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### СОВЕРШЕНСТВОВАНИЕ СОЦИАЛЬНОЙ СИТУАЦИИ МОЛОДЕЖИ В ЕВРОПЕЙСКОМ СОЮЗЕ

*Социальная политика Европейского Союза последних лет направлена на улучшение социальных условий молодежи в Европе. Целью данного исследования является сравнительный анализ характеристик молодежи и их социальных условий в странах ЕС-27 в течение 2006–2016 гг. с использованием следующих показателей, связанных с молодежью: образование и обучение молодежи, уровень занятости и безработицы, здоровья, социальная интеграция, культура и творчество, участие молодежи в цифровом мире. Также рассматривается влияние и эффективность социальной политики ЕС в современных экономических условиях в вопросах улучшения социальных условий молодежи. С этой целью были использованы показатели занятости и социальных условий, а также показатели стратегии "Европа 2020".*

*Анализ показывает, что со временем меняются стремления и потребности молодежи вместе с их социальными условиями. В ЕС очевиден прогресс в совершенствовании социальной политики, адресованной молодым людям, однако между странами-членами все еще заметны различия, и поэтому нужны новые необходимые инновационные подходы для реагирования на потребности молодежи в условиях быстро изменяющегося экономического и политического контекста в Европе.*

*Ключевые слова: молодежь, социальная политика, социальные условия, ЕС-27.*

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### COMPARATIVE ANALYSIS OF BANKING PERFORMANCE OF COMERCIAL BANKS GROUPS. CASE STUDY: TURKEY VS. ROMANIA

*The purpose of this article is to present a comparative analysis of performance between two commercial bank groups from Turkey and Romania. In conducting the study we have considered evaluating financial performance achieved by a group of commercial banks in Turkey and Romania in relation to the Eurozone during 1999–2016 and examine the level of liquidity of assets acquired during these 18 years of activity of these two banking groups, in comparison with the Eurozone. In this analysis there were tested three hypotheses based on the performance indicators used by the two banking trade groups and the indicators used in the specialty literature. Results and interpretations from this study/ testing were presented and interpreted, in the case of these two banking trade groups. The article ends with the authors' conclusions related to comparative analysis of bank performance between the two commercial bank groups in Turkey and Romania.*

**Keywords.** Commercial banks, banking performance, Turkey, Romania, Eurozone, ANOVA

**Introduction.** Recent developments in the euro area banks, which have played an important role in the allocation and global liquidity intermediation, are closely monitored by the international financial markets. The most important concern for Eurozone banks is the low rates of return and this problem, if it persists, has the potential to adversely affect their ability of intermediation. The competition that comes from the state banks and the very slow pace of involvement of the Banking Regulation and Supervision Agencies suffocate the performance of private banks and increase the likelihood of a banking crisis. So far, the banking sector sustained the prosperity of the countries that find themselves in growth and development, but increasing the role of state banks, weakens the private banks and therefore prevented private consumption. The main objectives of the study were: (a) Evaluation of financial performance achieved by groups of commercial banks in Turkey and Romania in relation to the Eurozone during the period 1999–2016; (b) Examination of the liquidity level of assets acquired during the 18 years of activity of the two banking groups compared with the Eurozone; (c) The existence of significant differences in profitability between the two groups of commercial banks (Turkey vs. Romania). In this study they were tested three hypotheses:  $H_{01}$ : There is no significant difference between the two banking groups ROA;  $H_{02}$ : There is no significant difference between the two banking groups ROE;  $H_{03}$ : There is no significant difference between the two banking groups NIM.

**Literature review.** Evaluating the financial performance of banks in European countries was carried out in the detailed research done by many specialists from Greece [19, 18, 2, 27], Czech Republic [15], Switzerland [10], Germany [12], Romania [22, 4], Great Britain [11]. Analyzing the main performance indicators of the first Romanian banks we found that in 2003–2007, the Romanian banking system registered a level of ROE slightly above the average of European Union countries, lower than the one in the former communist countries, but above countries that have a developed banking system. Also we have observed a downward trend in this indicator due to increased competition in the banking system and reduce inflation, which led to lower interest rates and thus revenue banks. Although there has been a significant drop in 2003–2007, the rate of return on assets of the Romanian banking system remains much higher than the average banking systems in the European Union, almost equal to the level recorded in other former communist countries [3].

In Asian countries, assessing financial performance of banks was carried out by specialists such as the ones above mentioned, from Turkey [1], and from Pakistan [17], Malaysia [25, 23]. With the help of financial ratios, the relative performance of Islamic banks varies being influenced by the conventional financial indicators measured. Some specialists have found that, on average, six Islamic banks in Bahrain are as good as 15 homologous conventional parts in terms of liquidity and profitability, and even present a performance of lending better, using the financial indicators after the war Gulf 1991–2001 [26]. Moreover, Islamic banks found them-

selves less exposed to liquidity risk due to high liquidity and the limitation of investment opportunities, with short-term loans and investments, and a more conservative attitude towards lending. Other specialists have found that a pioneer Islamic bank which used financial indicators had greater liquidity and was less exposed to risk than 8 other conventional banks during 1984–1997 [24]. This was due to high intake of equity and assets and investments in government securities, but found no significant difference in managerial performance measured by ROA and ROE. Profitability performance of Islamic bank in Malaysia was found to be significantly lower than that of conventional banks because of reduced opportunities laid in stocks and securities due to religious constraints. The same conclusions reached and other specialists who have conducted comparative studies on 12 Islamic private banks in different countries with conventional banks and showed that Islamic banks have a growth rate relatively high in terms of equity, deposits, investments and total assets, having a better organization of resources and higher profitability in terms of return on investment (ROE) [16]. Changes in the macroeconomic and regulatory environment, in the competitive landscape and in the customer dynamics creates the need for transformation, evolving and reshaping the banking sectors generally in Turkey and also in Romania, in particular.

Financial intermediation has continued to decline in the first 6 months of 2016, Romania still having one of the lowest values at the EU. Dynamic financial system was relatively stable, given that the most notable advances were given to private sector pension funds, insurance and non-banking financial institutions. The main trends identified in the previous Report on the Romanian banking sector remained the same as in the first 9 months of 2016. Liquidity remained adequate, aspect pointed out by the relevant indicators for characterizing this phenomenon and also on the results of stress testing. Banks have significant resources to finance both the economy and to counter nega-

tive liquidity shocks. The continued consolidation of the banking market through new bank acquisitions, the completion of the mergers being still ongoing. Currently, in Romania there are 37 credit institutions, of which 8 are subsidiaries of foreign banks [8]. Compared with the Romanian banking system in 2016, Turkish banks had to meet capital supplement reserves under Basel III to meet: (a) higher minimum capital requirements; (b) high risk weights; (c) continued depreciation will erode the capital adequacy ratios. In February 2016, the Agency for Banking Regulation and Supervision of Turkey (BRSA) has issued 16 regulations (some new, some have been changed) to make the regulatory framework more in line with the standards of Basel III (these changes apply to internal systems banks, the capital adequacy ratios, liquidity coverage ratio, equity and all disclosures relating to techniques for reducing credit risk and risk management).

**Methodology of research.** Through this study we tried to make a comparative analysis of financial performance and liquidity of assets acquired by commercial banks groups in Turkey and Romania in relation to the Eurozone during the period 1999–2016. The study was based on a quantitative research in which they resorted to simple random sampling method based on random number tables. The list included all community banks in Turkey and respectively, Romania, which conducted financial and banking activities during 1999–2016. Respecting the steps and the general rules regarding the selection process, resulted in a sample of 20 banking organizations. Ensuring the incidentally natural character of the transaction, there have been extracted 10 numbers from the list of banks in Turkey and 10 other numbers from the banking organizations in Romania, building the two banking groups for the study (see Table 1).

Secondary data and information (ROA, ROE and NIM) needed for the quantitative study was taken from the banks' financial reports selected and prepared for their analysis.

**Table 1. The list of commercial banks in Turkey and Romania**

Randomly selected commercial banks		
	Turkey	Romania
1	Halk Bank	Carpatica Commercial Bank
2	Takasbank	Pyraeus Bank S.A.
3	Emlak Bank	Romanian Commercial Bank
4	Akbank	BRD – Groupe Societe Generale
5	Koçbank	Transilvania Bank
6	Disbank	Raiffeisen Bank
7	Turkish Bank	UniCredit Bank
8	Citibank Turkey	Alpha Bank
9	Egebank	Bancpost Bank
10	Yapi Kredi Babkasi	Garanti Bank

Source: www.tcmb.gov.tr and www.bnr.ro

Measurement, description and disclosure of bank performance level obtained by the two banking groups in the Eurozone compared to the period 1999–2016, was carried out based on two methods: a descriptive analysis of the research variables and analysis of the variance (ANOVA).

In order to highlight the differences between environments and characterization indicators ROA, ROE and NIM recorded in the two countries during the period 1999–2016, we opted to use variance analysis, examining the cause-effect links between the research variables. Based on data in the tables ANOVA, statistical significance was tested on the influence of the independent variable "home country of the banking groups" on the dependent variable "Media ROA, ROE and NIM" recorded in the period 1999–2016. Testing the hypothesis using ANOVA test reveals whether

there are significant differences between the average ROA, ROE and NIM obtained by the two banking groups in Turkey and Romania.

In the studied population, testing the significance as defined above was performed using the Fisher test type, which is based on the following assumptions:

$$\begin{aligned}
 H_0 : \bar{\lambda}_1 &= \bar{\lambda}_2 \\
 H_1 : \bar{\lambda}_1 &\neq \bar{\lambda}_2
 \end{aligned}
 \tag{1}$$

where  $\bar{\lambda}_1$  is the means on (ROA, ROE and NIM) Turkish banks group,  $\bar{\lambda}_2$  is the means on (ROA, ROE and NIM) Romanian banks group.

To test the hypothesis calculate the size of  $F_{calc}$ . Using the formulas from the Table of ANOVA variance analysis, the calculated values are compared with the critical ones from the Fisher law of distribution table and are selected according to the level of significance set and to the two degrees of freedom –  $F_{\alpha; df_1; df_2}$  as follows:

$df_1 = c - 1$ , the degrees of freedom in the numerator,  
 $df_2 = n - c$ , the degrees of freedom in the denominator.

The rule of decision can be taken in two ways:

By comparing the value  $F_{calc}$  with the critical value  $F_{\alpha; df_1; df_2}$

- If  $F_{calc} \leq F_{\alpha; df_1; df_2}$ , a null hypothesis is accepted –  $H_0$ ,
- If  $F_{calc} > F_{\alpha; df_1; df_2}$ , an alternative hypothesis is accepted –  $H_1$ .

By comparing the minimum level of significance  $P_{value}$  with the value  $\alpha = 0.05$

- If  $P_{value} \geq \alpha$ , a null hypothesis is accepted –  $H_0$ ,
- If  $P_{value} < \alpha$ , an alternative hypothesis is accepted –  $H_1$ .

The originality of this study lies in the fact that so far in Romania there wasn't any compared analysis conducted between the examining of the indicators of bank performance (ROA, ROE and NIM) over a period of time and research of the dependence relations of the three variables linked to the provenance site of the banking groups using ANOVA test.

Theoretical aspects regarding the indicators used in this quantitative study are presented in Table 2.

**Table 2. The list of indicators for financial performance and for the banking liquidity of assets**

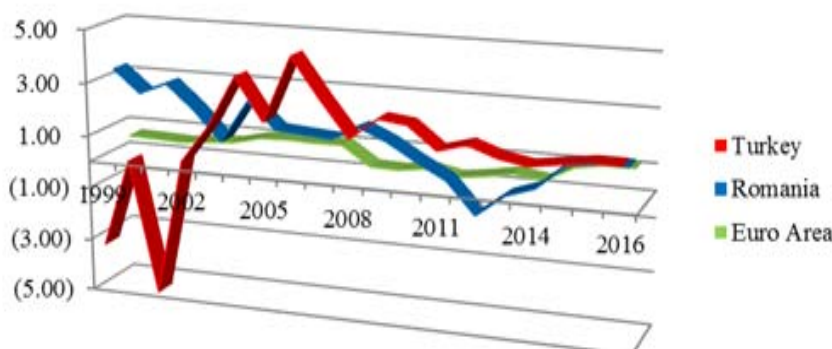
1 Profitability Performance	
– Return on Assets (ROA)	The indicator reflects the net income of the 10 commercial banks in Turkey and Romania, relative to the average annual total assets recorded in each country.
– Return on Equity (ROE)	The indicator highlights levels of net revenue from banking groups in Turkey and Romania at an average of capitals annual used [fred.stlouisfed.org].
– Net Interest Margin (NIM)	The indicator displays the amount of net interest income from bank accounts as part of the total return obtained by the two banking groups or from the average interest-bearing assets [fred.stlouisfed.org]
2. Liquidity assets	
– Liquid Assets to Deposits and Short Term Funding for Romania	The indicator is obtained by dividing the value of liquid assets (easily converted into cash) in the amount of short-term funding and total deposits. In the category of liquid assets there were included: cash, amounts due to other banks, income from traded securities at fair value, loans and advances to other institutions, eligible collateral (such as cash in deposits, debt securities issued by banks, equity or convertible bonds), repo and reverse repo operations. In the bank deposits category, were included all customer deposits, ie amounts of current accounts, savings and loan term. In the group of short-term financed money market instruments, were included: certificates of deposit, treasury bills, bonds and other deposits) [www.fred.stlouisfed.org].

Source: Authors contribution.

Studies regarding the evaluation of financial performance in the various sectors of banking groups of different countries were made by many specialists as: [20, 21, 9, 13, 7, 14, 5, 6].

**Results and discussions.** Measurement, description and disclosure of the financial performance and liquidity of assets made by banking groups in Turkey and Romania in relation to the Eurozone was performed through the indicators: Return on Assets (ROA), Return on Equity (ROE) Net Interest Margin (NIM) and Liquid Assets to Deposits and Short Term Funding (LA).

During 1999-2016, the annual average rate of return on assets (ROA), calculated as a ratio between net income and the average value of the total assets at the level of the group of Turkish banks, there was a recorded peak of 4.57% in 2006 and a minimum of -4.82 in 2001. The profitability of the Turkish banking sector, measured by ROA was positive even if there was a downward trend in 2007–2016. As can be seen in figure 1, since 2002 the medium of achieved ROA in the group of Turkish banks, were above the euro area average. In 2016, ROA was 1.65%, lower by 50.01% from the average ROA in 2007 and 61.77% higher than the average one in the Eurozone.



**Fig. 1. Return on Assets (ROA %) on banks in the period 1999–2016**

Source: <https://fred.stlouisfed.org/>

In Romania, the annual average ROA recorded a constant decline from 60.23% to 1.34% in 2016 in comparison with 3.37% in 1999. Compared with the annual average ROA recorded in the Eurozone, those in Romania were much higher, except in 2012 and 2013 when there were

negative values of -0.94% and -0.11% respectively. During 2003–2016, the average of ROA calculated for the group of banks in Turkey was on average 30-50% higher compared with those of the group of commercial banks in Romania.

Table 3. Descriptive statistics results on ROA% 1999-2016

	Turkey	Romania	Euro Area
Mean	1.33	1.38	0.54
Standard Error	0.52	0.26	0.07
Standard Deviation	2.22	1.10	0.31
Sample Variance	4.92	1.20	0.09
Kurtosis	3.29	0.01	(1.41)
Skewness	(1.63)	(0.20)	0.12
Range	9.39	4.31	0.94
Minimum	(4.82)	(0.94)	0.08
Maximum	4.57	3.37	1.02
Sum	23.94	24.89	9.77
Count	18	18	18

Source: Made by author.

The group of commercial banks in Turkey have achieved in the period under review an average ROA of 1.33% and a standard deviation of 0.52, while those in Romania have an average ROA of 1.38% and a higher standard deviation of 0.26. The highest annual average ROA in 2006 are recorded in Turkey (4.57%), in 1999 in Romania (3.37%) and in 2016 in the Eurozone (1.02%). The amplitude obtained by the group of banks in Romania (4.31) is half of the one obtained by the banks in Turkey (9.39), calculated as the difference between the maximum and minimum of the average ROA. Asymmetry index (Skewness) calculated for the group of banks in Turkey has negative value (-1.63), indicating an asymmetry to the left that departs significantly from the normal distribution form. The group of banks in Romania has an asymmetry index of 0.22 indicating a slight negative asymmetry to the left. In

the Eurozone there is a positively skewed to the right, due to positive Skewness index of 0.12. Boltzmann indicators (Kurtosis) for the group of banks in Turkey and Romania have positive values of 3.29 and 0.01 respectively showing a leptokurtic distribution, while Eurozone indicator has a value of -1.41, indicating platykurtic distribution.

In the period 2006-2016, annual average ROE of the Group banks in Turkey have fluctuated, decreasing gradually from 28.43% in 2006 to 1.38% in 2013, but subsequently increased to 13.79% in 2016. Despite the global crisis and the economic crisis in the Eurozone, banks in Turkey have maintained high levels of profitability. At the end of 2016, the group of banks in Romania recorded an average annual ROE of 12.06%, with 56.25% lower than that obtained in 2008 and 12.06% higher than the average ROE in 2011.

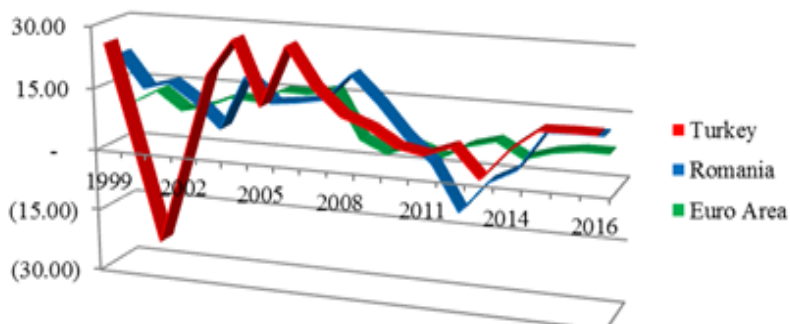


Fig. 2. Return on Equity (ROE %) on banks in the period 1999–2016

Source: <https://fred.stlouisfed.org/>

In the same period, annual average ROE achieved in the Eurozone fluctuated between 1.81% minimum and a maximum of 15.92%, ROE being rarely higher than the annual average of Turkey (1.38% in 2013) and of Romania (between -8.55% and 2.42% 2012–2014).

Overall, return on assets of the Turkish banking sector, as measured by annual averages, ROE was higher than that

of the commercial banks in Romania or in the major financial centers in Eastern Europe and the Eurozone. With a standard deviation of 11.94 the bank group in Turkey had a double ROE risk than that of the commercial banks in Romania (St. Dev. – 8.07) and a triple one than the risk in the Eurozone banks whose standard deviation were of only 4.49.

Table 4. Descriptive statistics results on ROE% 1999–2016

	Turkey	Romania	Euro Area
Mean	11.13	10.89	8.30
Standard Error	2.81	1.90	1.06
Median	11.99	12.66	7.59
Standard Deviation	11.94	8.07	4.49
Sample Variance	142.54	65.11	20.19
Kurtosis	2.05	0.56	(1.17)
Skewness	(0.83)	(0.86)	0.25
Range	50.18	30.97	14.11
Minimum	(21.13)	(8.55)	1.81
Maximum	29.05	22.42	15.92
Sum	200.31	196.09	149.48
Count	18	18	18

Source: Made by author.

Banks in Turkey and Romania have Skewness negative indices of -0.83 and respectively, -0.86, developing a slight asymmetry to the left. Meanwhile, Eurozone bank group recorded an asymmetry index of 0.25, indicating a slightly positive asymmetry to the right of the ROE averages. Kurtosis negative indicator of -1.17 for the Eurozone, signals a platycurtik distribution, different than the normal one. Kurtosis indicators calculated for an annual average ROE for the banking groups in Turkey and Romania, have

obtained positive values of 2.05 and 0.56, drawing a leptocurtik distribution.

Banks in Turkey recorded a maximum amplitude of 50.18, calculated as the difference between a maximum ROA of 29.05% achieved in 2004 and a minimum ROA of -21.13% in 2001. With reference to the situation in Turkey, banks in Romania obtained amplitude of less than 1.62 times and the Eurozone by 3.56 times.

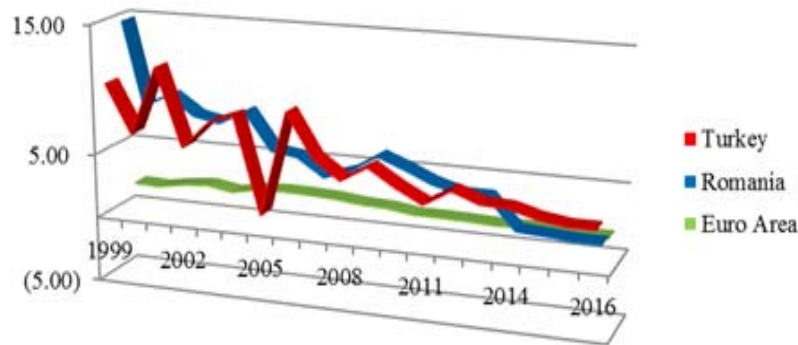


Fig. 3. Net Interest Margin (NIM %) on banks in the period 1999–2016

Source: <https://fred.stlouisfed.org/>

In the context of implementing the Basel II standard for credit risk assessment, the evaluation indicator of annual profitability assessed by the Net Interest Margin (NIM) in banks in Turkey, Romania and Eurozone has been positive during the period 1999–2016. Annual averages of NIM for the group of Turkish banks had a strongly fluctuating evolution, alternating between maximums of 12.11% in 2001 to minimums of 1.58% in 2005, above the average NIM in the Euro Area.

Although the profitability of Romanian banks, appreciated by NIM, continued to decrease from 6.32% in 2009 to 1.50% in 2016, it was still above the levels achieved by the commercial banks in Turkey and in the Eurozone. In Romania, the banks present a greater risk to NIM indicator, having a standard deviation of 3.61, superior to those of Turkey (2.83) and of the "Eurozone" (0.33).

Table 5. Descriptive statistics results on NIM% 1999–2016

	Turkey	Romania	Euro Area
Mean	6.09	6.11	1.73
Standard Error	0.67	0.85	0.08
Median	5.49	5.60	1.72
Standard Deviation	2.83	3.61	0.33
Sample Variance	8.01	13.03	0.11
Kurtosis	(0.25)	3.69	(1.44)
Skewness	0.64	1.45	0.18
Range	10.53	15.35	0.96
Minimum	1.58	1.50	1.28
Maximum	12.11	16.85	2.24
Sum	109.59	109.93	31.22
Count	18	18	18

Source: Made by author.

The survey showed that banks in Turkey and Euro area, achieved positive Skewness indices of 0.64 and of 0.18, developing a slightly positive asymmetry to the right. At the same time, commercial banks in Romania have achieved a Skewness index of 1.45, indicating a mismatch to the right that departs significantly from the normal distribution form. Kurtosis indicators for groups of banks in Turkey and in the Eurozone took negative values of -0.25 and respectively, 1.44, indicating a platycurtik distribution, much more different from a normal one. Banks in Romania have

achieved a Kurtosis index of 3.69, showing a strong leptocurtik distribution (curved vaulted more than normal).

Liquid Assets to Deposits and Short Term Funding (LA), registered by the banks in Turkey had an average of 24.62%/year, lower by 32.73%/year in comparison with the one in the Eurozone and most notably, the one from Romania- by 38.26%/year. In the period under review, the positive Skewness indices were 0.77 and respectively, 0.14, developing a slightly positive asymmetry to the right, similar to that of the Eurozone.

Table 5. Descriptive statistics results on LA% 1999–2016

	Turkey	Romania	Euro Area
Mean	24.62	38.26	32.73
Standard Error	3.16	5.01	0.83
Median	20.13	37.99	32.13
Standard Deviation	13.41	21.25	3.52
Sample Variance	179.76	451.39	12.40
Kurtosis	(1.05)	(1.69)	(0.38)
Skewness	0.77	0.14	0.37
Range	39.20	56.05	13.46
Minimum	10.13	12.75	26.71
Maximum	49.33	68.80	40.17
Sum	443.16	688.69	589.12
Count	18	18	18

Source: Made by author.

Kurtosis indicators of banking groups are negative: -1.05 -1.69 in Turkey and respectively, Romania, indicating a platycurtik distribution, different from the one in the Euro Area (see table 5). The analysis of annual averages of

distribution in the two countries and in the Euro Area was represented using the "box plot" chart type (see Figure 4).

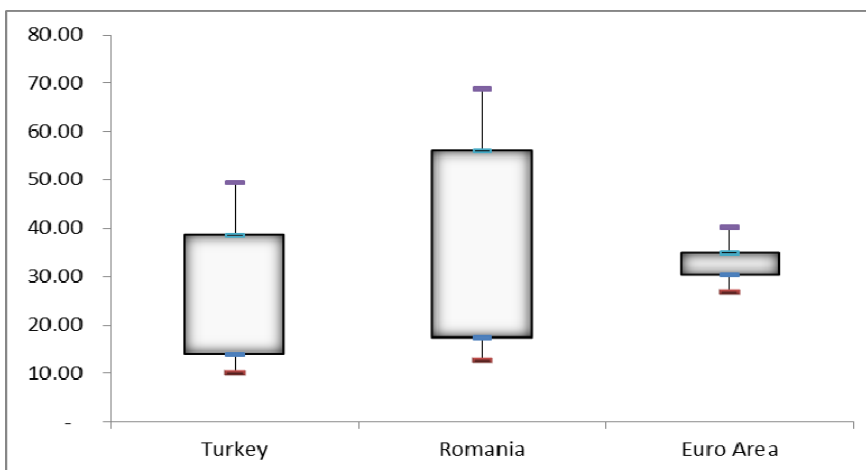


Fig. 4. Box plot – Liquid Assets to Deposits and Short Term Funding in the period 1999–2016

Source: Made by author.

According to the chart we can see that the on Romanian banking market, assets can be most easily converted into cash. At the opposite pole lies Eurozone, where assets become liquidities much harder. This is due to the accelerated growth of incomes from interest and due to the commissions granted to individual customers and organizations, the income from trading securities or the income from repurchase agreements (repo), in relation to the incomes from the placement of deposits, savings accounts or selling money market instruments.

**Results of statistic testing**

Testing the H0<sub>1</sub> Hypothesis: There is no significant difference of ROA between the two banking groups.

In the second part of the research we proceeded to test the significant differences on the level of profitability measured by ROA, ROE and NIM registered in the period of 1999–2016, by the groups of commercial banks in Turkey and Romania. Analysis of variance (ANOVA) for the dependent variables – ROA, ROE and NIM is presented in Tables 6, 7 and 8. If the dependent variable Return on Assets (ROA), size  $F_{calc}=0.008$  (Levene statistics) is less than the critical value  $F_{0.05;1;34} = 4.13$ , thus accepting the null hypothesis that averages of ROA achieved at the level of the two banking groups are not so different. Analyzing the level of minimum significance P-value (0.928) of Table 6, we can observe that it is higher than  $\alpha = 0.05$ , so the null hypothesis H<sub>0</sub>, is accepted.

Table 6. ANOVA-ROA

Source of variation	SS	df	MS	F	P-value	F crit
Between Groups	0.03	1	0.03	0.008	0.928	4.130
Within Groups	104.17	34	3.06			
Total	104.19	35				

Source: Made by author.

Testing the H0<sub>2</sub> Hypothesis: There is no significant difference of ROE between the two banking groups

In the case of the variable Return on Equity (ROE),  $F_{calc} = 0.005 < F_{0.05;1;34} = 4.13$  and  $P_{value} < \alpha = 0.05 = 0.94$ , so it supports the null hypothesis H<sub>0</sub>, therefore the independent

variable "country " doesn't have any significant influence on the dependent variable "ROE averages" obtained by the banking groups in Turkey and Romania for the period of 1999–2016.



Table 7. ANOVA-ROE

Source of variation	SS	df	MS	F	P-value	F crit
Between Groups	0.49	1	0.49	0.005	0.945	4.130
Within Groups	3,529.90	34	103.82			
Total	3,530.39	35				

Source: Made by author.

Testing the  $H_0$  Hypothesis: There is no significant difference of NIM between the two banking groups

Table 7 presents the analysis of the profitability variances measure as Net Interest Margin NIM.  $P$ -value = 0.986 being higher the level of minimum significance (0.05),

therefore the null hypothesis  $H_0$  is accepted, the hypothesis stating that there isn't a significant difference between the average NIM obtained by the banking groups in Turkey and Romania (see table 7).

Table 8. ANOVA-NIM

Source of variation	SS	df	MS	F	P-value	F crit
Between Groups	0.00	1	0.00	0.000	0.986	4.130
Within Groups	357.69	34	10.52			
Total	357.70	35				

Source: Made by author.

The same result was obtained with the Leneve test, a Fisher type of test, that allows the comparison of size  $F_{calc}$  (0.0003) with the critical value from the table of Fisher distribution law, chosen for a level of significance of  $\alpha = 0.05$  and  $df_1 = 1$ ,  $df_2 = 34$ , meaning  $F_{0.05;1;34}$  (4.13). Since  $F_{calc} = 0.0003 < F_{0.05;1;34} = 4.13$ , it means that the alternative hypothesis is rejected, and the null hypothesis is accepted (see table 8).

**Conclusions.** In this study we analyzed financial performance and liquidity of assets acquired by some of the commercial banks groups in Turkey and Romania in relation to the Eurozone during the period of 1999–2016.

The results of descriptive statistics show that the profitability of the Turkish banking sector has witnessed a downward trend in 2007–2016. This is the adverse effect of regulations on financial intermediation and regulatory constraints of capital, raising real barriers to Turkish commercial banks in issuing loans to all sectors of national economy. They have contributed to the decline in profitability: increase of interest expenses generated by higher financing costs, decrease in net interest income and gains arising from banking diminishing because of the increase of swap rates currency. Knowing a peak of 4.57% in 2006, the average Return on Assets (ROA) was gradually deteriorated, reaching in 2016 a level of 1.65%. Return on Equity (ROE) has fluctuated, the average decreasing from 28.43% in 2006 to 1.38% in 2013, but subsequently increased to 13.79% in 2016. In the past 18 years, the Net Interest Margin Indicator (NIM) conducted by the Turkish commercial banks had a historical minimum and maximum of 1.58% in 2005 and 12.11% in 2001. However, during 2015–2016, under the impact of macro-prudential measures that had as effect: increase in net interest income, a sharp decline in losses from securities transactions, derivatives and other foreign exchange transactions and increase in the volume of mortgage and consumer sales, there was a recovery in profitability. In this context, at the end of 2016, Turkish banks have been registering much more improved annual averages: 1.65% ROA, ROE of 13.79% and 3.20% NIM.

In Romania, the assessment of profitability indicators have been positive in the last 18 years, higher than in the Eurozone, except the years of 2012 and 2013. Return on equity (ROE) recorded a historic high of 22.42% in 1999 and two minimums of -8.55 % in 2012 and -1.01% in 2013. Meanwhile, the rate of return on assets (ROA) recorded a

peak of 3.37% in 1999 and a minimum of -0.94% in 2012. In the same period, Net Interest Margin indicator (NIM) has fared of peer to that achieved by Turkish banks. NIM maximum was recorded in 1999 (16.85%) and the minimum NIM of 1.50% was recorded in 2016.

Profitability and liquidity in the banking sector recovered significantly in the Romanian system, in recent years, with the introduction of quantitative liquidity requirements under Basel III package, amending the regulation of and supervision of commercial banks as the European Union requested and also once with the operationalization of macro-prudential policy strategy. Since 2015, profitability had positive rates, much higher than previous years, as follows: ROA was 1.34%, ROE of 11.80% and 1.66% NIM. In the period under review, the evaluation indicators of financial performance achieved by the groups of banks in Turkey and Romania were higher than the level recorded in the Eurozone. In general, the liquidity of assets is subject to peripheral debt resulting from operations (non-core Liabilities) on short-term and deposit rates. In Romania and Turkey, the Liquid Assets to Deposits and Short Term Funding (LA) exceeded legal limits by significant margins in the last two years. In these circumstances, the assets of the Romanian banking market remains the most easily converted into cash, compared with those in Turkey and the Eurozone. Banks prefer to convert excess liquidity through credit. Current monthly rates within legal limits drawn by banks increase lending capacity of the banks and the liquidity possibility to act in the opposite constitution deposits or significant increase in the amounts needed to finance short term. ANOVA test results indicate that there are no significant differences between the average ROA, ROE and NIM obtained by the two banking groups in Turkey and Romania.

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### ПОРІВНЯЛЬНИЙ АНАЛІЗ РЕАЛІЗАЦІЇ КОМЕРЦІЙНИХ БАНКІВСЬКИХ ГРУП: ТУРЕЧЧИНА ТА РУМУНІЯ

*Представлено порівняльний аналіз ефективності двох комерційних банківських груп із Туреччини та Румунії. Під час проведення дослідження розглянуто фінансову ефективність, досягнуту групою комерційних банків Туреччини та Румунії порівняно з єврозоною протягом 1999–2016 рр. Вивчено рівень ліквідності активів, придбаних протягом 18 років діяльності цих двох банківських груп, порівняно з єврозоною. В аналізі були перевірені три гіпотези на основі показників ефективності, які використовуються двома групами банківської торгівлі, та індикатори, що використовуються у спеціальній літературі. Результати і тлумачення цього дослідження / тестування були представлені та інтерпретовані відносно цих двох банківських торговельних груп. Наведено висновки авторів щодо порівняльного аналізу діяльності двох груп комерційних банків Туреччини та Румунії.*

*Ключові слова. Комерційні банки, банківська діяльність, Туреччина, Румунія, Єврозона, ANOVA.*

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### СРАВНИТЕЛЬНЫЙ АНАЛИЗ РЕАЛИЗАЦИИ КОММЕРЧЕСКИХ БАНКОВСКИХ ГРУПП: ТУРЦИЯ И РУМУНИЯ

*Представлен сравнительный анализ эффективности двух коммерческих банковских групп из Турции и Румынии. При проведении исследования рассмотрена финансовая эффективность, достигнутая группой коммерческих банков Турции и Румынии в сравнении с еврозоной в течение 1999–2016 гг. Изучен уровень ликвидности активов, приобретенных в течение 18 лет деятельности этих двух банковских групп, по сравнению с еврозоной. В анализе проверены три гипотезы на основе показателей эффективности, используемых двумя группами банковской торговли, и индикаторы, используемые в специальной литературе. Результаты и толкования этого исследования / тестирования были представлены и интерпретированы в случае двух коммерческих торговых групп. В заключительной части представлены выводы сравнительного анализа деятельности двух групп коммерческих банков Турции и Румынии.*

*Ключевые слова. Коммерческие банки, банковская деятельность, Турция, Румыния, Еврозоны, ANOVA.*