ANALYSIS OF INCOMES, EXPENSES AND PROFITABILITY IN BANKS

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Abstract: *The paper is centered on presenting some aspects regarding incomes, expenses and results of commercial banks from Romanian banking system such as: income dynamics and structure, expenses dynamics and structure, a set of indicators which reflects the main banks performances. Discussion is focused on a comparative analysis between two commercial banks from Romanian banking system, taking into consideration date from a certain period of time. Profitability indicators are very usefully from banks management having an important informational value, the main discussion being focused on: return on assets, return on equity, net assets margin, rate of profit, equity multiplier, expenses to income ratio.*

KEY WORDS: *income; expenses; profitability; return on assets; return on equity.*

JEL CLASSIFICATION: *G21***,** *G29, M21*

1. INTRODUCTION

Now-a-days, the place and aims of banking system within national economy depends on the feature of the main intermediaries between borrowers and lenders in the relation savings – investments, which is very important in order to achieve economic growth. Commercial banks are a key component and support business environment development through services and products offered, being the main lender in modern economy.

The main goal of a commercial bank is profitability or profit maximization in order to minimize risk exposure. Profitability express banks position on banking system highlighting banks management quality (Bătrâncea, 2010).

Banks financial performance is revealed through income statement where there are the incomes and expenses and also are explained the results. One of the statements of a complete set of banks financial statement is the statement of comprehensive income for the period, which is presented: one statement (single

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statement approach - a statement of comprehensive income), or two statements (a separate income statement and a statement beginning with profit or loss and presenting components of other comprehensive income) (KPMG – Illustrative Financial Statement: Banks).

Total income comprises: operating incomes (from ordinary, current activities of the bank excluding the influence of extraordinary factors) and extraordinary incomes (from activities and transaction that are unusual, infrequent).

Total incomes comprises: net interest income; net fee and commission income; net trading income and other revenues. Net interest income is the difference between interest income and interest expenses. Net fee and commission income is the difference between fee and commission income and fee and commission expenses. Total expenses comprises mainly: staff expenses, net impairment loss on financial assets, depreciation and amortization expenses and other operating expenses.

2. THE ANALYSIS OF INCOME AND EXPENSES

Dynamics analysis (horizontal analysis) of the incomes, expenses and results from profit and loss account is based on indexes which are expressed as percentage changes from the value of the same position of a base period considered equal to 100% or sequentially from the previous period. Structural analysis (vertical analysis) is based on weights, every income or expense being expressed through a percentage value from total income or total expenses. These types of analysis allow establishing the sources of the results, the quality of the performances and all the changes in income and expenses structure.

In table 1 is presented a comparative dynamics analysis of the main incomes, expenses and results of bank A and bank B from Romanian banking system based on income statements of those banks. (Data from financial statements of bank A and bank B are presented in appendix 1 and appendix 2).

Table 1. Evolution of incomes and expenses

	Indicator	Bank A		Bank B	
		2009	2010	2009	2010
1.	Total incomes	858.396	733.726	1.365.545	1.546.636
2.	The total incomes index	100%	85,47%	100%	113,26%
3.	Net interest income	683.658	579.711	754.329	996.297
4.	The net interest income index	100%	84,79%	100%	132,07%
5.	Net fee and commission income	95.473	92.410	370.805	382.666
6.	The net fee and commission index	100%	96,79%	100%	103,19%
7.	Total expenses	702.428	696.586	1.207.782	1.388.121
8.	The total expenses index	100%	99,16%	100%	114,93%
9.	Profit before tax	155.968	37.140	157.763	158.515
10.	The profit before tax index	100%	23,81%	100%	104,76
11.	Net profit	134.668	28.992	136.715	133.984
12.	The net profit index	100%	21,52%	100%	98,00%

Source: own calculations

Based on these data (table 1) we can analyze the evolution of the banks incomes, expenses and profit, comparing the data for the two periods taken into account (years 2009 and year 2010). It is observed different evolutions of incomes, expenses and results in case of those banks. In case of bank A (majority Greek shareholders) it is seen a decreasing trend of the main elements (incomes decreased with 14,53%, expenses decreased only with 0,84%, affecting profit – the net profit decreased with 78,48%). In case of bank B (majority Romanian shareholders) it is observed an increasing trend of income (with 13,26%), expenses (with 14,93%), and net profit decreased only with 2%.

Also, in order to analyze the structure of the elements of a bank profit and loss account there are few incomes structure ratios that we will consider in the following comparative analysis between two banks:

$$Net\ Interest\ Income\ to\ Total\ Income\,(\%) = \frac{Interest\ Income - Interest\ Expenses}{Total\ Income} \times 100 \quad (1)$$

$$Net\ Fee\ and\ Commission\ Income\ to\ Total\ Income\,(\%) = \frac{Net\ Fee\ and\ Commission\ Income}{Total\ Income} \times 100$$

$$Dividend\ Income\ to\ Total\ Income\,(\%) = \frac{Dividend\ Income}{Total\ Income} \times 100 \quad (3)$$

$$Net\ Trading\ Income\ to\ Total\ Income\,(\%) = \frac{Net\ Trading\ Income}{Total\ Income} \times 100 \quad (4)$$

$$Other\ Operating\ \mathrm{Re}venues\ to\ Total\ Income\,(\%) = \frac{Other\ Operating\ \mathrm{Re}venues}{Total\ Income} \times 100 \quad (5)$$

$$Interest\ Income\ to\ Total\ Assets\,(\%) = \frac{Interest\ Income}{Total\ Assets} \times 100 \quad (6)$$

$$Fee\ and\ Commission\ Income\ to\ Total\ Assets\,(\%) = \frac{Fee\ and\ Commission\ Income}{Total\ Assets} \times 100 \quad (7)$$

$$Staff\ Expenses\ to\ Total\ Expenses\,(\%) = \frac{Staff\ Expenses}{Total\ Expenses} \times 100 \quad (8)$$

$$Net\ \mathrm{Im}pairment\ loss\ on\ financial\ assets\ ratio\,(\%) = \frac{Net\ impairment\ loss\ on\ financial\ assets}{Total\ Expenses} \times 100$$

$$Other\ Operating\ Expenses\ to\ Total\ Expenses\,(\%) = \frac{Other\ Operating\ Expenses}{Total\ Expenses} \times 100 \quad (10)$$

$$Coverage\ of\ Staff\ Expenses\,(\%) = \frac{Fee\ and\ Commission\ Income}{Staff\ Expenses} \times 100 \quad (11)$$

$$Fee\ and\ Commission\ Expenses\ to\ Total\ \ Assets\,(\%) = \frac{Fee\ and\ Commission\ Expenses}{Total\ \ Assets} \times 100 \quad (12)$$

Table 2. Incomes and expenses structure ratios

	Indicator	Bank A		Bank B	
		2009	2010	2009	2010
1.	Net interest income to Total income (%)	79,64	79,00	55,29	64,41
2.	Net fee and commission income to Total income (%)	11,12	12,59	27,75	24,74
3.	Net trading income to Total income (%)	8,12	7,24	10,48	7,70
4.	Other operating revenues to Total income (%)	1,12	1,17	6,48	3,15
5.	Interest income to total assets (%)	5,70	6,37	10,75	8,71
6.	Fee and commission income to total assets (%)	0,50	0,61	2,12	1,97
7.	Staff Expenses to Total Expenses (%)	21,82	21,78	28,90	26,90
8.	Net impairment loss on financial assets ratio (%)	46,94	45,83	40,63	46,60
9.	Other operating expenses to Total Expenses (%)	27,62	28,60	24,83	22,10
10.	Coverage of staff expenses	68,78	67,88	119,5	115,0
11.	Fee and commission expenses to total assets (%)	0,05	0,06	0,24	0,21

Source: own calculations

The data from table 2 shows the structure of banks incomes and expenses and it is observed that the larger part of the bank's incomes from regular operation is found in the net interest incomes and net fee and commission incomes. In fact, total incomes of both two banks comprise operating incomes and are not affected by activities and transaction that are unusual, extraordinary.

The larger part of bank's expenses is found in net impairment loss on financial assets (level ratio is between 40,6% and 47,0% from total expenses for both banks in the analyzed period). Coverage of staff expenses illustrates the efficiency of the employee working time as a result of their activity, and is observed a better value of the ratio in case of bank A (67% - 68%), instead in the case of bank B staff expenses are not covered by fee and commission incomes (registered value is between 115% - 119,5%), and also the weight of staff expenses ratio is higher (27%-29%) than in case of bank A (21%-22%).

In the total expenses also an important weight is observed on other operating expenses, between 27% - 28% in case of bank A and lower in case of bank B (24,8% in 2009 and 22,10% in 2010).

3. PROFITABILITY ANALYSIS

Profit is the reason for the continued existence of every commercial organization. The rate of profitability and volume of profits are considered as indicators of efficiency in the deployment of resources of banks. Profitability, also, indicates earning capacity of the banks. It highlights the managerial competency of the banks. Profitability is the most important and reliable indicator as it gives a broad indication of the ability of a bank to raise its income level. (Dasgupta, 2001)

Profitability indicators are also used in order to determine the global risk position of a commercial bank (Drigă, 2009). Profitability analysis in banks is based on a set of ratios: return on assets, return on equity, net assets margin, rate of profit, expenses to income ratio, equity multiplier. Profitability allow to a bank to increase capital, in order to support the growth of assets, to absorb loan losses and also to provide a return to investors.

Return on Assets (ROA) is a ratio between net profit and total assets. In American literature the ratio is known as Return on Total Assets or Return on Investment (Halpern, 1998) and measures the profitability of the invested capital in bank or the efficiency of the assets management.

$$\text{ROA} = \frac{\textit{Net profit}}{\textit{Total Assets}} \times 100 \qquad (13)$$

ROA indicates how much net income is generated per monetary unit of assets. The higher is ratio, the more profitable is the bank. In case of a decreasing trend of the ratio we can say that the bank have some difficulties in obtaining incomes, and an increasing trend signify good results, but in conditions of excessive risk assumed by the bank.

Return on Equity (ROE) is a ratio between net profit and total equity measuring the profitability of the shareholders investments. This ratio depends on profit margin, financial leverage and speed assets (Bătrâncea, 2010).

$$\text{ROE} = \frac{\textit{Net profit}}{\textit{Total Equity}} \times 100 \qquad (14)$$

Net Assets Margin in banking is a percentage of net interest income and total assets. Net interest income is calculated by subtracting interest expense from interest income.

$$\text{AM} = \frac{\textit{Net Interest Income}}{\textit{Total Assets}} \times 100 \qquad (15)$$

Rate of profit is a ratio between profit before tax and total incomes.

$$\text{R}_{\text{Pr}} = \frac{\text{Pr}\,\textit{ofit before tax}}{\textit{Total Income}} \times 100 \qquad (16)$$

Expenses to Income Ratio measures the income generated per monetary unit cost. That is how expensive it is for the bank to produce a unit of output. The lower the E/I ratio is, the better the performance of the bank (Kumbirai & Webb, 2010).

$$E/I = \frac{Total\ Expenses}{Total\ Incomes} \times 100 \qquad (17)$$

Equity Multiplier is a ratio between total assets and equity revealing the degree of banks business development starting from a certain amount of equity, and how additional resources use generate an increase in return on equity.

$$EM = \frac{Total\ Assets}{Equity} \times 100 \qquad (18)$$

Based on data from Appendix 1 and Appendix 2 we will calculate the profitability indicators for two banks in the period 2009-2010.

Table 3. Profitability indicators

	Indicator	Bank A		Bank B	
		2009	**2010**	**2009**	**2010**
1.	Return on Assets (ROA) (%)	0,62	0,17	0,69	0.61
2.	ROA index	100%	27,45%	100%	88,40%
3.	*ROA – banking system (%)*	*0,25 – in 2009*		*- 0,16 – in 2010*	
4.	Return on Equity (ROE) (%)	8,70	1,83	7,43	6,41
5.	ROE index	100%	21,03%	100%	86,27%
6.	*ROE – banking system (%)*	*2,89– in 2009*		*-1,73– in 2010*	
7.	Net Assets Margin (%)	3,18	3,43	3,85	4,58
8.	Net Assets Margin index	100%	107,8%	100%	118,9%
9.	Rate of profit (%)	18,16	5,06	11,55	10,25
10.	Rate of profit index	100	27,86%	100	88,74%
11.	Total Expenses to Incomes Ratio (%)	81,83	94,93	88,44	89,75
12.	Total Expenses to Incomes Ratio index	100	116%	100	101,5%
13.	Equity Multiplier (%)	1387,22	1068,88	1067,06	1039,74
14.	Equity Multiplier index	100%	77,05%	100%	97,43%

Source: own calculations

The value of the main profitability indicators in case of both banks shows a better situation in comparison with the average values from Romanian banking system with a plus in case of the bank B, if we consider the ROA and ROE. Return on assets is the best measure of bank efficiency. ROA value is usually between 0,5% to 1,6%, and in case of bank A the trend reveal that are problems with incomes. But the rate of profit decreased for both institutions, substantially in case of bank A, and also if we take in discussion the expense to income ratio we observes that is much expensive for banks to produce a unit of income, with a worst scenario for bank A.

4. CONCLUSIONS

To evaluate the quality of banking activity and their performances is particularly important to measure results, and their evolution depends on evolution of the incomes and expenses. The analysis of bank's performance is useful to shareholders, creditors, customers, but also administrators, managers and employees of the bank.

In the paper we presented a comparative analysis of incomes, expenses and profitability for two banks taking into account two periods (year 2009 and year 2010). The study shows different trends of the analyzed elements from income statement with a better situation for bank B having a majority Romanian shareholders comparative with bank A having a majority Greek shareholders affected by Greek crisis and vulnerability, influencing customers confidence. There were fears that Greek banks present in our country will not be able to finance their subsidiaries, and these are seen in evolution of their activity.

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Appendix 1. Elements from Financial Statement of the bank A

Thousand lei

		Year	
		2009	**2010**
Income statement			
I.	*Total incomes*	858.396	733.726
1.	Interest income	1.224.651	1.074.341
2.	Interest expenses	(540.993)	(494.630)
3.	*Net interest income (1-2)*	683.658	579.711
4.	Fee and commission income	105.426	103.008
5.	Fee and commission expenses	(9.953)	(10.598)
6.	*Net fee and commission income (4-5)*	95.473	92.410

7.	Net trading income	69.723	53.159
8.	Other operating revenues	4.957	3.292
II.	*Total expenses*	702.428	696.586
1.	Net impairment loss on financial assets	329.750	319.248
2.	Staff expenses	153.279	151.752
3.	Depreciation and amortization expenses	25.342	26.426
4.	Other operating expenses	194.057	199.160
III.	*Profit before tax*	155.968	37.140
-	Income tax expense	21.300	8.148
IV.	*Net profit*	134.668	28.992
Elements from Balance Sheet			
1.	Total Assets	21.462.788	16.858.163
2.	Total Liabilities	19.915.617	15.280.955
3.	Equity	1.547.171	1.577.168
4.	Total liabilities and equity	21.462.788	16.858.163

Source: Financial statement of the bank A at the ended of years 2009 and 2010

Appendix 2. Elements from Financial Statement of the bank B

Thousand lei

		Year	
		2009	**2010**
Income statement			
I.	*Total incomes*	1.365.545	1.546.636
1.	Interest income	2.109.440	1.894.260
2.	Interest expenses	(1.355.111)	(897.973)
3.	*Net interest income (1-2)*	754.329	996.297
4.	Fee and commission income	417.098	429.401
5.	Fee and commission expenses	(46.293)	(46.735)
6.	*Net fee and commission income (4-5)*	370.805	382.666
7.	Net trading income	143.201	118.968
8.	Other operating revenues	48.316	43.963
II.	*Total expenses*	1.207.782	1.388.121
1.	Net impairment loss on financial assets	490.784	646.945
2.	Staff expenses	348.999	373.371
3.	Depreciation and amortization expenses	68.042	60.897
4.	Other operating expenses	299.957	306.888
III.	*Profit before tax*	157.763	158.515
-	Income tax expense	21.048	24.531
IV.	*Net profit*	136.715	133.984
Elements from Balance Sheet			
1.	Total Assets	19.613.030	21.730.252
2.	Total Liabilities	17.774.996	19.640.288
3.	Equity	1.838.034	2.089.964
4.	Total liabilities and equity	19.613.030	21.730.252

Source: Financial statement of the bank B at the ended of years 2009 and 2010