.97
HSBC Bank Armenia	5.44	5.51	5.78	4.77	0.07	0.27	- 1.01
AraratBank	4.13	3.93	4.39	3.02	- 0.2	0.46	- 1.37
Acba bank	7.36	6.85	6.86	4.70	- 0.51	0.01	- 2.16
Mellat bank	9.09	8.96	8.03	5.64	- 0.13	- 0.93	- 2.39
Converse Bank	5.32	5.30	5.15	3.74	- 0.02	- 0.15	- 1.41
IDBank	6.47	6.79	6.63	4.64	0.32	- 0.16	1.99
Byblos Bank Armenia	2.96	3.28	3.11	2.81	0.32	- 0.17	- 0.3
Unibank	4.29	5.37	4.93	4.50	1.08	- 0.44	- 0.43
Evocabank	4.09	5.28	5.44	2.94	1.19	0.16	- 2.5
VTB Armenia Bank	9.75	9.57	9.90	6.77	- 0.18	0.33	- 3.13
ArmBusinessBank	1.73	2.20	2.14	1.58	0.47	- 0.06	- 0.56
Total	4.92	5.07	4.98	3.52	0.15	- 0.09	- 1.46

Sourse: Prepared by the author based on annual financial statements published by Armenian banks (2018-2021).

Net Interest Margin (NIM) of banking sector is decreased during 2020 by 1.8% (from 5.07% to 4.98%). Erosion of banks' NIMs is also a current trend in banking sectors of advanced economies.

Figure 6. Net interest margin in the general banking system of commercial banks operating in the Republic of Armenia for 2018-2021(%)
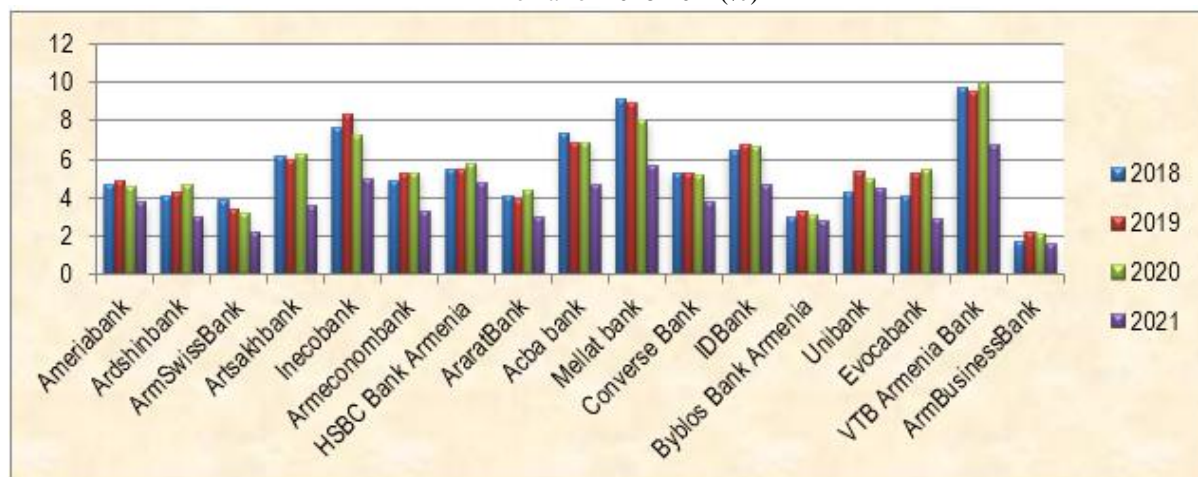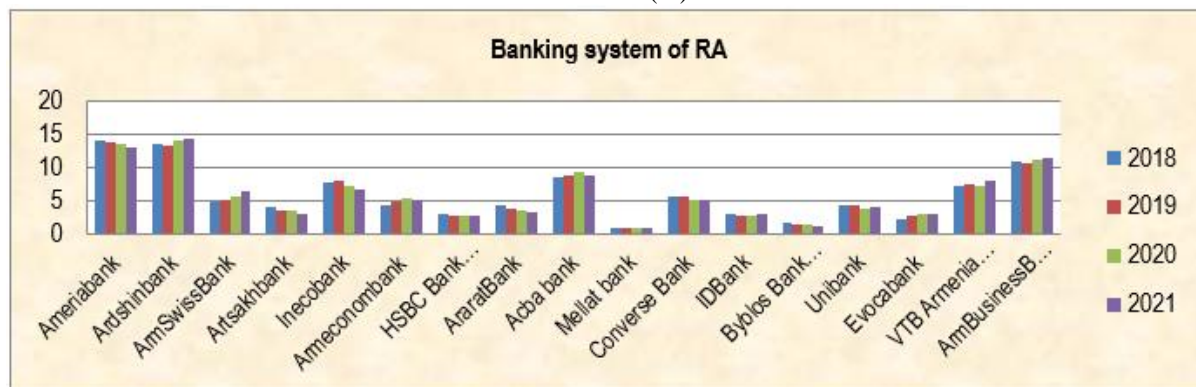

Sourse: Prepared by the author (2022).

The highest net interest rate results were registered at VTB Bank (Armenia). The latter occupied a leading position in this indicator throughout all the years under study.

The net interest margin on the general banking system is fluctuating.

Figure 7. Share of interest income of commercial banks operating in the RA in the general banking system in 2018-2021(%)

Sourse: Prepared by the author (2022).

In 2021 the highest share in terms of interest income had Ardshinbank - 14.3%, increasing by 0.2% compared to 2020. During the same period Mellat Bank had the lowest share in the overall banking system.

Figure 8. Share of interest expenses of commercial banks operating in the RA in the general banking system in 2018-2021(%)
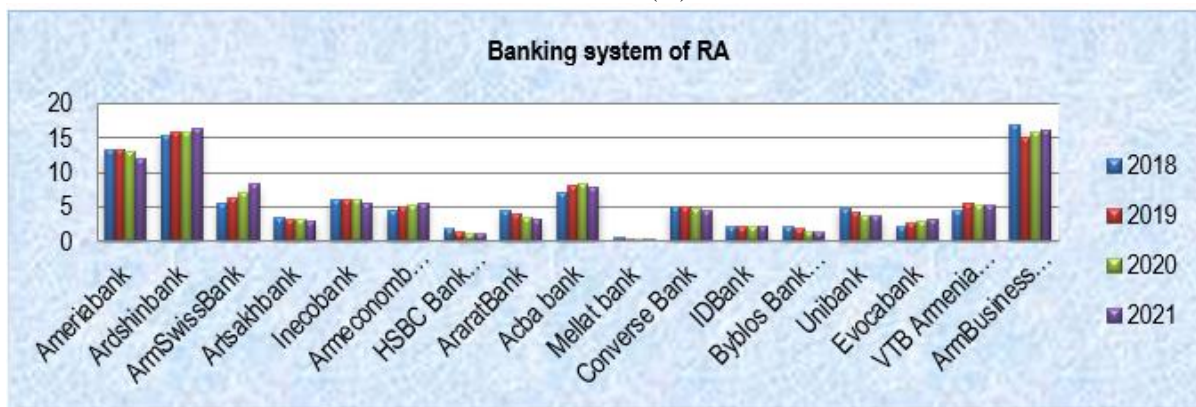
Sourse: Prepared by the author (2022).

In 2021 interest expenses in Ardshinbank amounted to 16.4%, exceeding the interest income by 2.1%. In the same period, Armbusinessbank registered relatively high interest expenses, making 16.1%, exceeding the interest income by 4.6%.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

15

Figure 9. The share of the average annual return on profitable assets of commercial banks operating in the Republic of Armenia in the total banking system for 2018-2021 (%)
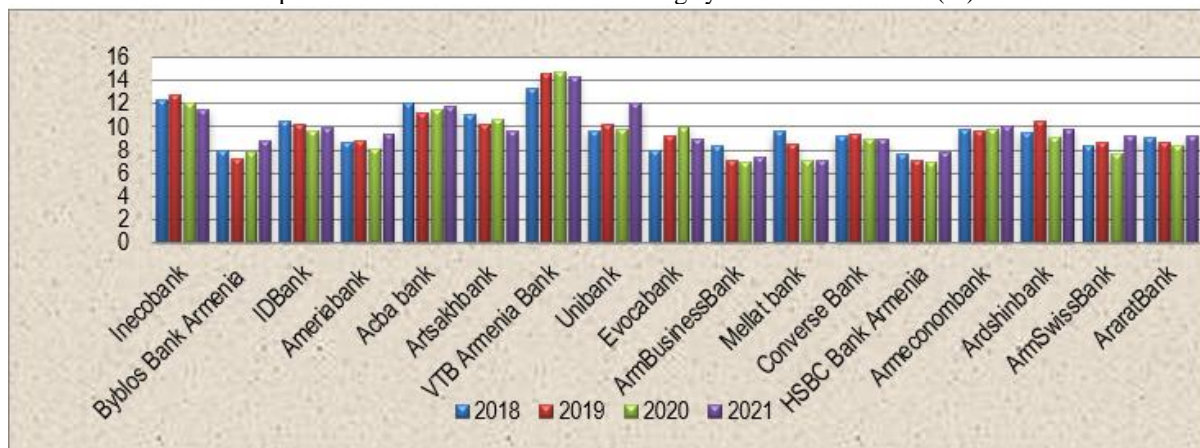
Sourse: Prepared by the author (2022).

In 2021 the largest share of the average annual return on profitable assets was allocated to VTB Bank (Armenia) - 14.35%. The Bank has maintained this result for almost all the years under review.

The changes in political and economic environment and the development of the legal, tax and legislative systems in Armenia have continuing nature. The stability and development of the Armenian economy largely depends on these changes.

In March 2020 the World Health Organization has classified the coronavirus (COVID-19), which has exploded in China in December 2019, as pandemic. The coronavirus has already had a significant impact on the global economy and major financial markets. Continuous measures were introduced by the Government and the Central Bank of the Republic of Armenia to mitigate the impact of the coronavirus on the economy.

The situation in the Republic of Armenia has intensified as a result of the war unleashed by the Republic of Azerbaijan. Despite the ceasefire agreement, the consequences of the war on Armenia's economy, both in the short and long term, are still uncertain.

CONCLUSIONS

Banks are subject to the economic and financial markets of Armenia, which are characterized by some features characteristic of developing economies. The economic environment in Armenia is significantly influenced by the level of business activity in the Russian Federation and significant cash flows from Russia to Armenia. Consequently, the decrease in business activity, the instability of the stock market and other risks in the Russian

Federation may have a negative impact on the corporate and financial sectors of the Republic of Armenia.

- In 2020, three banks (Ardshinbank, Ameriabank and Armswissbank) registered almost 50% of the net profit of the Armenian banking system.

- ROE of banking sector is decreased during 2021 by 34.96% (from 6.75% to 9.11%). Despite that, in the same period all Armenian banks have positive ROE for 2021.

- ROA of banking sector is decreased during 2021 by 35.16% (from 0.91 % to 1.23%). Despite that, in the same period all Armenian banks have positive ROA for 2021.

- Net Interest Margin (NIM) of banking sector is decreased during 2021 by 29.32% (from 4.98% to 3.52%).

- Erosion of banks' NIMs is also a current trend in banking sectors of advanced economies.

- NIM varies among banks depending on their business models and their total asset structure.

- Overall, in 2020 the lending activity decreased in the financial market as banks are reassessing the business models of their borrowers, as well as their ability to withstand in the future, taking into account the increased exchange rates and the reduction of business activity.

RECOMMENDATIONS

Based on the results of the research of the profitability indicators of the RA banking system and the conclusions drawn, several ways of increasing the profitability of banks are proposed:

- Approval of merger-acquisition transactions between banks. Properly designed merger-acquisition deals can significantly increase banks' profitability mainly due to synergy effects as well as significant savings of non-interest expenses.

- All processes should be reviewed at least once a year, as well as focus on the most profitable sectors and leave the unprofitable segments based on analyses of various banking products. It is also necessary to introduce various new banking products increasing commission income.

- Electronic coordination of processes can significantly increase the efficiency of operations, as innovative technologies also help to improve the quality of service for bank customers.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

17

- Handling business processes with clients, which aims to improve the bank's efficiency ratio by reducing the unit cost-to-value ratio of each activity or transaction – such as the cost of opening an account, creating a loan document package, or handling a specific type of transaction. Important trends include greater reliance on electronic documents, automated routing and processing, and process automation driven by machine learning models.

- To introduce "responsible lending" concept, ensuring Banks only offer borrowers a loan if it suits to borrowers' needs and circumstances. Deployment of mentioned concept will lead to decreased risks of default.

So, in 2022, it is expected, that Banks' performance will still remain under pressure, due to COVID-19 pandemic and political instability in Armenia.

REFERENCES

Alharthi, M. (2016). Determinants of profitability in banking: an international comparative study of islamic, conventional and socially responsible banks. Corporate Ownership & Control. Volume 13. Issue 4. Continued-4, 633-634. https://doi.org/10.22495/cocv13i4c4p12

Annual financial statements published by Armenian banks, 2018-2021.

Armeconombank, (2021). Ratings and awards.

Banerjee, R., Majumdar, S., Albastaki, M. (2022). Ideal self-congruence: Neobanking by traditional banks and the impact on market share -A case of UAE banks. International Journal of Professional Business Review. Vol. 7, no. 4. https://doi.org/10.26668/businessreview/2022.v7i4.e779

Bayadyan, A.A. (2008). The system of profitability indicators of commercial banks and factor analysis. Educational-methodical instruction. Yerevan, 56-57.

Black Sea Trade & Development Bank. (2020). Annual report, 16.

Byblos Bank Armenia CJSC (2020). Statement of Financial Position.

Central Bank of the Republic of Armenia. (2020). Annual report.

Central Bank of the Republic of Armenia. (2021). Annual report.

Hallunovi, A., (2017). Determinants of profitability according to groups of banks in Albania. ILIRIA International Review, 7 (1), 36-45. https://doi.org/10.21113/iir.v7i1.280

Handito, P.D., Wiwiek, M.D., (2019). Earning per share (EPS), price book value (PBV), return on asset (ROA), return on equity (ROE), and index Harga Saham Gaburgan (IHSG) effect on stock return. South East Asia Journal of Contemporary Business, Economics and Law, Vol. 20, Issue 1 (DEC) ISSN 2289-1560, 20.

Karapetyan, N. (2017) Profitability and vulnerability of Armenian banks. ASUE ''Amberd" Research Center.

Knyazeva, E.G., Bakunova, T.V. (2019). Economic analysis organization's activity in the bank's credit risk management system. Teaching aid. Yekaterinburg, Ural University, 41, 45.

Medcraft, Greg. (2021). The COVID-19 crisis and banking system resilience Simulation of losses on non-performing loans and policy implications. Director, OECD Directorate for Financial and Enterprise Affairs., OECD, 18.

Mellat Bank (2020). Annual Audit Report, 8-9.

Rumels Management Solution (2019/2020). Profitability analysis of Armenian banking sector.

Shanmugam, R.M., and Chandran, M. (2022). A relationship between service quality and customer satisfaction in e-banking services- a study with reference to commercial banks in Chennai City. International Journal of Professional Business Review. Vol. 7, no. 3.https://doi.org/10.26668/businessreview/2022.v7i3.0490

Sylwester, K. (2021). The Impact of COVID-19 on Bank Equity and Performance: The Case of Central Eastern South European Countries. Sustainability. 13(19). https://doi.org/10.3390/su131911036

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-19 | e01746 | 2023.

19