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How Mergers and Acquisitions Affected the Basic Accounting Elements of Greek Banks During the Euro Years 2002-2018

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Abstract

During the years 2002-2018 a big wave of mergers and acquisitions took place in Greek Banking System. We have two big time periods that mergers and acquisitions occurred in the Greek Banking System. The first one includes the years 2002-2009 that the main domestic reasons for mergers and acquisitions in the Greek Banking System were the profit and the size so as to be able to expand mainly to the Balkan Countries with cross border mergers and acquisitions for more profit. The second one includes the years 2010-2018 that the world financial crisis affected the Greek Banking System. So the main reason for domestic mergers and acquisitions among the Greek Banks were the strengthening of them against aggressive takeovers, the economies of scale, risk of bankruptcy and recapitalization. In this paper we try to find out how these two time periods of mergers and acquisitions in the Greek Banking System affected the basic accounting elements such as Assets, Loans Equity, all kind of profits, Deposit even the personnel, of the remaining four Systemic Greek Banks. The remaining four Systemic Greek Banks that we examine in this paper are Eurobank, National Bank, Alpha Bank and Bank of Piraeus.

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1. Introduction

In recent years and, following major changes in both the European and international financial markets, the structure of the banking system has changed significantly. Bank privatization is on the rise, increasing their market share relative to state-owned banks, while the simultaneous globalization of the capital market and the rapid technological development in the telecommunications and IT sectors enable banks to exploit economies of scale and spectrum. As a result, there have been significant acquisitions and mergers, as well as the development of financial services (Triantopoulos, 2008).

Also, the situation in the Greek banking sector shows (Tomaras, 2003):
1) Restructuring of banking products, focusing on new specialized banking products, replacing traditional ones.
2) Oligopoly structure in the banking distribution system.
3) Opening financial institutions in the developing Balkans.
3) Low Banking Indicators in Relation to International and European Data.

Until the mid-1990s, Greek banks operated mainly with high operating costs and low profitability. The general trends that have prevailed in Greece, mainly since 1996, are mergers between Greek banks, strategic alliances with major foreign banks, the creation and offering of new banking products and the participation in the funds of other financial institutions (Papadakis & Thanos, 2008).

According to the international literature, the basic functions of the bank are (Diamond & Dybvig, 1983):

1. Offer payment instruments (checks). Indeed, in the modern economy monetary policy is transmitted through the banking system.
2. Convert their relatively short-term liabilities into relatively longer-term receivables.
3. Check existing and potential borrowers.
4. Provide safety against sudden changes in consumption.

Merger and acquisition activities affect both the economy and the society. These activities directly impact the worker, the consumer, and the world economy at large. Certain transactions produce positive outcomes and may lead to the enhancement of a company's effectiveness, to shareholder benefit, and to overall societal wealth (Boston College – The Center for Corporate Citizenship, 2004). More specifically, mergers and acquisitions play an important role in the economic landscape by being able to: (1) respond effectively to changed business and regulatory climates, (2) discipline ineffective management, (3) integrate management and resource structures, (4) reform out-of-date business practices, and (5) expand markets and services by producing synergies (Boston College – The Center for Corporate Citizenship, 2004).

The purpose of this article is to show in charts and graphs how the key accounting figures such as assets, liabilities, profits etc. of the four Greek systemic banks fluctuated from the adoption of the Euro in 2002 to the onset of the financial crisis in 2009 and from 2010 to 2018. The year 2018 is the last year for which the four Greek systemic banks have published financial statements until we write down this article.

2. Literature Review

Mergers and Acquisitions is one of the most aggressive change agents in the business economy. The volume of deals and their dollar value grew explosively over the past 30 years. Journalists, legislators, financial scientists and consumers have watched this activity with fascination and concern (Bruner, 2004).

Mergers and acquisitions create competition which can result in positive economic outcomes by enhancing "research and development efforts by combining complementary talents or technologies" and enabling "a firm to gain market entry with a new product and interject new competition" (Balto & Pitofsky, 1998).

Merger is defined as the merger of two or more companies and results in the creation of a new one entity, a new legal entity. The integration is done through the solution but not the business clearing and the transfer of all their assets (Assets and Liabilities) based on the predetermined share exchange ratio. For legal reasons there are differences in the way in which Mergers, however, are always aimed at maximizing it value of the business. More specifically, mergers occur primarily with the following ways (Tsagarakis, 2010) Absorption merger, ii) Merging with a new company, iii) Absorption of a firm by another firm that holds 100% of its shares.

Acquisition is defined as an Acquisition of a business transaction against which a company buys part or all of the ownership shares "Target Company", with a view to taking control of that company. In the first case, the "target business" still exists, but does not participate in decision making and has no administrative influence. In case of complete acquisition of the "target business" through acquisition of all its shares, the business ceases to exist.

Usually, acquisition is part of a business development strategy and is accomplished by paying cash, to acquire the shares of the target bank or to exchange shares between the target bank and the bidder bank or a combination of the two described methods above.

The term "Merger" refers to a friendlier union for companies that are often the same size on the other hand, the term "Acquisition" implies the involvement of companies of different sizes. They are also differentiated as to the involvement of the older owners in the management of the company, in the "right of speech" which exists in Mergers but not in Acquisitions (Samuels, Wilkes, & Brayshaw, 1999).

1) Leveraged Buyout (LBO Leveraged Buy- Outs). A small group of investors acquires a company from a debt-financed transaction and withdraws it from the Stock Exchange. The loan is served by the operations of the absorbed company and often by the sale of its assets.

In general, business management remains the same and is compensated with benefits. The ultimate goal of this process is to keep the merged company running for some years until its value rises and its subsequent listing on the Stock Exchange as a stronger company. In other cases, the acquisition company resells parts of the business to other companies for the purpose of concluding synergies. In any case, this process takes place in anticipation of high profit but the inherent risk arising from borrowing is not negligible (Brigham & Ehrhardt, 2011).

2) Acquisition by Management (Management Buyout). A Debt Redemption which is organized and implemented by this business management (Rosenbaum, Pearl, Harris, & Perella, 2013). The acquisition by executives (MBOs- Management Buy-Outs) is carried out by a company management team or investor team. Usually large-scale enterprises acquire the executive capacity of a smaller business for the purpose of transferring know-how, flexibility and greater expertise.

3) Tender offer. The method of gaining control of a business through a public offering to buy part of the business shares at a predetermined price usually in cash and at a premium. The public bidding company usually wants to gain operational control over the business and is not satisfied with the role of the investor. In many cases, a public one bid followed by Merge (Fleischer & Mundheim, 1967).

Based on research conducted in the past, it has been concluded that the Offer Acquisition brings unexpected profits to both its shareholders. Purchaser and the absorbed company. This conclusion is in line with the hypothesis that public bidding is yet another attempt to exploit its resources through a different operating strategy (Bradley, Desai, & Kim, 1983).

Supporting shareholders at the proxy contest is a tactic of gaining control of the Board. The Acquisition Company is trying to persuade the undecided members of the General Assembly to exercise their voting power with a view to replacing the existing members of the General Assembly. The new composition of the General Assembly is expected to be welcomed by the Acquisition Company's proposals[1].

Synergy, the most important motivation for most synergies, is to increase the value and achieve better results of the new company as it is created after the merger or acquisition of two or more companies. Mergers and acquisitions are then considered beneficial to shareholders. Synergies can be even more beneficial for businesses when it comes to companies operating in the same industry. The likelihood of synergies from a Merger and Acquisition significantly affects the Acquisition Price (Rosenbaum et al., 2013).

Synergy from Redemption is defined as the value of the business that results less the value of the two companies as separate entities. That is,

Synergy = VAB - (VA + VB)

Where:

VAB = the value of the new resulting business.

VA = redemption value.

VB = value of the acquisition.

Tax effects arise in the case that the company, created after the Acquisition it pays less taxes than they would pay merged companies separately (Papadakis & Thanos, 2008).

The main differences between mergers and acquisitions are:

i. The type of consideration offered for making them. In mergers, shareholders may receive shares in exchange for shares, while in redemptions the shares may only be shares in exchange for certain cash consideration. When this price exceeds 10% (provided for in Article 68 of Greek Law 2190/1920), it determines the existence of a takeover operation while otherwise, ie less than 10%, is considered to be a merger.

ii. The ability of the acquired or merged entity's shareholders to influence the management of the new organization. In the case of a merger, the old shareholders can participate in the management of the company through the number of shares they hold. Even if the number of shares is large enough, then the old shareholders will be able to greatly influence the management of the new business. But in the case of the takeover, the old shareholders will not have this right after these shares have been canceled.

On the basis of the correlation of the business sector, or otherwise with the degree of integration, Mergers and Acquisitions leads to horizontal integration, vertical integration and differentiation, which is divided into concentric / related and unrelated (conglomerate / unrelated).

i) Horizontal Integration: It is a merger of two or more companies that produce the same or similar product / service and are at the same level of the production process. The result of this integration is to grow economies of scale and the acquirer to increase its market share as well as its degree of concentration in that market. The risk inherent in this merger is, of course, to create a monopoly if the acquiring company succeeds in displacing or absorbing all of its competitors (Georgopoulos, 2006).

ii) Vertical Integration: Vertical integration is observed in companies operating in a common supply chain, but at different levels of the production process. That is, they have a supplier-customer or supplier-distributor relationship. To expand a business vertically it must incorporate a customer business or a supplier business. The result of this integration is to reduce production costs and increase the efficiency of the company (Georgopoulos, 2006).

3. Methodology

On 2/5/2010, Greece receives the first aid package totaling € 110 billion, 80 billion euros from the other (15) euro countries and 30 billion euros from the International Monetary Fund (IMF). The negotiations on the PSI and the A second bailout was made from November 2010 to February 2011. With the money from this second bailout, the Stability Fund was funded with € 50bn, which channeled € 39bn to clear and recapitalize healthy banks (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018).

The recapitalization process of banks from the Hellenic Financial Stability Fund (EFSF), which was funded by the corresponding European Financial Stability Fund (EFSF) 9, forced the banks seeking recapitalization to invest in the recapitalization plan. In the end, only 4 banks (National, Piraeus, Alpha,

[1] Proxy Contest, 2012

Eurobank) were considered viable, which hold about 92% of the loans and assets. In the first recapitalization in 2013, 3 of the 4 systemic banks attracted new shareholders and € 3.1 billion, while the 4th (Eurobank) was fully capitalized by the HFSF (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018).

Thus, any banks deemed viable raised funds from the Hellenic Financial Stability Fund (HFSF) in return for giving the public with voting shares (unless private equity participation was below a minimum of 10%, recapitalization is done by voting jointly (essentially the temporary privatization of the bank) or bond loans which, if after 5 years margin the bank could not cope with, were converted to common voting by the State (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018).

On 6.03.2014 the Bank of Greece announced the results of stress tests for the Greek Banking Sector, which showed an additional total capital requirement of € 6.4 billion. This leads to the second recapitalization of systemic banks with private equity raising of € 8.2 billion, more than required. As a result, Eurobank comes under the full control of the private sector and has the smallest state stake among the 4 systemic banks (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018).

In 2015, the International Domestic Banking Loan of Domestic Banks also declines. During this period there was a new outflow of deposits from Greeks, refusal of foreigners to lend to Greek banks, while the ECB ceased to accept the pledges of Greek banks. This resulted in the re-ejection of the country's dependence on the Euro system and, more importantly, the more expensive lending by Greek banks to the Bank of Greece's extraordinary financing mechanism (ELA). Specifically, instead of 2.9% growth, a new recession comes with a sharp drop in bank equity prices and consequently significant HFSF losses of over € 20bn. The new financial aid package is earmarked for € 25 billion exclusively for bank recapitalization. Alpha and Eurobank also find private equity for the unfavorable scenario, while National and Piraeus need new HFSF funds. Also, in October 2015 the ECB announces a new Asset Control (AQR) and simulation exercise. Following the third recapitalization, HFSF's participation is limited to 40% for the EIB, 26.4% for Piraeus Bank, 11% for Alpha and 2.45% for Eurobank (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018).

During 2017, the main factors affecting the structure of the Greek banking sector's assets and liabilities remained the same as in 2016, namely the reduction of Euro system lending, the disinvestment of systemic banks by their non-core activities and the consolidation of the loan portfolio. During the period January - September 2017, the assets of the Greek commercial banking groups decreased by 11.8% (ie by EUR 35.2 billion) to 262.6 billion. This is mainly due to the decrease (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018):

i. A € 24.0 billion reduction in the bond portfolio due to the sale of European Financial Stability Fund (EFSF) and European Support Facility (ESM) bonds in the context of the implementation of short-term government debt relief measures. Under the relevant bond swap agreement, the EFSF and ESF bonds held by banks are gradually exchanged for long-term, fixed-rate, EFSF and ESF bonds respectively, which will be repurchased within one month by the EFSF and the EFSF respectively. cash. The share of the bond portfolio in total assets decreased by six percentage points (September 2017: 13.4%, December 2016: 19.8%).

ii. The decrease in loan balances after provisions of EUR 10.9 billion due to write-offs and gradual deleveraging. However, their share has increased as a percentage of assets (September 2017: 64.3%, December 2016: 60.4%).

The decrease in loan balances is partly due to the reclassification of loan portfolios by transferring them to assets held for sale, which increased by EUR 3.4 billion, thus doubling their share of assets (September 2017: 3.0%, December 2016: 1.5%). This increase is due to new planned sales of subsidiaries of systemic banks in Greece (eg Real Estate Investment Companies, insurance companies) and abroad in the context of the implementation of restructuring plans approved by the European Commission.

On the liability side, its € 35.2 billion decrease is mainly due to (Bank of Greece Annual Financial Reports of the Greek Banking System, 2018):

(i) The reduction of liabilities to credit institutions by EUR 30.9 billion, which also decreased as a percentage of liabilities (September 2017: 21.5%, December 2016: 29.3%). This development was mainly a result of the Euro system's reduced funding for banks due to their participation in the EFSF and ESM bonds exchange program and the deleveraging of the loan portfolio.

(ii) The decrease in customer deposits by EUR 2.1 billion, which despite being reduced in absolute terms, increased as a percentage of liabilities (September 2017: 57.8%, December 2016: 51.6%). At the same time, liabilities related to non-current assets intended for sale increased by EUR 2.7 billion due to the gradual disinvestment of banks by their non-core business in Greece and abroad. During the period under review, National Insurance's insurance provisions represent EUR 2.2 billion from this change.

iii) Associated Differentiation / Concentric Merger: In this case, the companies that are consolidated are alike, although not directly related, they have similar know-how and complementarity, and especially in management matters the products they produce are similar but not the same.

iv) Incompatible Diversification / Inter-branching - Diagonal Merger: There is no correlation between businesses: Their field of activity is unrelated and the aim of the acquiring company is to expand to other business areas with the ultimate goal of forming a group.

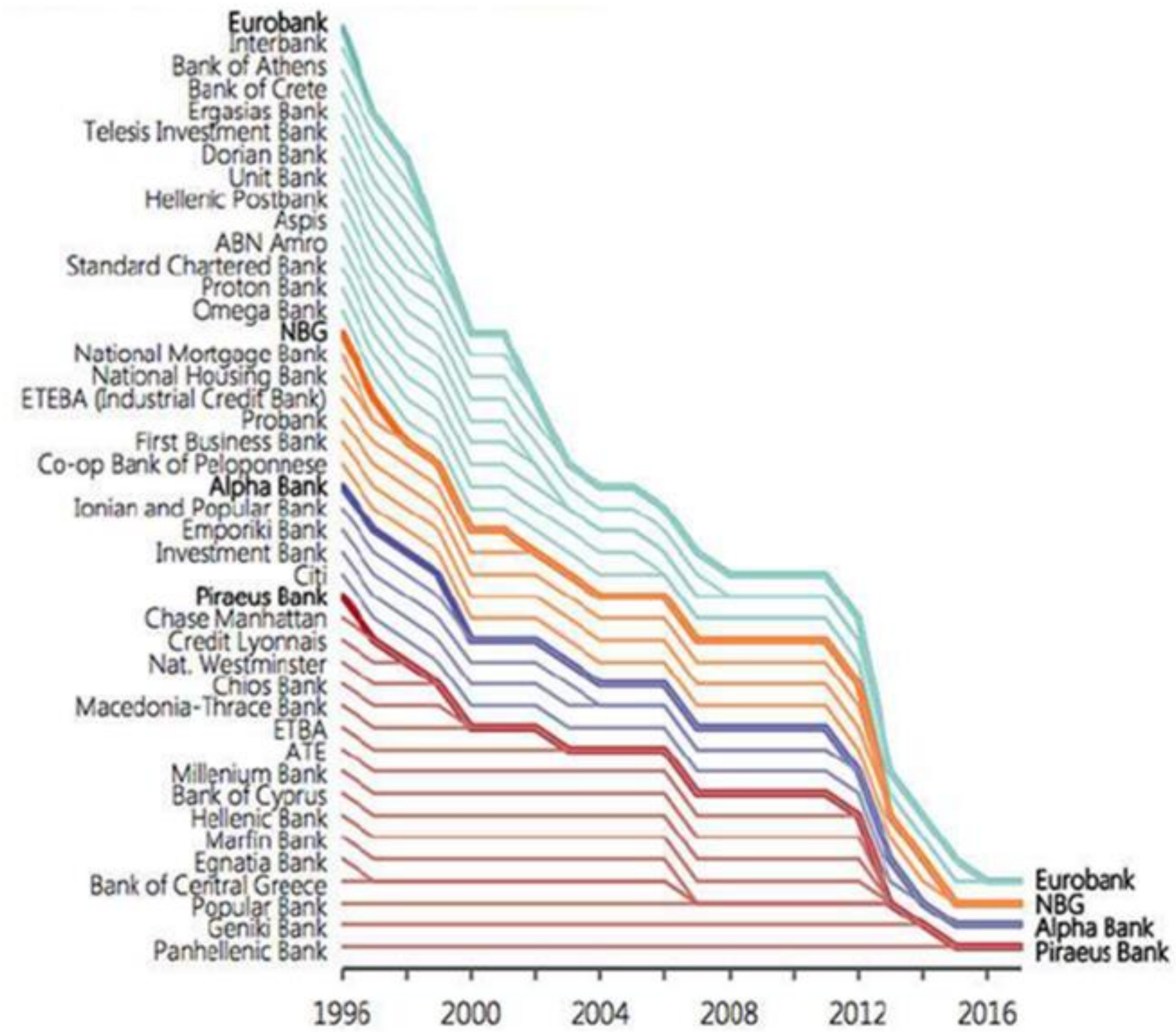

Figure-1. Greek bank consolidation over 20 years.

Source: PwC, deloitte and financial statements.

The above Figure 1 shows all the mergers and acquisitions that have been made by the four Greek Systemic Banks from 1996 since 2016. In 2016 the acquisitions stopped because only four systemic and one small bank remained intact.

The Accounting Merger and Acquisitions of credit institutions based on the Greek Law. The valuation of the assets of the companies involved in the merger, as referred to in Article 71 of Law 2190/20, is carried out by the Committee of Experts, which draws up a report addressed to the general meeting of shareholders. Of course, it is true that, instead of the Commission's assessment, the credit institutions that are to be merged can consolidate the assets and liabilities as shown in the special balance sheets drawn up for this purpose. The assets of the merging credit institution are transferred as the balance sheet of the absorbing or the new credit institution.

In the above graph extract from Deloitte. It describes the consolidation of the Greek Banking System year per year since 1996 until 2016 and we can see that at the end remained only four Systemic Banks.

In the below Table 1 we can see more clearly which bank acquire and acquired from the implementation of the Euro in the year 2002.

So in 2018 we notice that most of the domestic mergers and acquisitions were carried out by Piraeus Bank.

From the Table 2 we can see that all these domestic mergers and acquisitions of Piraeus Bank together with its cross-border mergers and acquisitions put it at the forefront of its assets. Piraeus Bank Group also came in second in terms of assets.

Table-1. Mergers and acquisitions in the Greek banking system.

Years	Bidder	Target
2002	National Bank	National Industrial Development Investment Bank Sa
2002	Piraeus Bank	National Bank of Industrial Development Sa
2003	Piraeus Bank	National Bank of Industrial Development Sa
2003	Efg Eurobank Ergasias	Post Banka Ad
2005	Piraeus Bank	Eurobank Piraeus Bank Bulgaria
2005	Piraeus Bank	Atlas Banka
2005	Piraeus Bank	Egyptian Commercial Bank
2006	National Bank	Finansbank
2006	National Bank	Vojvodjanska Banka
2006	Efg Eurobank Ergasias	Nacionalna Stedionica – Banka
2006	Efg Eurobank Ergasias	Dzi Bank
2007	Piraeus Bank	International Commerce Bank
2007	Efg Eurobank Ergasias	Tekfenbank
2007	Efg Eurobank Ergasias	Universal Bank
2012	Piraeus Bank	Agricaltural Bank S.A.
2013	Piraeus Bank	Panellinia Cooperation Bank
2013	Piraeus Bank	Bank of Cyprus
2013	Piraeus Bank	Cpb Popular Marfin Bank
2013	Piraeus Bank	Hellenic Bank
2013	Piraeus Bank	Millenioum Bank
2013	Alpha Bank	Commercial Bank
2013	Efg Eurobank Ergasias	New Postal Savings Greece
2013	Efg Eurobank Ergasias	New Proton Bank
2014	Piraeus Bank	Geniki Bank

Source: Bank of Greece.

Table-2. Assets of 4 Greek systemic banks and their group.

	Assets							
Years	Piraeus Group	Piraeus Bank	NBG Group	NBG Bank	Alpha Group	Alpha Bank	Eurobank Group	Eurobank Bank
2002	14,725	14,074	54,096	49,162	28,855	27,264	24,622	23,366
2003	14,735	13,992	53,891	49,117	30,802	29,591	28,030	26,215
2004	16,846	15,683	54,487	48,147	33,237	31,843	31,939	29,773
2005	23,545	21,154	60,427	53,279	44,007	41,849	44,464	41,724
2006	30,931	27,941	76,570	61,306	49,800	46,769	53,820	50,057
2007	46,427	42,343	90,386	71,059	54,684	54,039	68,389	68,272
2008	54,890	50,213	101,323	84,286	65,270	66,738	82,202	93,065
2009	54,280	48,922	113,394	91,220	69,596	67,849	84,269	99,856
2010	57,680	51,768	120,744	96,305	66,798	63,771	87,188	90,372
2011	49,352	43,840	106,731	87,308	59,148	55,197	76,822	75,782
2012	70,406	63,020	104,798	77,939	58,357	53,799	67,655	60,808
2013	92,010	85,778	111,930	84,197	73,697	68,103	77,586	70,669
2014	89,290	84,603	115,212	81,946	72,936	67,635	75,518	67,494
2015	87,528	83,002	111,175	77,131	69,296	64,993	73,553	64,195
2016	81,500	78,533	78,531	68,268	64,872	60,403	66,393	57,882
2017	67,416	64,491	64,768	58,425	60,813	55,855	60,029	51,448
2018	61,880	60,420	65,095	59,287	61,007	55,176	57,984	50,275
Average	53,732	49,987	87,268	70,493	56,657	53,581	62,380	60,074
Median	54,890	50,213	90,386	71,059	60,813	55,197	67,655	60,808

Source: Authors' structure from financial statements of 4 Systemic Banks.

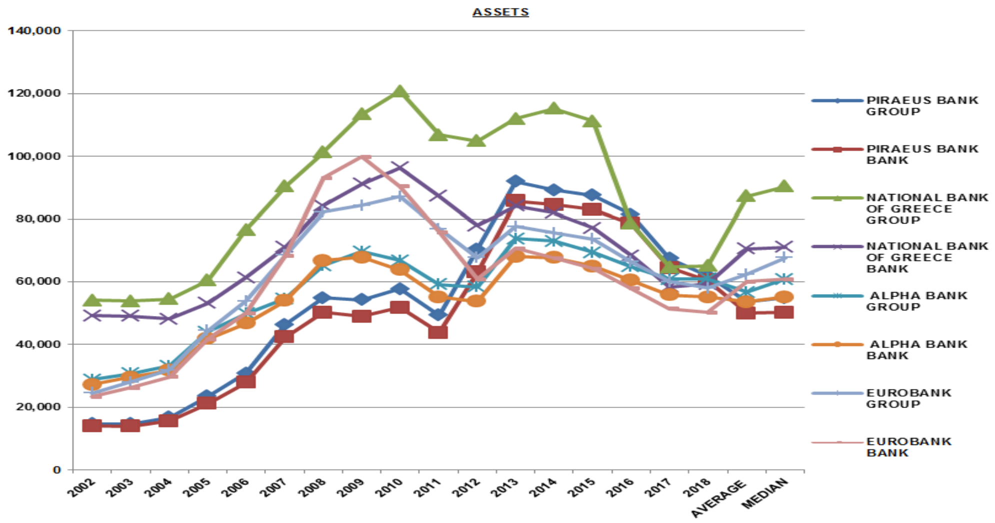

Figure-2. Volatility of assets for banks and banking group.

Source: Authors' structure from financial statements of 4 systemic banks.

From the Figure 2 above we can see that National Bank Group (NBG Group) remained in the first place of the banking groups in terms of assets, despite serious disinvestments, while the National Bank (NBG) itself moved to the second position in terms of assets.

Alpha Bank was the third largest bank in 2018 with a slight difference. Alpha Bank Group itself ranks third for the year 2018 in terms of assets. Fourth bank in terms of pledge was Eurobank and fourth group in Eurobank.

Thus the ranking of the four systemic banks by assets for the period 2002-2018 is shown in Table 2a.

Table-2a. Assets rank of the four systemic Greek bank.

Rank Assets								
Years	Piraeus Group	Piraeus Bank	NBG Group	NBG Bank	Alpha Group	Alpha Bank	Eurobank Group	Eurobank Bank
2018	2	1	1	2	3	3	4	4
2017	1	1	2	2	3	3	4	4
2016	1	1	2	2	4	3	3	4
2015	2	1	1	2	4	3	3	4
2014	2	1	1	2	4	3	3	4
2013	2	1	1	2	4	4	3	3
2012	2	2	1	1	4	4	3	3
2011	4	4	1	1	3	3	2	2
2010	4	4	1	1	3	3	2	2
2009	4	4	1	2	3	3	2	1
2008	4	4	1	2	3	3	2	1
2007	4	4	1	1	3	3	2	2
2006	4	4	1	1	3	3	2	2
2005	4	4	1	1	3	2	2	3
2004	4	4	1	1	2	2	3	3
2003	4	4	1	1	2	2	3	3
2002	4	4	1	1	2	2	3	3

Source: Authors' structure from financial statements of 4 systemic banks.

Looking at Table 2a we can see that Piraeus Bank holds the lead as the largest asset bank from 2013 to 2018. This bank in 2002 was the smallest asset of the four Greek systemic banks. The Piraeus Bank Group itself was also the smallest in terms of assets. Piraeus Bank, with its mainly domestic mergers and acquisitions of other Greek banks, succeeded in stifling competition and by 2013 leading the Greek banking system, leaving as the second-largest the National Bank which for many years was the first.

We also note that Alpha Bank in the years 2002 to 2005 was the second largest bank in Greece. Since then, however, with its conservative investment policy and especially in the area of mergers and acquisitions, it has fallen to third place, while in 2012 and 2013 it came in fourth.

The Eurobank is a special case. Since the advent of the euro in Greece in 2002, it has started as the third bank in terms of assets. It advanced dynamically in the investment segment and thus reached the peak of the Greek banking system in 2008 and 2009. However, the advent of the financial crisis in Greece further affected the bank more than the others three systemic banks, with the result that it slipped to fourth place in 2014, where it has since remains.

So rational investment policies of a bank such as mergers and acquisitions can seem to drive to the top of the banking system like the case of Piraeus Bank, while wrong investing moves you to the bottom like the case of Eurobank.

Below at the Table 3 we can see the how was the value of the Deposits in the four Greek Systemic Banks from the implementation of Euro since 2002 until 2018 after all mergers and acquisitions took place in the Greek Banking System as it described in the above Figure 1.

Table-3. Deposits of 4 Greek systemic banks and their group.

	Deposits							
Years	**Piraeus Group**	**Piraeus Bank**	**NBG Group**	**NBG Bank**	**Alpha Group**	**Alpha Bank**	**Eurobank Group**	**Eurobank Bank**
2002	10,075	9,649	40,025	36,657	23,190	21,327	17,032	16,636
2003	9,929	9,678	38,978	35,439	21,807	20,251	17,309	18,346
2004	10,867	10,260	40,865	37,174	20,697	18,948	18,209	21,253
2005	13,197	11,451	43,350	41,060	21,645	19,302	19,255	24,660
2006	16,735	14,606	53,234	44,565	23,573	20,373	23,914	30,363
2007	22,067	19,030	60,530	49,260	34,665	23,334	36,151	38,939
2008	28,381	24,110	67,657	56,291	51,640	33,816	45,656	44,467
2009	30,064	25,730	71,194	58,081	42,916	35,258	46,808	45,807
2010	29,475	24,052	68,039	52,471	38,293	31,234	44,435	40,522
2011	21,796	18,334	59,544	44,025	29,399	23,749	32,459	26,864
2012	36,971	31,107	58,722	40,908	28,451	23,191	30,752	23,366
2013	54,279	48,498	62,876	45,290	42,485	37,505	41,535	33,952
2014	54,733	50,240	64,929	44,130	42,901	37,817	40,878	31,985
2015	38,952	36,771	42,959	36,868	31,434	27,734	31,446	22,802
2016	42,364	39,765	40,459	37,326	32,946	29,010	34,031	23,678
2017	42,715	41,301	40,265	38,849	34,890	30,255	33,843	25,015
2018	44,739	44,919	43,027	42,249	38,732	23,492	39,083	29,135
Average	29,843	27,029	52,744	43,567	32,921	26,859	32,517	29,282
Median	29,475	24,110	53,234	42,249	32,946	23,749	33,843	26,864

Source: Authors' structure from financial statements of 4 Systemic Banks.

Traditionally, the National Bank of Greece and its Group, the oldest bank in Greece, maintains the confidence of Greek investors in deposits, with the result that it accumulates the largest volume of deposits in Greece. Of course, the large number of branches of the National Bank, even in remote villages and islands in Greece, also played an important role.

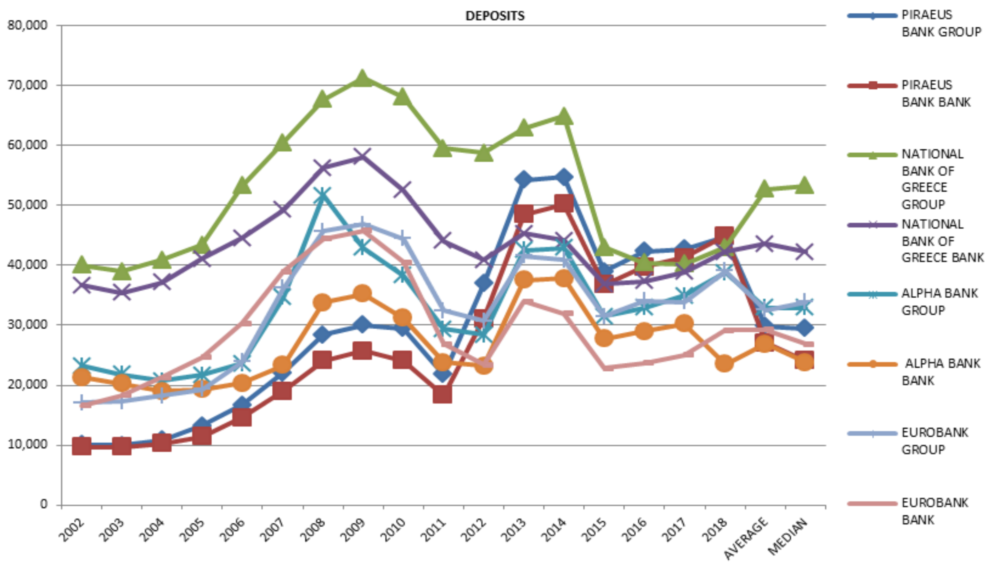

Figure-3. Volatility of deposits for banks and banking group.

Source: Authors' structure from financial statements of 4 systemic banks.

As we can observe from Figure 3, National Bank of Greece (NBG) and National Bank of Greece Group (NBG Group) have the "lion share" of the Deposits in the Greek Banking System, even though the financial crisis in 2009 strike the Greek Banks. The main explanation of this phenomenon is that National Bank of Greece is the oldest Bank in Greece and it has more branches all over Greece than the other three systemic banks.

Below in the Table 4 we can see how was the value of the Loans that the four Greek Systemic Banks gave to the Greek Economy from the implementation of the Euro since 2002 until 2018.

Table-4. Loans of 4 Greek systemic banks and their group.

Years	Piraeus Group	Piraeus Bank	NBG Group	NBG Bank	Alpha Group	Alpha Bank	Eurobank Group	Eurobank
2002	8,758	8,136	20,608	18,147	4,167	15,467	13,360	12,532
2003	10,278	9,643	22,700	19,887	19,845	17,542	16,333	14,951
2004	11,705	11,416	26,053	23,097	22,378	19,901	20,498	19,259
2005	15,451	14,587	29,528	27,179	27,357	24,201	26,624	24,214
2006	20,427	18,729	42,625	32,755	32,223	28,238	34,046	30,183
2007	30,288	26,763	54,693	39,569	42,072	35,267	45,638	37,235
2008	38,313	33,483	73,076	55,798	50,704	42,189	55,878	43,570
2009	37,688	31,245	74,753	58,130	51,400	41,811	55,837	42,015
2010	37,638	31,190	77,262	58,243	49,305	39,919	56,268	43,539
2011	35,634	29,898	71,496	52,891	44,876	36,152	48,094	36,087
2012	44,612	37,618	69,135	47,000	40,495	32,796	43,171	33,434
2013	62,366	57,399	67,250	46,327	51,678	44,237	45,610	37,468
2014	57,143	53,987	68,109	43,531	49,557	43,476	42,133	35,076
2015	50,591	49,426	45,375	39,750	46,186	41,558	39,893	32,974
2016	49,707	48,720	41,643	38,166	44,409	40,262	39,058	31,908
2017	44,720	44,884	37,941	36,248	43,318	38,521	37,108	30,866
2018	39,757	40,557	30,134	29,103	40,228	35,648	36,232	29,354
Average	35,004	32,217	50,140	39,166	38,835	33,952	38,575	31,451
Median	37,688	31,245	45,375	39,569	43,318	36,152	39,893	32,974

Source: Authors' structure from financial statements of 4 Systemic Banks.

In the Figure 4 we observe as it was naturally, as long as the National Bank and its Group retain most of the deposits, they would have the largest volume of loans, in line with the central rules of the Basel Committee III and the Greek Banking Law.

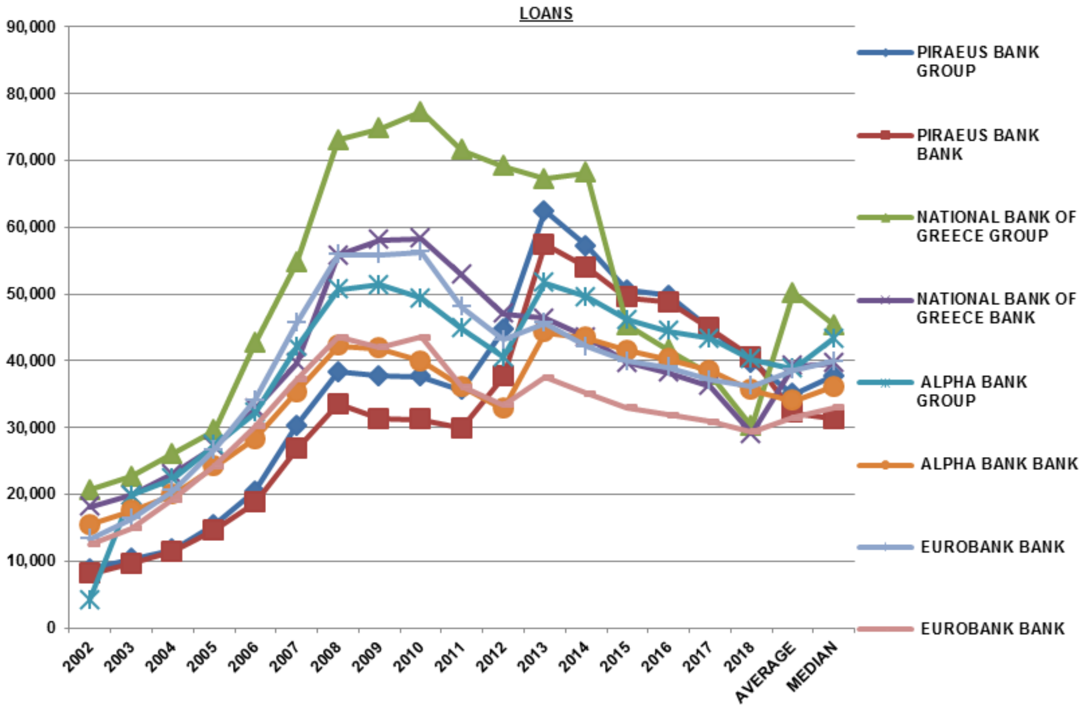

Figure-4. Volatility of loans for banks and banking group.

Source: Authors' structure from Financial Statements of 4 Systemic Banks.

From the Table 5 below we can see the value of the Total Equity that the four Greek Systemic Bank had from the implementation of Euro since 2002 until 2018 after all mergers and acquisition took place in Greece and after the strike of financial crisis in Greece.

Table-5. Equity of 4 Greek systemic banks and their group.

Years	Piraeus Group	Piraeus Bank	NBG Group	NBG Bank	Alpha Group	Alpha Bank	Eurobank Group	Eurobank
2002	1,335	1,356	2,584	2,353	1,316	1,602	1,822	1,868
2003	1,342	1,303	2,611	2,545	2,141	2,274	1,793	1,767
2004	1,269	973	3,440	2,623	2,347	1,812	1,940	1,928
2005	1,608	1,459	4,316	2,972	3,122	1,951	3,399	3,116
2006	1,832	1,628	8,833	6,119	3,614	2,436	3,624	3,162
2007	3,310	2,944	8,542	6,536	4,291	2,740	5,359	4,687
2008	3,025	2,624	8,267	6,434	3,941	2,369	4,623	3,895
2009	3,614	3,238	9,828	8,224	5,973	4,776	6,314	5,186
2010	3,273	2,956	11,905	8,780	5,784	4,430	6,094	5,115
2011	-1,940	-2,059	-253	-1,066	1,966	593	875	-10
2012	-2,315	-2,734	-2,042	-3,930	773	-405	-655	-1,297
2013	8,293	8,269	7,874	6,383	8,367	7,147	4,523	4,002
2014	7,322	7,387	10,466	8,653	7,707	6,821	6,304	5,257
2015	10,021	9,608	9,824	8,315	9,054	8,418	7,132	6,131
2016	9,823	9,456	7,587	6,027	9,113	8,725	7,355	6,173
2017	9,544	9,427	7,379	6,214	9,627	9,146	7,150	6,442
2018	7,506	7,574	5,638	4,638	8,143	7,851	5,031	4,378
Average	4,051	3,848	6,282	4,813	5,134	4,276	4,275	3,635
Median	3,273	2,944	7,587	6,119	4,291	2,740	4,623	4,002

Source: Authors' structure from financial statements of 4 Systemic Banks.

In the Figure 5 below we can observe that National Bank of Greece (NBG Bank) and its Group held the largest equity position of the other three systemic banks during the years 2002 to 2010. But when the global financial crisis entry into Greek Economy, which significantly affected the Greek banking system, the National Bank which was probably the most exposed bank to Greek bonds had lost all of its equity and consequently had the largest negative equity of the other three systemic banks, which also had a negative equity position.

This phenomenon had to be dealt with immediately, so the year 2012 started the recapitalization of the Greek systemic banks, which was completed in 2013, and again allowed the four Greek systemic banks to return to positive equity.

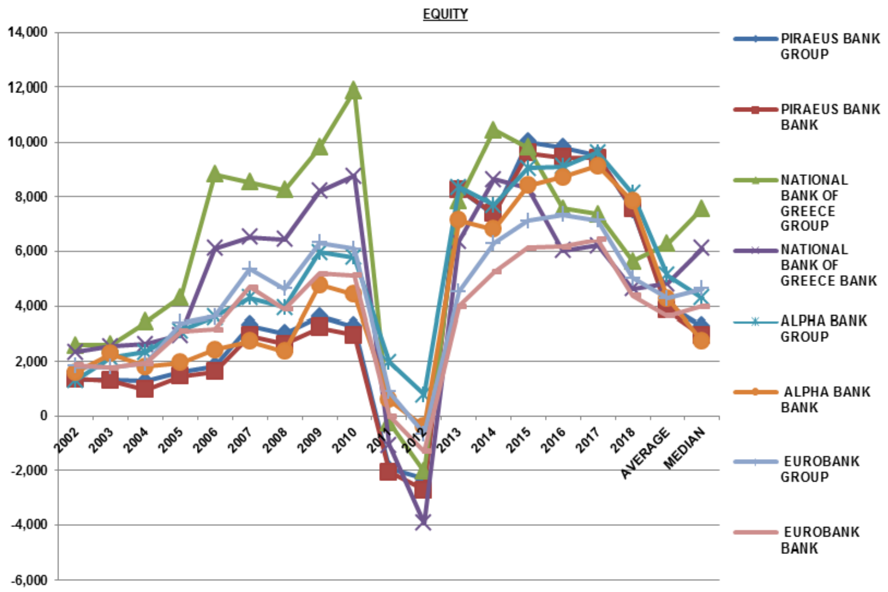

Figure-5. Volatility of equity for banks and banking group.

Source: Authors' structure from financial statements of 4 Systemic Banks.

From the Table 6 below we can see the total sales of four Greek Systemic Banks from the implementation of Euro since 2002 until 2018.

Table-6. Sales of 4 Greek systemic banks and their group.

Years	Piraeus Group	Piraeus Bank	NBG Group	NBG Bank	Alpha Group	Alpha Bank	Eurobank Group	Eurobank
2002	927	786	3,289	2,887	1,951	1,602	1,876	1,702
2003	962	839	3,042	2,630	2,573	1,634	2,084	1,774
2004	1,081	1,802	4,212	2,357	2,087	1,734	2,613	2,239
2005	1,477	1,270	3,806	2,645	2,319	1,953	3,512	2,981
2006	2,222	1,818	5,125	3,267	3,258	2,947	4,770	4,153
2007	3,415	2,724	7,959	4,198	4,086	3,536	6,939	6,025
2008	4,724	3,451	8,946	4,401	4,995	4,561	8,597	7,419
2009	6,923	2,378	8,678	4,180	4,242	4,039	6,818	5,828
2010	3,020	2,296	8,079	3,782	4,024	3,307	5,710	5,086
2011	3,178	3,337	8,074	4,001	4,770	3,561	5,553	4,840
2012	3,830	3,191	7,701	3,311	4,685	3,072	4,555	3,716
2013	4,057	3,324	6,956	3,346	4,274	3,686	3,262	2,362
2014	4,184	3,535	3,821	2,597	3,744	3,160	3,367	2,591
2015	3,451	3,191	3,146	2,341	3,408	3,009	3,063	2,658
2016	3,013	2,935	2,372	2,345	3,188	3,154	2,844	2,520
2017	2,766	2,668	2,082	1,943	3,311	2,620	2,696	2,274
2018	2,317	2,282	1,686	1,619	3,715	2,741	2,741	2,306
Average	3,032	2,460	5,234	3,050	3,566	2,960	4,176	3,557
Median	3,020	2,668	4,212	2,887	3,715	3,072	3,367	2,658

Source: Authors' structure from financial statements of 4 Systemic Banks.

As we can observe in Figure 6 the sales of the four Greek systemic banks maintained an upward trend from 2002 to 2008. The National Bank and Alpha Bank were the main players. Since then the downward trend has begun, but until 2011 it was not significant. But from 2012 to 2018 the downward trend continues and is very significant.

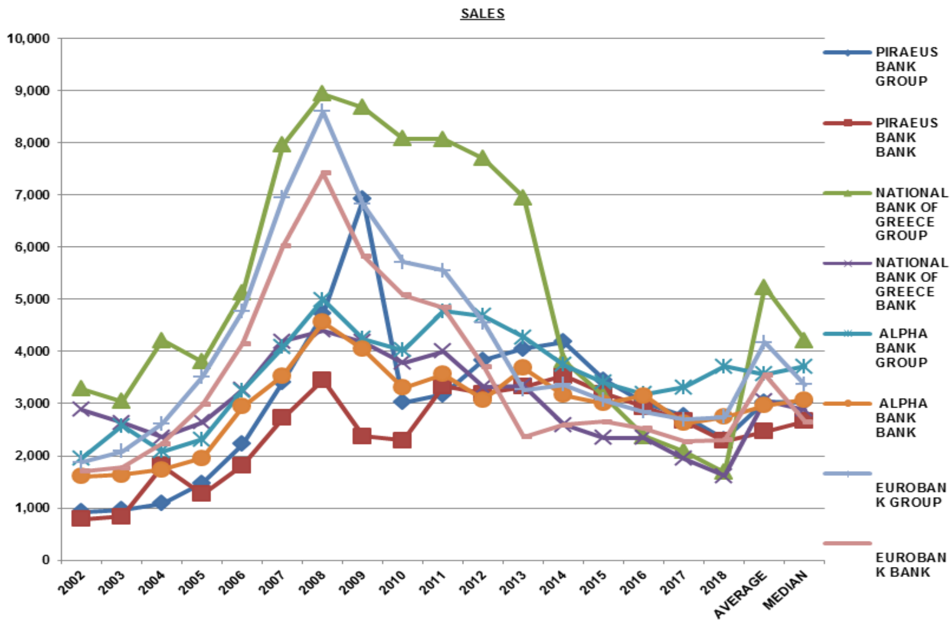

Figure-6. Volatility of sales for banks and banking group.

Source: Authors' structure from financial statements of 4 Systemic Banks.

From the Table 7 below we can see the total Gross Earnings of four Greek Systemic Banks from the implementation of Euro since 2002 until 2018, after all mergers and acquisitions and the strike of Global Financial Crisis in the Greek Banking System in 2009.

Table-7. Gross earnings of 4 Greek systemic banks and their group.

Years	Piraeus Group	Piraeus Bank	NBG Group	NBG	Alpha Group	Alpha Bank	Eurobank Group	Eurobank
2002	517	456	1,647	1,325	1,262	989	992	837
2003	595	492	1,764	1,410	1,349	1,140	1,215	983
2004	741	521	2,074	1,587	1,577	1,254	1,489	1,154
2005	901	735	2,492	1,769	1,689	1,314	1,860	1,225
2006	1,224	908	3,136	2,116	1,943	1,623	827	1,644
2007	1,633	1,081	4,559	2,546	2,241	1,587	2,817	2,034
2008	1,652	937	4,926	2,353	2,339	1,743	1,711	982
2009	1,663	1,014	5,077	2,636	2,383	2,006	1,570	836
2010	1,509	907	4,639	2,112	2,249	1,661	1,450	958
2011	3,178	3,337	4,372	2,307	4,270	3,561	1,103	656
2012	2,272	1,482	3,527	840	1,484	806	697	460
2013	6,015	5,238	3,771	1,872	2,360	1,439	521	122
2014	2,562	2,070	2,064	1,323	2,360	1,882	761	461
2015	2,393	2,154	1,780	1,430	2,221	1,823	745	775
2016	2,226	2,152	1,832	1,769	2,387	2,228	1,004	959
2017	2,146	2,019	1,594	1,492	2,467	1,938	987	835
2018	1,882	1,772	1,320	1,325	2,605	2,001	966	799
Average	1,948	1,604	2,975	1,777	2,187	1,706	1,219	925
Median	1,663	1,081	2,492	1,769	2,249	1,661	1,004	837

Source: Authors' structure from financial statements of 4 Systemic Banks.

As we can observe in the Figure 7 the gross profits of the four Greek banks follow a similar path to their sales as they presented in figure 6, from 2002 to 2010 with National Bank dominating. From 2013 until 2018, however, the first position goes to Piraeus Bank. So the rational investment moves with its mergers and acquisitions began to pay off.

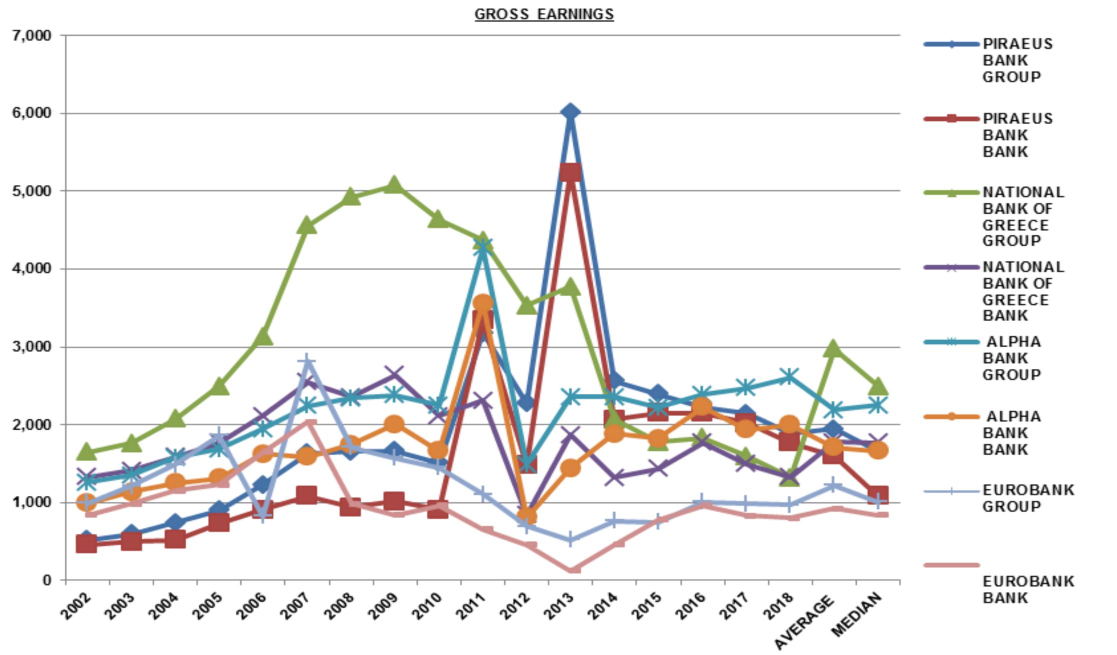

Figure-7. Volatility of gross earnings for banks and banking group.

Source: Authors' structure from financial statements of 4 Systemic Banks.

From the Table 8 below we can see the total Before Tax Earnings-Profits of four Greek Systemic Banks from the implementation of Euro since 2002 until 2018, after all mergers and acquisitions and the strike of Global Financial Crisis in the Greek Banking System in 2009.

Table-8. Profit (earnings) before tax of 4 Greek systemic banks and their group.

Years	Piraeus Group	Piraeus Bank	NBG Group	NBG	Alpha Group	Alpha Bank	Eurobank Group	Eurobank
2002	115	108	350	297	279	244	277	247
2003	138	112	521	409	417	356	382	330
2004	206	89	428	347	575	422	512	422
2005	304	266	443	623	642	476	676	561
2006	557	404	1,268	840	800	716	832	644
2007	785	498	1,903	1,032	985	614	1,050	854
2008	386	137	1,937	633	625	395	818	263
2009	287	201	1,252	404	502	568	398	0
2010	11	5	638	-334	216	46	136	-104
2011	-7,510	-7,327	-13,420	-13,136	-4,732	-4,782	-6,955	-6,636
2012	-1,165	-1,456	-1,986	-3,025	-1,345	-1,416	-1,688	-1,615
2013	1,748	1,763	-179	-501	2,278	2,176	-1,926	-1,916
2014	-3,037	-3,149	-1,422	-2,050	-1,025	-736	-1,678	-2,103
2015	-2,958	-3,480	-3,589	-3,853	-2,066	-1,812	-2,086	-2,154
2016	-167	-174	87	27	-10	138	160	-49
2017	-1,208	-1,203	-137	-245	165	106	181	-24
2018	80	-57	9	66	-289	-3,872	232	56
Average	-672	-780	-700	-1,086	-117	-374	-511	-660
Median	115	89	350	66	279	244	232	0

Source: Authors' structure from financial statements of 4 Systemic Banks.

The four Greek systemic banks from 2002 to 2010 were operating with positive pre-tax profitability. But since 2010, when the global financial crisis has hit Greece, the pre-tax profitability of banks has been on the negative side. The exception is the year 2013 when their recapitalization was completed. After 2013 they returned to negative levels of profit before tax.

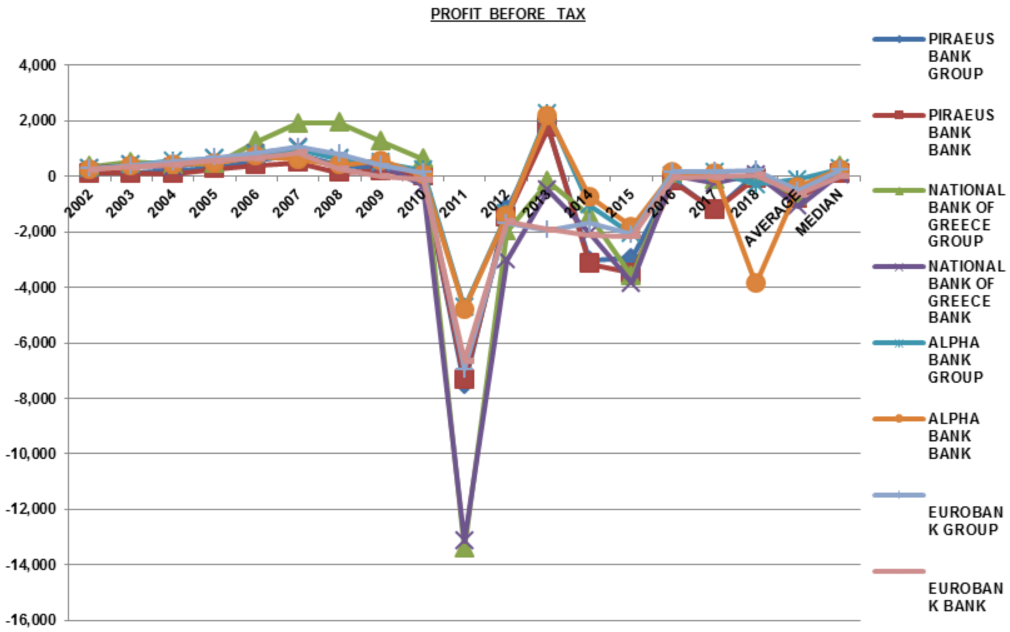

Figure-8. Volatility of profit (earnings) before tax for banks and banking group.

Source: Authors' structure from financial statements of 4 Systemic Banks.

From the Table 9 below we can see the total after Tax Earnings-Profits of four Greek Systemic Banks from the implementation of Euro since 2002 until 2018, after all mergers and acquisitions and the strike of Global Financial Crisis in the Greek Banking System in 2009.

Table-9. Net profit (earnings) after tax of 4 Greek systemic banks and their group.

Years	Piraeus Group	Piraeus Bank	NBG Group	NBG	Alpha Group	Alpha Bank	Eurobank Group	Eurobank
2002	81	98	213	395	172	231	196	190
2003	124	216	360	508	284	399	272	256
2004	176	69	292	235	412	306	368	315
2005	283	262	751	474	506	378	504	434
2006	456	340	1,064	583	554	502	607	475
2007	651	423	1,644	915	851	457	831	705
2008	331	113	1,585	480	513	334	677	236
2009	206	146	963	225	349	429	316	3
2010	-21	-4	440	361	86	56	84	-83
2011	-6,618	-6,429	-12,325	-12,145	-3,809	-3,843	-5,496	-5,155
2012	-509	-805	-2,144	-2,936	-1,086	-1,137	-1,440	-1,364
2013	2,516	2,506	807	618	2,922	2,857	-1,139	-1,008
2014	-1,972	-2,065	106	-382	-330	-59	-1,196	-1,383
2015	-1,895	-2,389	-2,592	-2,846	-1,371	-1,032	-1,155	-1,051
2016	-40	10	53	24	42	261	249	5
2017	-204	3	-163	-248	21	44	115	11
2018	-171	51	-28	62	53	63	91	33
Average	-389	-439	-528	-805	10	14	-360	-434
Median	81	69	292	235	172	261	196	11

Source: Authors' structure from financial statements of 4 systemic banks.

As we observe in the Figure 9 the volatility of net income earnings or profits of the four Greek systemic banks follows the same course as the pre-tax profits follow. So we suppose that the tax was not a various that could affect the net profit of the four Greek systemic banks, especially when they had negative before taxes profits from the beginning of the global financial crisis.

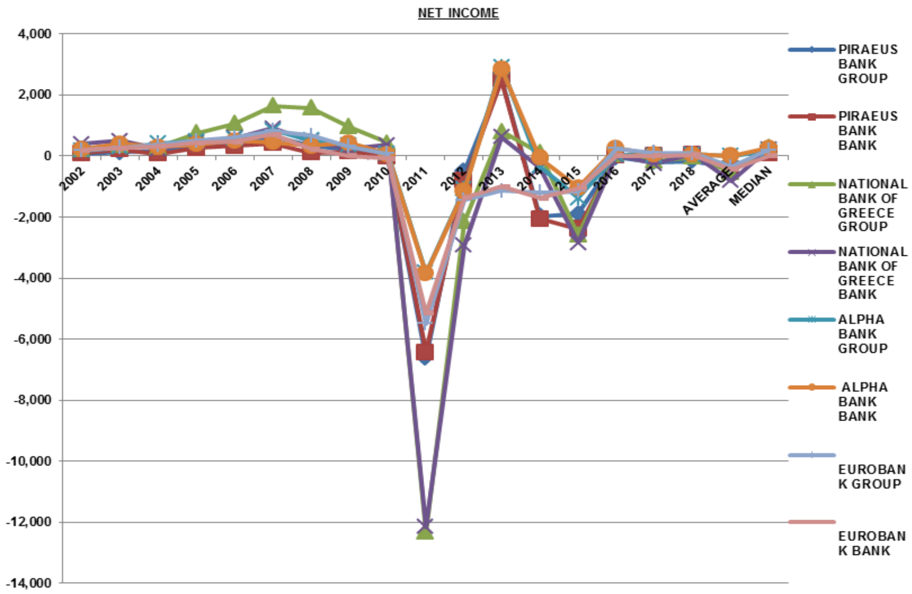

Figure-9. Volatility of profit (earnings) after tax for banks and banking group.

Source: Authors' structure from financial statements of 4 systemic banks.

4. Conclusion

The general finding about why companies tend to merge or takeover is that they try to maximize their market share or even gain dominance through such synergies. Of course, we would say that it can negatively affect the functioning of the market, since a dominant business is likely to lead to an oligopoly or even a monopoly, burden consumers with high costs, reduce their choice but also reduce their choice to become a barrier to innovation.

The policy of mergers and acquisitions could only appeal to banking institutions, which use this expansionary tactic as a tool for strategic growth and empowerment. The merger or acquisition of a smaller or equal size banking institution by another is a trend that has flourished in Greece over the last fifteen years, increasingly.

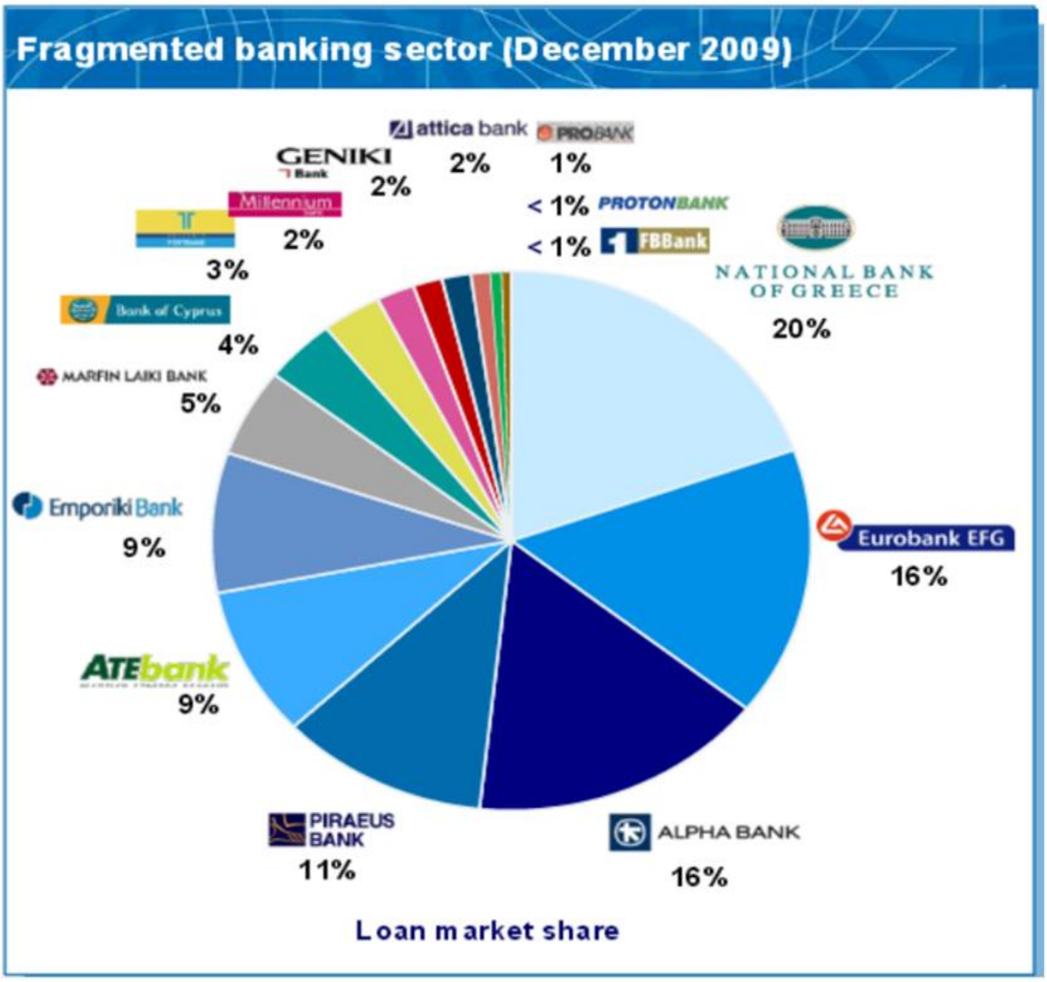

Figure-10. The Greek banking system and loan market shares in 2009.

Source: www.bankingnews.gr.

As we can see in the above Figure 10 the loan market share of the Greek Banking System before the world financial crisis strike the Greek Economy. We note that in 2009 there were 15 banks operating in Greece. We also note that just before the global financial crisis hit Greece's banking system, the four systemic banks still held over 50% of the total share of loans granted. Today, the four systemic banks and Attica Bank cover 97% of Greek banking system (in terms of 67.7% that were the share of the five largest banks at the end of 2007).

Within five years 21 credits institutions ceased to function in Greece with many consequences to the unemployment and to the Demand of the Greek Economy.

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