# Profit value of the co-operative Banks in Greece

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#### Abstract

The analysis of the banking sector has been the object of study by many researchers. In this study will be evaluated the profitability, the efficiency and the liquidity of the co-operative banks in Greece for the time period 1999-2014. In order to achieve this we present the course of the co-operative banks in Greece and we analyze a series of basic arithmetic indexes.

For the analysis of the economic magnitudes of the co-operative banks the groups of indexes such as: of profitability, of efficiency and of liquidity are being implemented. With the help of the above indexes the values of the corresponding magnitudes for the co-operative banks as a whole through the years is compared. Finally, through the above analysis the reasons for these changes through time are pointed out. From the analysis is revealed that profitability and efficiency for the co-operative banks turn out to be very satisfactory.

JEL classification numbers: E51, E52, G21

**Key words**: banks, banking sector, co-operative banks, efficiency, liquidity

### 1 Introduction

The co-operative credit in our country started to develop essentially during the last years, based on the Law 2076/92, in which is defined that: "Credit institutions are allowed to be established and to operate only under the legal form of a public company with the only exception being the legal form of the pure credit co-operative created by the Law 1667/1986" (Gortsos, 2000).<sup>3</sup> With the

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<sup>&</sup>lt;sup>3</sup> In 1993 were established the first co-operative banks of Ioannina and Lamia.

specific law there were incorporated into the Greek Banking Body of Law the terms of the Second Banking Directiva of the European Community Council 77/78 and the PD/TE 2258/2-11-1993. Today in our country operate 16 cooperative banks which are the object of this paper.

It took a very long time for the institutionalization and the development of the co-operative banks due to a series of factors. These factors are connected closely with the history of the Greek Banking System and have direct relation with the exercise of the controlled governmental agricultural credit by the Agricultural Bank of Greece, and most of all, with the extensive governmental intervention to the credit function (administratively setting of the interest rates of deposits and loans, direct and indirect controls in the granting of loans and of credits, currency exchange restrictions).

The co-operative banks in the relatively short time of their operation, have played an important role at a local level interfering in a complementing and improving way in the banking system, by establishing a new type of bank which is distinguished by its customers' based philosophy, that supports and in turn is supported by the local productive forces and reinforces local development. They become active at a local level and they are mostly the banks of small and medium size businesses and of individuals.

The purpose of the co-operative banks, is to support with inexpensive cost of money and banking services the small firms, which do not have easy access to the traditional banks, because of the small volume of their activity and therefore their small return. Also their purpose is to reinforce consumer credit with loans, according to the needs of every member being it a private person, a clerk, a scientist, a retiree, a homemaker etc, that does not have access to loans from other banks.

This new form of Credit Institutions, has a developmental and social dimension and operates as a "mechanism" for recycling the money inside the same prefecture they become active. They address themselves mainly to Small and Medium Size Enterprises (SME) and individuals, with competitive banking products adapted to the local conditions and, with operational characteristics that establish them as dependable, friendly, flexible and socially sensitive banks. A basic reason for their satisfactory development, is that they achieve the purpose of their operation and also cover the needs of a part of businesses and individuals.

## 2 Methodological approximation

The purpose of this paper is to present, to estimate and analyze the basic financial indexes of the co-operative banks that become active at the present time in Greece.

The analysis of the financial statements of a business includes besides the selection of the appropriate index and the comparison, without which the resulting

conclusions do not have any meaning and most probably they do not lead to the correct explanation. The comparison makes sense when it is done in relation to time and in relation to the similar businesses or the sector. This double comparison gives the capability of a more correct explanation of the indexes and consequently of the business condition (Papoulias, 2000).

In order to achieve this we will use the following four indexes<sup>4</sup>:

#### a. Profitability - Efficiency Indexes

#### a.1 Return On Assets (ROA): ROA = Net Profits / Total Assets

This index reflects the administrations capability to use efficiently the financial resources (assets) that has at its disposition, in order to create profits.

### a.2 Return On Investment (ROE): ROE = Net Profits / Total Equity

This index reflects the efficiency with which the bank uses the capital of its owners, as it shows the size of profits that were created by the capital that was invested by the shareholders (owners) of the bank- enterprise (Vasiliou, 1999).

## b. Liquidity Indexes

<u>b.1 Loans / Deposits</u> This index shows the banks' needs in relation to loans and deposits. Without liquidity, a bank could fail.

<u>b.2 Total Assets / Total Loans</u> This index shows the proportion of loans that the bank retains. A high value means low efficiency and low risk.

#### 3 Results

## a. Profitability – Efficiency

#### a.1 ROA = Net Profits / Total Assets

Analyzing the specific index we could:

- compare the efficiency among the co-operative banks.
- observe the efficiency through time.
- investigate the reasons of the changes through time.

Table 1. Return on Total Assets (ROA) – Index

Bank	1999	2000	2001	2002	2003	2004	2005	2006
Total of co- operative banks	4,63	3,39	2,04	1,96	1,93	1,84	1,76	1,69
Bank	2007	2008	2009	2010	2011	2012	2013	2014
Dank	2007	2000	2007	2010	2011	2012	2013	2014

**Source**: Union of co-operative banks of Greece (ESTE) / Bank of Greece / Self processing

<sup>&</sup>lt;sup>4</sup> The above indexes are recorded in the bibliography as the most appropriate indexes for measuring economic magnitudes and characteristics (profitability, return, liquidity) of the banks.

From Figure 1 we observe that the value of ROA is generally decreasing, we also notice that ROA declined sharply in 2011. The main cause of the sharp decline is the large losses that two of the cooperative banks accumulated that year.

## Return on Total Assets (Total of Co-operative Banks)

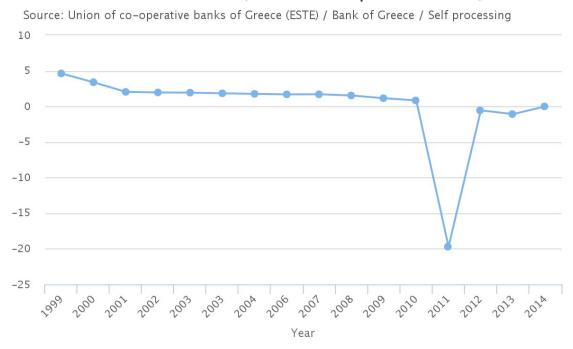


Figure 1

From the statistical processing of the ROA index for the total of the cooperative banks result the data of Table 1.

Table 2. Return on Assets (ROA) – Index statistics

	1999	2003	2007	2011	2014
Arithmetic average	5,03	1,90	2,18	-38,51	-0,12
Median	4,65	1,74	1,92	0,50	0,02
Low value	0,00	0,65	1,17	-387,61	-1,65
High value	8,96	3,16	4,61	1,74	0,37

Source: Self processing

### a.2 ROE = Net Profits / Total Equity

Analyzing the specific index of efficiency of the shareholders total equity, we can find out if the purpose of achieving a satisfactory result has succeeded.

Table 3. Return of Total Equity (ROE) – Index

Bank	1999	2000	2001	2002	2003	2004	2005	2006
Total of co- operative banks	11,01	9,49	7,38	8,80	9,98	10,95	12,6	12,47
Bank	2007	2008	2009	2010	2011	2012	2013	2014
Total of co- operative banks	11,46	11,43	9,59	6,62	-167,79	-5,03	-9,40	0,01

Source: Union of co-operative banks of Greece (ESTE) / Bank of Greece / Self processing

From Figure 2 we observe that from 1999 until 2010 the value of ROE generally remains the same, then in 2011 it reaches its minimum value and it increases again. Once again the value of ROE in 2011, is due to the large losses that two of the cooperative banks presented that year.

## Return on Total Equity (ROE) (Total of Co-operative Banks)

Source: Union of co-operative banks of Greece (ESTE) / Bank of Greece / Self processing

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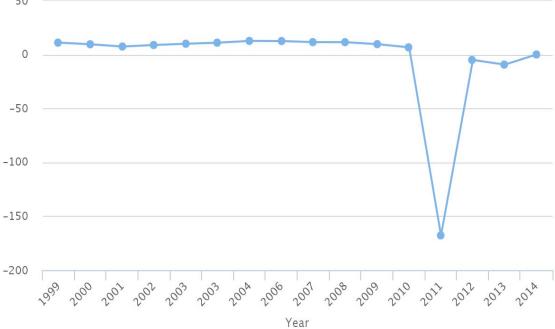


Figure 2

From the statistical processing of the ROE index for the total of the cooperative banks result the data of Table 4.

Table 4. Return of Total Equity (ROE) – Index statistics

	1999	2003	2007	2011	2014
Arithmetic mean	12,20	8,46	10,68	-0,24	-0,22
Median	10,27	8,10	10,36	4,34	0,14
Low value	0,00	0,65	4,84	-19,03	-8,46
High value	22,42	16,88	20,41	8,41	3,05

**Source**: Self processing

## **b.** Liquidity Results

## b.1 Loans / Deposits

Analyzing the specific index of liquidity, we can find out the capability of a bank to fulfill its obligations.

Table 5. Liquidity (Loans / Deposits) – Index

		10010 0		(	- P = 51.55)			
Bank	1999	2000	2001	2002	2003	2004	2005	2006
Total of co- operative banks	118,54	109,78	106,21	101,05	98,53	99,82	95,29	90,64
Bank	2007	2008	2009	2010	2011	2012	2013	2014
Total of co- operative	97,29	104,46	95,37	104,80	111,00	110,03	110,06	108,69
operative banks	97,29	104,46	95,37	104,80	111,00	110,03	110,06	

Source: Union of co-operative banks of Greece (ESTE) / Bank of Greece / Self processing

From Figure 3 we observe that the value of the specified index exhibits variations, during the time period under investigation.

# Liquidity (Loans / Deposits) Index (Total of Co-operative Banks)

Source: Union of co-operative banks of Greece (ESTE) / Bank of Greece / Self processing

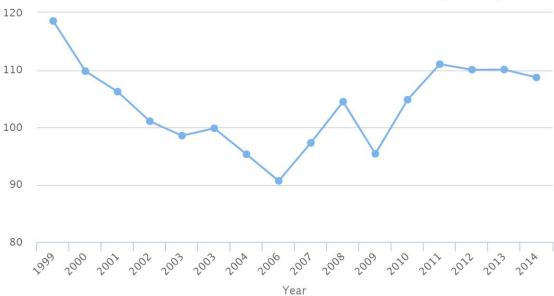


Figure 3

Finally, we observe that, the change of the specific index for the total of the co-operative banks shows a reduction of 48,5%,

Table 6. Liquidity (Loans / Deposits) – Index statistics

	1999	2003	2007	2011	2014
Arithmetic mean	146,54	95,53	100,11	101,17	98,04
Median	138,55	89,35	101,30	100,72	95,44
Low value	86,38	62,73	63,61	86,77	66,76
High value	254,84	138,23	114,61	120,95	122,52

Source: Self processing

## b.2 Total Assets / Total Loans

Table 7. Liquidity (Total Assets / Total Loans)*100 – Ir	– Index
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Bank	1999	2000	2001	2002	2003	2004	2005	2006
Total of								
co-	160,21	151,23	142,47	132,93	130,44	123,84	127,75	132,72
operative	100,21	131,23	172,77	132,73	130,44	123,04	127,73	132,72
banks								
Bank	2007	2008	2009	2010	2011	2012	2013	2014
Total of								
co-	129,36	123,46	133,41	126,33	113,76	110,80	110,24	111,67
operative	149,30	123,40	133,41	120,33	113,70	110,00	110,24	111,07
banks								

**Source**: Union of co-operative banks of Greece (ESTE) / Bank of Greece / Self processing

From Figure 4 we observe that the value of the specified index exhibits a downward trend for the time period under investigation.

# Liquidity (Total Assets / Total Loans) Index (Total of Cooperative Banks)

Figure 4

Also we observe that, the change of the specified index for the total of the co-operative banks shows a reduction of 21,7%.

Table 8. Liquidity (Total Assets / Total Loans)\*100 – Index statistics

	1999	2003	2007	2011	2014
Arithmetic average	163,03	155,71	138,80	125,84	127,52
Median	159,54	144,25	130,78	123,65	123,09
Low value	124,81	124,96	126,53	106,39	101,29
High value	234,98	218,17	196,89	154,01	180,97

Source: Self processing

#### 4 Conclusions

One basic result that comes out from this paper is that the co-operative banks in spite of the relatively short period of their business activity, have achieved significant magnitudes and they have covered a basic need of the local societies.<sup>5</sup>

The estimation of the profitability and efficiency of the co-operative banks reaches satisfactory levels.

A basic problem the co-operative banks are faced with and which affects their economic magnitudes is that they can not invest large amounts of capital to new technologies because of diseconomies of scale. This creates additional cost for the customer and takes away revenues from them. Moreover in periods of crises – like the present one – it is hard for them to deal with the reservations of the depositors. This contributes to the increase of the interest rates, while they are not in the position to do the same with the interest rates on loans, which results to a negative balance and liquidity problems. At the same time the co-operative banks because they could not expand to third countries and mainly to the ones in the Balkan peninsula, they are not faced with the risks other big banks are faced with. Furthermore, their small size secures for them flexibility and speed in the making, implementation and following up of decisions.

The present work includes the time period, during which the whole of the banking sector was developing at high rates. The incorporation of more variables and the extension of the time period could be the object for future research.

Up to including the year 2007 the co-operative banks could make transactions only with their members. The new law gave the capability for transactions and with customers that are not members, after receiving the relevant permission from the bank of Greece.

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Index A. The banks that participate in the analysis are:

NUMBER	BANK
1	Co-operative Bank of Achaia
2	Co-operative Bank of Drama
3	Co-operative Bank of Western Macedonia
4	Co-operative Bank of Dodecanesos
5	Co-operative Bank of Evros
6	Co-operative Bank of Evia
7	Co-operative Bank of Thessalia
8	Co-operative Bank of Ioannina (of Epirus since 30/09/08)
9	Co-operative Bank of Karditsa
10	Co-operative Bank of Korinthia (of Peloponnesus since 19/01/09)
11	Co-operative Bank of Lamia
12	Co-operative Bank of Lesvos-Lemnos
13	Pankritia Co-operative Bank
14	Co-operative Bank of Pieria
15	Co-operative Bank of Serres
16	Co-operative Bank of Chania