NEAPOLIS UNIVERSITY PAFOS

MASTER IN BANKING, INVESTMENT AND FINANCE

DISSERTATION:

THE REQUIREMENTS OF BASEL II AND THE CREDIT RISK IN GREEK BANKS

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2010 - 2012

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Abstract

This project aims to understand the need for building up capital requirements for banks. In particular, the role of the institutional framework for the operation of banks is to ensure all the conditions required for the smooth functioning of the banking institutions in a fair competition and the protection of depositors of all malice and bad management of the administration of the institution. The rules for determining the capital requirements for banks aimed at strengthening the capacity of absorption losses in case an unpredictable risks to which banks are exposed for their operation. The rules for determining capital requirements developed by the Basel Committee on Banking Supervision. The structure of this paper is as follows: The introduction is a brief overview of the structural changes that have helped to create a new framework for financial rules and the operation of credit institutions and then report the historical background of Basel I, goal of the capital adequacy of international banks and the need to improve, with the creation of Basel II, the bulk of the work consists of three chapters.

Acknowledgement

I would like to express my gratitude to all those who gave me the possibility to complete this thesis. I am deeply indebted to my supervisor Prof. K. Giannopoulos from the Paphos Neapolis University whose help, stimulating suggestions and encouragement helped me in all the time of research for and writing of this thesis. Especially, I would like to give my special thanks to my family whose patient love enabled me to complete this work.

Declaration

I hereby declare that this thesis is my own work and effort and that it has not been submitted anywhere for any award. Where other sources of information have been used, they have been acknowledged.

CHAPTER 1 : INTRODUCTION

The globalization of the economy, the rapidly changing and growing competition in social as well as political and technological environment, has forced financial institutions to alter the conditions under which they operate. Banks are focusing on more niche markets and services, introduce a high degree of expertise and generally pushed to gain more competitive advantage over liberalized and integrated financial markets. Especially in Europe, the creation of a pan-European financial services market accelerated the introduction of the common currency, the euro, and also created the need to expand the European banking institutions, to enable them to cope with impending aggressive markets. Banks have as immediate priorities to increase operational profitability, control costs, increase capitalizations and therefore increase their profitability, organic growth within, regional development, and to increase their participation in acquisitions and mergers both at home and abroad. In doing so the banks face a wide range of risks. To avoid adverse impacts require the development and implementation of high quality systems for measuring and managing risk. The increased interest in measurement and management due to the direct and indirect effects of inconsistency associated with the viability and hence the profitability of banks. Banks have to manage legal risks.

The financial crisis we are experiencing in recent months began to be created gradually since 2007, when it called for a repricing of risk assets linked to mortgages in America. Followed by conversion to a large proportion of doubtful loans, limiting the liquidity of various financial institutions, increased volatility and shifting the crisis to other sectors of the global money market and capital. The globalization of these markets, combined with the rapid development of information systems in recent decades have created a volatile economic environment, with 'local' judgments should not be confined to the narrow limits of a country, but to influence uncontrollably worldwide. The opinion expressed by many economists is that "a butterfly flying to Hong Kong is able to create hurricane in America," which declares vivid way how fickle is our world and what it means financial crisis and crisis global economic structures. Several economists began to dust off the «The Great Crash» of John Galbraith and collate current data on the circumstances that led to the Great Depression of the 30s. This means that difficult days come, not only for the global financial system, but also for individual prosperity. It also means that the policies of states or central banks will play a decisive role in the outcome of this crisis. Classical economic theories are being questioned, since the act proved unable to cope with the consequences of the crisis, but also in anticipation of the growing expansion, which acts as a "domino effect" in economic structures worldwide. Risk management (risk management), which exposed banks, insurance companies, businesses of all sizes, is of particular interest nowadays and is a field of knowledge is constantly evolving. How businesses and investors respond to the risks, how to predict if it is possible to estimate the proportion of the value at risk, whether there aversion to risk and how to anticipate and manage the price volatility generally avoiding bankruptcy.

In light of the increased size and, while the actions of banks internationally, it became necessary to create and adopt regulatory frameworks governing banks in European or global level. The need for controls and modeling created a framework which formally called "International Convergence of Capital and Capital Adequacy Standards» International Convergence of Capital Measures and Capital Standards), while informally known as "Basel II» (Basel II), named after the town of Switzerland. Created, so major regulatory authorities and control mechanisms,
designed to monitor the application of the standards and rules set. This includes the "Corporate Social Responsibility" and "Regulatory Compliance", which reflects the outcome of the Basel Committee on Banking Supervision (April 2005).

The motivation of the thesis is trying to understand the functioning of the banking sector in Greece and the changes that had occurred to him by the "on capital adequacy" of the Basel Committee. Also to find out the contribution of the Basel II in risk management, the general trend in the banking industry during the period 2008-2011 and the prospects and developments of the Greek Banking System.

Banks perform various roles in the economy. First, they ameliorate the information problems between investors and borrowers by monitoring the latter and ensuring a proper use of the depositors' funds. Second, they provide intertemporal smoothing of risk that cannot be diversified at a given point in time as well as insurance to depositors against unexpected consumption shocks. Because of the maturity mismatch between their assets and liabilities, however, banks are subject to the possibility of runs and systemic risk. Third, banks contribute to the growth of the economy. Fourth, they perform an important role in corporate governance. The relative importance of the different roles of banks varies substantially across countries and times but, banks are always critical to the financial system.

Banks act as delegated monitors and ensure that firms use the resources allocated to them effectively. They also play an important role in sharing risk in the economy by diversifying and smoothing fluctuations over time. These are positive aspects of the roles banks play. However, the fixed nature of the claims they issue can cause fragility in the financial system. Banks are often at the center of financial crises as in the crisis that started in August 2007. They can help spread crises if there is contagion and small shocks can have a large effect on the financial system and the economy. Banks play an important role in providing funds for firms and helping them and the economy to grow.
They are also important for corporate governance, particularly in countries like Germany where bankers sit on boards and control a significant number of proxy votes. Finally, banks can help overcome asymmetric information problems by forming long-lived relationships with firms.

In today's financial environment, the role of banks has become more complex. Financial institutions beyond their traditional role as intermediaries between capitalists seeking to invest capital, and those who need to borrow to finance their activities are required to manage the underwriting financial risks. Given the specificity of the role and function of banking was born the need to create a framework of settings, which will aim to enhance the benefits and services offered by banks. Some of these settings are

a) **The subjects of monetary policy** are exercised from the Central Bank which controls immediately the quantity of paper money and coins in economy. In contrast, the biggest mass of money, which has the shape of banking deposits, is controlled indirectly from the Central Bank through mandatory liquidity. In Greece the minimum amount of cash should be kept at the Central Bank is 2% of deposits.
b) **Safety and economic robustness,** the state, for the protection of depositors and creditors has established "safe levels". The first level of protection refers to the dispersion of the portfolio of receivables. The second level of protection to the minimum amount of equity that shareholders must pay to finance its operation. The third level of protection has to do with direct deposit guarantees. Finally, the fourth level of protection concerns the frequent monitoring, supervision and oversight on the part of the state.
c) **The consumer protection** is referred to the regulations for the avoidance discrimination in lending, especially discrimination on age, sex or income.
d) **Allocation of credits,** the rules require banks to finance their sensitive economic sectors like agriculture industry. Furthermore, the credit institution must keep a minimum percentage requirement of (the loan portfolio) in a particular sector of the economy.
e) **The protection of investors** is succeeded by the host of laws which protect investors from deceptions, distortions and abuses. These laws further institutional strengthening, due to the wide range of banking activities.
f) **The entry of other banks in the industry.** Institutional arrangements should aim at improving the competitiveness of the banking industry. This is achieved if the industry is highly protected from new entry banks.

These settings are usually imposed at the international and national levels through a regulatory framework. Such a framework is the Basel I and later the Basel II.

Basel II is the second of the Basel Accords, (now extended and effectively superseded by Basel III), which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. In simple words the Basel Committee II is a new standard for the measurement of risks in banks,

and for the allocation of capital to cover those risks. Original name was the Commission's Committee on banking Regulation and Supervisory Practices.

Basel II was intended to create an international standard for banking regulators to control how much capital banks need to put aside to guard against the types of financial and operational risks banks (and the whole economy) face. One focus was to maintain sufficient consistency of regulations so that this does not become a source of competitive inequality amongst internationally active banks. In theory, Basel II attempted to accomplish this by setting up risk and capital management requirements designed to ensure that a bank has adequate capital for the risk the bank exposes itself to through its lending and investment practices. Generally speaking, these rules mean that the greater risk to which the bank is exposed, the greater the amount of capital the bank needs to hold to safeguard its solvency and overall economic stability..

Some of the main objectives and activities that Basel Committee does were:

- ✓ The creation of an international standard that regulators can use when creating regulations about how much capital (capital adequacy) should the banks have at their disposal, to protect themselves against the financial and operational risks.
- ✓ The shortening of the gap in the supervision of credit institutions in different countries. The coverage of this objective is pursued through the promotion of two key principles:
    i. All banking institutions in the world should have surveillance systems
    ii. The supervisory system must be adequate.

The Commission's aim is to encourage convergence towards common approaches and standards. The Dieter Kerwer states that "the Basel Committee on Banking Supervision is not a classical multilateral organization that has no founding treaty and does not issue binding regulations. A fortiori, the main function is to act as an informal open forum (forum) to find solutions to inform policy and standards"

Some of the activities the Basel Committee are 1) Acts as Think-Tank for banking regulators, 2) Issues guidance on best practice for banks, 3) Standards accepted worldwide (authoritative, best practices), 4) Generally incorporated in national banking regulations, 5) Ensuring that capital allocation is more risk sensitive, 6) Enhance disclosure requirements which will allow market participants to assess the capital adequacy of an institution, 7) Ensuring that credit risk, operational risk and market risk are quantified based on data and formal techniques and 8) Attempting to align economic and regulatory capital more closely to reduce the scope for regulatory arbitrage

The Commission, although not in the form of a supranational supervisory authority and its decisions have no binding legal force, the influence is particularly important in all countries. Specifically, the project has a determining influence in shaping the framework for prudential capital adequacy of banks in the single European banking and financial market in general. There is also advisory, shaping proposals to establish competitive equality between international financial institutions and prevent generalized seizures, which were adopted from countries not members of the Commission.

In 1988, Commission entered the 'Basel Capital Accord' which is a method of measuring risk capital, which aims at building capacity to absorb losses in case the occurrence of various financial or other risks to which banks are exposed in the course their activities. Furthermore, significant weaknesses such as asymmetric

information and the potential exploitation of consumers, taking excessive risks by banks, as well as the complexity of transactions, the opacity and the private nature of financial institutions require banking supervision. For these reasons, the Commission has to control credit risk as the minimum rate of 8% to a fraction the numerator of the equity of the institution and the denominator the sum of assets and off balance sheet risk-weighted them.

The work of the Basel Committee aims primarily at ensuring the stability of the international financial system and the formation of equivalent conditions of competition. The main instruments for implementing the project are the exchange of information on supervisory arrangements at national level, accurate recording and managing the risks exposed banks, improving the effectiveness of rules and technical supervision the international banking system and finally establishment of minimum standards and rules of supervision activities issues and each time there is a need to do this.

In recent years significant structural changes have helped to create a framework of rules and financial functioning of credit institutions. Considering the situation of banks, both currently, because of prevailing economic crisis, and over time, it becomes clear that the management of risks facing an imperative. The practice of risk management in financial institutions has grown rapidly since the late 1970's until today. The banks should feel secure in the free credit environment that exists, so you can act rationally without risk and to take right decisions in times when credit margins are narrow. The major reasons that was done was mainly to liberalize markets, monetary integration, increasing the velocity of capital, the increasing complexity of financial instruments with the introduction of derivatives, as well as the use of technology in both trading and asset management level. The key factor in promoting and developing practice, Manage Risk, was the needs created by the rapidly changing financial environment, as well as the pressures at supervisory level of national authorities because of problems and instability of that time.

Risk management in financial institutions followed these late developments worldwide. The increase in bankruptcies in the banking institutions mainly in the 1970's led the authorities to introduce institutions and rules on capital adequacy. Was designed common understanding among members of the Committee on the necessity and adopting an international agreement (the Treaty) in order to set a minimum level of capital to be every credit institution in relation to credit risk. The capital requirement against credit risk stemmed from the lack of proper management of loan portfolios of institutions.

Basis of the framework developed by the Basel Committee capital adequacy of banks is the Basel Accord of 1988 (Basel Capital Accord), whose provisions on two related topics: 1)The method of calculating capital requirements for international banks to cover against their exposure to credit risk (including country risk) of assets and off balance sheet, and 2) Define the elements of regulatory capital with which banks are allowed to meet their capital requirements to cover credit risk and market risk. The guidelines of the Basel II capital adequacy, by July 1988, published under the title "International Convergence of Capital Measurement and Capital Standards" developed gradually, with several amendments which suffered occasionally. The most important change is that of 1996, concerning the inclusion of market risk.

The first Basel Accord, known as Basel I, focuses on capital adequacy of banks. The risk capital, i.e. the risk of an unexpected loss, is classified into five categories (0%, 10%, 20%, 50%, 100%). Specifically, the line that defines the data and the quality of

banks' own funds and groups in the main categories and off-balance sheet items, depending on the deemed credit risk profile. So the Basle Accord imposed uniform minimum capital adequacy ratio of 8%, and harmonized for the first time the international supervisory system. Credit institutions in this way will ensure that they have resources that are adequate for the risks they have taken or will take in the future. Under Basel I are:

$$\frac{\textbf{Regulatory Capital}}{\textbf{Credit risk} + \textbf{Market risk}} \quad \textbf{1.a}$$

(given the risk weights). Furthermore, the above fraction has to be greater than 8%. The international acceptance of the pact was impressive, especially in the case of the European Union, if corresponding provisions incorporated in the Community institutional framework of banking supervision, resulting in a definite strengthening of the solvency of banks in the past and current decade. The presence of high capital adequacy ratios is certainly necessary but not sufficient condition for ensuring stability of the banking system. There are a number of qualitative characteristics such as good management and sound structure of the bank, the existence of adequate internal control systems, developing procedures for loans and prudent portfolio management, which is equally necessary.

But the decade of 1980 was characterized by high volatility in market parameters and particularly the exchange rates, resulting in negative impact on the profitability of financial institutions. Then in the 1990 cases occurred in catastrophic losses due to credit risks arising from imperfections of the operational framework. The revised document in 1988 was given in publicity in 1999 by the Basel Committee in respect of credit risk for commendation. This document led to continuing consultations between the central bodies. The basic methodology of the first revised Basel refers directly to regulatory capital. The credit risk weights are defined by payer category, ie lower credit risk, and central governments and central banks, and then followed by financial institutions and businesses.

Despite these achievements, the design of capital adequacy rules in 1988 only took into account the characteristics of the banking system of the 80s. Hence it is inadequate for the needs of international finance in the 21st century. Realizing the shortcomings of Basel I, and market pressure led to the start of work on the revision by the Basel Committee on Banking Supervision and the European Commission, which had to revise its guidelines on capital adequacy, which contrary to the recommendations of the Basel Committee is mandatory.

Monetary integration, liberalization of financial markets, international banking regulations, supervisory changes, technology development are some of the factors that created the conditions for the formation of a new European financial sense. The changes that have occurred and the reforms that will persist for the foreseeable future, have implications that extends not only to financial institutions but also the whole economic activity. H hit a smooth business operation depends largely on consumer confidence in the banks, the traditional role of which is to transfer funds from surplus to deficit economic units, ie mediation between lenders and borrowers and to channel savings in the economy to those investments with the highest expected return. Significant weaknesses, such as asymmetric information and potential exploitation of consumers, taking excessive risks by banks, as well as the

complexity of transactions, the opacity and the private nature of financial institutions require banking supervision. Credit institutions should therefore ensure that they have funds, which are sufficient for the risks which they have taken or will take in the future. The existence of insolvency, coupled with unreliable and asymmetric information makes the regulatory action desired by the public, much more than if consumers know that the supervisory control is not freely available, as banks are able to pass on the cost mentoring in their product prices.

This factor became known as $Solvency\ Ratio$ and aims to protect financial institutions from credit risk. It is also an international yardstick of solvency of banks and the minimum acceptable level of capital to cover risks assumed by credit institutions. The policy of capital applies to capital and capital assets. This can be overestimated in many cases. The BIS requires that handsel bank capital to assets is over a certain minimum international level to protect all involved central banks. The main role of the BIS is the definition of capital adequacy requirements. From an international perspective, ensuring that the capital adequacy is the most important problem among central banks, the profit-based lending to poor underlying capital varied rules and obligations caused financial crises as "bad money drives out good" (Law of Gresham) . The rate was originally formed by the ratio of regulatory capital of the bank to credit risk assets (on and off balance sheet) as the denominator, as follows:

$$\textbf{Solvency Ratio} = \frac{\text{Regulatory Capital}}{\text{credit risk}} \qquad \textbf{1.b}$$

OR

$$\textbf{Solvency Ratio} = \frac{\text{Regulatory Capital}}{\text{Weighted off balance sheet assets}} \qquad \textbf{1.c}$$

For the Commercial banks the solvency ratio must be greater than or equal to 8% while Cooperative banks greater than or equal to 10%. The first measure of the solvency ratio was related only to credit risk.

Credit Risk arises from the possibility of default by borrowers, videlicet, the probability of default on their loans to the bank. A financial institution reflects the risk that may arise from the inadequate response of the institution in fulfilling its obligations to its creditors. The risk is identified with the concept of uncertainty and no loss. The risk is primarily that of the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs. The loss may be complete or partial and can arise in a number of circumstances.

Equity Capitals expresses the relationship between equity and total capital available to the company. Equity Capital of a company consists of share capital, reserves from investments or from share premium, retained earnings, and sometimes some pits. 1. Common equity is that portion of total equity owned by holders of common shares. 2. Total equity and include preferred shares. The terms of equity and common equity

are often used interchangeably. Calculated if we divide the total (not average) of its equity firm with total liabilities or assets in the balance sheet. The equity mentioned in solvency ratio, videlicet the numerator is differentiated from the accounting equity. For this so- called regulatory capital, videlicet Tier 1 (Basic of at least 50%) and Tier 2 (supplementary), where Tier 1 consists from share capital and reserves and Tier 2 consists of some forms of foreign capital for example subordinated debentures.

The **Weighted off balance sheet assets**, videlicet the denominator of the fraction, which are standardized and uniform for all banks, refer to the underwriting of these credit risk.

Since the mid 1990's, had become some obvious shortcomings and weaknesses of Basel. Both the supervisors and the supervised banks criticized that focused on the following points:

- ✓ Reviewed supervisors focus on: 1) the absence of capital requirements for risks other than credit risk, and 2) allowing the avoidance of capital requirements (regulatory capital arbitrage).

- ✓ The review of the banks concerned the limited "sensitivity" of credit risk weighting than the actual risk assumed.

By extension, was concerned, the development of new complex banking products such as securitization, has raised concerns regarding the adequacy of the prudential framework for capital adequacy.

Some of the main shortcomings and weaknesses of the Basel 1 are:

- The weightings which are laid down in Basel for the assets are based solely on exposure to credit risk. Not aligned with the actual risks faced by banking organizations.
- It takes no account of operational risk, namely the risk that may arise from any damage to the interior of the bank, where it may be damaged due to technological factors, unexpected results or process factors, eg when processing transactions. Moreover, it ignores other forms of banking risks such as interest rate risk, legal risk, etc.
- The grouping of the weighting categories for credit risk was too centralized and arbitrary, so that there is sufficient differentiation based on the actual credit risk. This has led some banks to engage in high-risk lending. Specifically, the Basel Accord imposed, despite significant differences in the level of credit risk among placements in different countries of the OECD report on lending to these countries generally be weighed against the risk to 0%.
- The Basel Accord did not provide incentives for banks to develop improved risk management systems. On the contrary, encouraged in some cases only formal compliance with the provisions and required the banks that used reliable calculation of credit risk and required capital to cover to make double counting of capital requirements, one for internal use and one for compliance with supervisory provisions.
- The capital adequacy rules of Basel were designed to monitor the activities of the various banks operating in the industrial countries. However these rules are followed to the letter by many banks and investment companies not only in Europe but in many countries around the world. This

> makes ineffective risk management by supervisors of credit institutions and investment firms, because the capital adequacy rules of Basel is generalized and weightings under the Basel Accord is arbitrary.

The main dysfunction were the rules of Basel I is that because of the lack of specificity imposed capital requirements on banks for 'good' risks (loans to firms with sufficient creditworthiness) and lowest for 'bad' risks, thus creating the phenomenon of capital arbitrage. In summary, the major weaknesses of the Basel I as the determination of the weights regardless of the size of the institution, the arbitrary determination of the percentage of capital adequacy, and the failure risk assessment such as credit, operational, currency, the legal, etc. led to the revision of the Pact and the introduction of a new framework for the capital adequacy of credit institutions, so be ideal ratio between risk and capital holdings.

The first text revision, which takes into account the specificity of credit institutions and the complexity of the banking system and the rapidly changing conditions in the financial world, published in June 1999. The Basel Accord on capital adequacy, however, overtaken by developments in the banking sector and ceased to respond effectively to the risks to which banks are exposed. So, 2001 is published the final text of the new Accord, now referred to as Basel II, which brings about significant changes in the prevention and management of risks to the banks.

The Treaty of Basel I, succeeded in creating a single methodology for assessing capital adequacy. It was, however, the need for improved methodologies for measuring credit risk identification and risk measurement and systematic surveillance. Realizing the shortcomings of Basel I, but market pressure led to the commencement of work on the revision of the Basel Committee on Banking Supervision and the European Commission, which was to revise the directives on capital adequacy, which contrary to the recommendations of the Basel Committee is mandatory. The new Basel II is an improvement on the existing framework, having identified the need to amend the provisions of the original agreement provides for an approach more comprehensive and nature of risks undertaken. Basel II Introduces advanced and flexible methods for measuring credit risk, effective methods for reducing credit risk measurement approach for operational risk and early disclosure of data and information to the supervisory authorities and shareholders.

The main objectives of the new Accord consist in the following: 1) to emphasis the supervisory review process and market transparency. 2) Adequate coverage of all financial and non-risks and 3) the gradual convergence of the level of regulatory capital to economic capital of banks, through recognition by supervisors of risk assessment carried out by the banks themselves.

Also behind the revision of the Basel I is to develop a framework that pushes the consolidation and stability of the international banking system, without uncontrolled competitive tendencies among international banks. Keeping the key elements of Basel I, the revised framework provides a range of options for addressing key requirements for credit risk and operational risk, allowing banks to use approaches that are appropriate for their operations. Under Basel II, the national authorities are free to adopt the settings they want. The Basel Committee has stated that Basel II is not intended to change the level of international capital in the banking industry, but rather to create an incentive that would encourage banks to adopt "best practices" for managing risk.

Thus, Basel distinguishing its role, which is to ensure the stability of the international financial system, the configuration equivalent conditions of competition, especially at international level both among internationally active banks and between banks and investment firms, the allocation of responsibilities and co-supervisors, promotion methods and prudential banking financial conglomerates, and risk management.

The new Basel Accord consists of three pillars:

- The first pillar concerns the determination of capital requirements for cover credit and operational risk.
- The second pillar concerns the determination of the purpose to which designed the process of assessing the capital adequacy of banks by supervisory authorities, and the general principles and criteria that will govern the process.
- The third pillar in strengthening market discipline through specific disclosure of qualitative and quantitative data.

These three pillars of the new Accord are mutually reinforcing. Undoubtedly, the effectiveness of the rules of the first pillar depends decisively on the ability of supervisors to monitor the correct implementation, through the powers of the second pillar. Also, the increased obligations of disclosure of the third pillar shape appropriate incentives for improved risk management procedures, developed by the banks. Finally, the capital adequacy of banks, as mentioned above, represents the ratio between equity and bank assets (on and off balance sheet), which are compensated according to the risk you have decided that their corresponding.
The key features of Basel II and the differences of the Basel I are the following:

a) The Basel II includes a sophisticated framework for measuring the adequacy of banks.
b) Basel II aims not only the efficiency, but also improve risk management in the banking industry, by providing the right incentives for better cooperation and encourage transparency.
c) Unlike Basel I, Basel II gives great weight to operational risk. Indeed, the main focus of Basel II is in operational risk and not market risk or credit risk.
d) The Basel II provides a more flexible framework competence (the ability to evolve over time), one depicting a better way risks faced by banks and encourage them to make the necessary improvements in risk assessment.
e) Basel II is more sensitive to risk than Basel I.
f) In countries where the level of risk is even higher, should consider the need for additional setting higher capital adequacy of that Pact. National authorities are also free to implement additional measures of adequacy.
g) The Basel II was designed to apply to internationally active banks (banks with branches in other countries).
h) An important innovation of Basel II is the extensive use of internal models for risk assessment. The agreement provides a range of options for credit risk and operational risk.

In various publications, the BCBS displays some of the benefits arising from Basel II: 1) Improve the adequacy framework, because it covers three pillars because it produces virtually the highest standards and sensitivity to risk. 2) Places emphasis on risk management and encourages internal risk assessment of banks. 3) The Basel II requires disclosure of key elements of risk, which provides important information to investors and stakeholders to form a view on the risk of the bank.

The rules for setting capital requirements for banks aimed at ensuring the stability of the banking system by strengthening the banks' ability to "absorb" losses when the risks they are exposed during operation, react.

CHAPTER 2 : THE CAPITAL POSITION OF BANKS AND THEIR FINANCIAL STABILITY AND EFFICIENCY

2.1 The impact of the New Covenant in the capital position of banks

The impact of the new Accord is divided into two main categories:

a) *Effects on systemic level*

System-level discussion of the impact of the implementation of the new Accord focuses on the impact of the policy to ensure the stability of the banking system. Ensuring the stability of the financial system is considered by many to be called into question in the new Covenant. The use of different in risk sensitivity methodologies of banks operating in the same banking market creates strong incentives for the low credit borrower to appeal for funding to banks applying the standardized approach. This will have the perverse effect of banks with less developed risk management procedures to collect the most risky loans.

b) *Impact in operating banks*

The impact at the individual level could be classified into three sections, the impact on market structure, the impact on the operation of banks and their impact on bank customers. Regarding the impact on market structure, there are many who argue that banks that adopt the advanced approach both for credit and for operational risk will gain competitive advantage over other banks due to declining capital requirements (relative capital advantage).

On the other hand, according to the speech of the Governor of the Bank of Greece, Nicholas C. Garganas, at dinner hosted in his honor by the Propeller Club on 19 December 2003, on the impact on the operation of banks, based on the results of the third exploratory impact exercise (QIS 3) of the Basel Committee drew the following conclusions:

i- Banks that adopt standardized methods for calculating capital requirements and are relatively risky investments, will proceed, depending on the quality of its portfolio, to increase their own funds. This is why the addition of capital requirements for operational risk is not offset by reductions in other risk categories and particularly the credit risk for loans and retail mortgages, where it is estimated that there will be a reduction of capital requirements.

ii- In contrast, banks that implement the advanced IRB approach and qualitative portfolio assignments will receive capital relief. This also consciously sought by the Basel Committee, in order to create incentives for a gradual transition to the advanced methods, especially for the adoption of adequate risk management systems. In addition, banks should create advisory services to inform their clients about the logic by which the system of assessment and to assist them to improve

their graduation. Otherwise, you'll have to price them high customers with low, with the risk that they advance to banks applying the first method

After the implementation of the new regulations, the phenomenon where a company with unsatisfactory economic data could borrow money with good pricing, this offer collateral (eg cash or mortgage the property) from the company or the main shareholder, will be limited and banks will be forced to price them higher these businesses. The reason is that the new evaluation models do not account for the collateral. For example, a client with low rating and ensuring the good bank, which uses the IRB approach, should hold high equity. In general, banks that specialize in investment services (asset management, custody), they will be losers. In so far as the imposition of capital requirements for operational risk is a result, these services will no longer be considered activities without capital costs. On the other hand, the retail banking will encourage more than any other sector.

Finally, discrete mentioned, even though they are on the other side of the coin, the impact on bank customers. The increased sensitivity of the new methods particularly, no, the IRB Approach will result in the diversification of the cost of bank loans depending on the creditworthiness of the counterparty and the specifics of the transaction, as well as the optimal provisioning against bad debts.

2.2 The impact of the New Covenant (Basel II) on financial stability and efficiency of banks.

The concept of *effectiveness* refers to the type of equilibrium occurs when aggregate demand and supply reflect both private and social costs and benefits. In financial theory as effective, mean of sharing resources through the financial system in the most effective investment opportunities at the lowest possible cost. The main factors affecting the effectiveness of a system are 1) The effectiveness of risk-sharing between the participants in the system, so that everyone can take part of the risk can be managed, 2) the dissemination of information, so they will be available and accessible to all, and the contrasts between debtors and creditors that are solved through the market and 3) strong corporate governance, which will effectively resolve the problems empowerment (agency problem) that appear in contributing to a more efficient allocation of available resources.

In contrast to effectiveness, the concept of stability is not commonly accepted definition. There are many angles and definition given each time trying to cover a specific need. According to one of them, as financial stability is defined as the ability of the financial system to withstand external or internal disorders and address economic imbalances caused, and the opportunity to be covered by the present, but also to expand in the future. Factors affecting stability is the effectiveness of management, the ability of the banking sector to absorb disturbances and the risk of contagion.

While financial stability and financial efficiency are different concepts, the analysis of the characteristics shows that are interrelated. Obviously, a high degree of efficiency contributes to stability. At the same time, stability is a precondition for a smooth and efficient functioning of the financial system. Therefore, the factors which affect financial stability and efficiency are risk sharing, information dissemination, corporate governance, ability to absorb losses and risk of contagion.

The first factor has to do with *sharing the risk*. It is obvious that the rapidly increasing size and complexity of market added new dimensions to the process of financial stability and efficiency. One of the most important innovations is the transfer of credit risk through securitization and use of credit derivatives. This should help in more appropriate sharing of risk within the banking system. On the other hand, the transfer of credit risk has created new risk's carrier, which in many cases is outside the banking system and beyond the implementation of Basel II.

Regarding the second factor, Basel II puts great emphasis on transparency and *dissemination of information*, after dedicating the entire third pillar, market discipline. The concept of market discipline is not new and can be traced to the "invisible hand" of Adam Smith. In modern financial theory gets more concrete and understood as the set of measures that can be adopted collectively market players to "punish" a bank in case of excessive risk taking. The "punishment" occurs as a result of price (price effect), where investors require a higher return on bonds of the bank as a result of volume (quantity effect), where depositors withdraw their funds from the bank or result value (valuation effect), where market factors leading to a reduction of the value of the share. Imposing discipline market players should have the right incentives, the strongest motivation is likely to be damaged and lose some of their funds. In this case, to impose discipline must have the necessary information, and the ability to influence the decisions of banks.

Corporate Governance means all systems and procedures have been established to resolve conflicts within the banks. The Basel Committee has published eight principles that define the notion of strong corporate governance in banks. The new Basel II framework places great emphasis on these principles and requires banks to adopt a strong and effective system of governance. All stakeholders, the board, management, the internal audit and control functions required to develop responsibilities for different aspects of systems. Furthermore, every bank must create control functions, examining periodically the effectiveness of the systems. Finally, the new framework requires the implementation of reporting system so that information can reach the senior ranks. All these make up a strong corporate governance system, as is common belief that good systems with poor corporate governance can create hazards that can adversely affect the stability.

The fourth factor affecting financial stability and efficiency of the banks is the *ability to absorb losses*. The Basel II adopts the principle that the provisions cover expected losses, while capital unexpected losses. The banks which will implement advanced methodologies must estimate the risk parameters that lead to the calculation of the necessary provisions and capital. Therefore, is created a shield that can be used to absorb losses without upsetting the soundness of the bank. The issue is the adequacy and range of funds in connection with supervisory expectations. Regarding the variance, Basel II introduces greater volatility in capital, but also tries to maintain a constant ratio of capital to risk assumed. Further, based on the logic of the new framework funds are intended to cover microeconomic risks (credit risk, market risk, etc.), but ignore the macroeconomic risks, namely the risks posed by macro-environment.

The last factor is the Risk of contagion. The contagion in the modern financial system depends on the degree of correlation between the banks and how to react supervisors in a crisis. The correlation between the banks, as a result of the interbank market and investment subject to common risk factors, is not taken into account by Basel II and therefore a modest contribution. Instead, Basel II will improve

the possibility of the supervisors through Pillar II and the planned cooperation between supervisors in the oversight of cross border groups.

2.3 The benefits of using the Basel II

The promote security and stability of the international financial system and to strengthen the conditions for equal competition are key strategic objectives of the new regulatory framework. Moreover, within the objectives include strengthening the management functions risk exposures across the range of activities of credit institutions (enterprise-wide risk management) and the correlation of these risks with the supervisory (regulatory), and the estimated internally capital requirements (economic capital). Although the new framework on capital adequacy requires changes in the operation and practices of financial institutions should not be seen as yet another costly and complex "charge" regulatory compliance. The main conditions to maximize collateral benefits from the implementation of Basel II is to adopt as possible advanced approaches for calculating capital requirements against the risks undertaken, which will require significant improvements in technological infrastructure and information systems, crop culture risk management throughout the entire body and the active involvement of top management and the board.

It is clear that Basel II, attempting to integrate the function of risk management in the process of making business decisions across the range of activities of the credit institution to promote the agenda of discussions and concerns of boards, suggesting that exercise banking activities are inextricably linked to the management of risks arising from them. The successful implementation, particularly the most advanced approaches for calculating capital requirements requires an effective risk management framework and capital, which requires both a strong system of internal controls (including IT and accounting systems), the other a clear business model in operation group level (group operating model). Basel II is removed from its predecessor in terms of Basel I, that the prudential rules should be same for everyone (one size fits all), and recognizes that the more sophisticated and effective is a credit institution to assess and manage risk exposures , providing both high quality assets and operations, less capital should be distinguished for each product or service. Additionally, not limited to the regulatory capital requirements of the dangers of Pillar I (credit, operational and market), but through the requirements of Pillar II expects credit institutions to provide comprehensive evaluation of their capital adequacy in relation to other risks to which exposed (eg liquidity, concentration, strategic, reputation). In this way the Basel II encourages credit institutions in evaluation (quantitative and qualitative) of available capital resources, the ability to take risks (risk bearing capacity), in conjunction with the risk appetite and risk profile (risk profile) and essentially the active management of their financial capital and distribution to individual business activities, portfolios or subsidiaries.

Basel II does not affect the efficiency of capital only through the change in the capital base (ie, the denominator of the ratio), but the level of diversification of profits (ie the numerator of the ratio). This is because the change in the profile or risk appetite affects both unexpected losses, which are covered by the principal and the expected losses (credit risk and operational risk), which is usually covered with provisioning and have a direct impact profits. Therefore, through the allocation of regulatory capital to cover unexpected losses (risk taking banking activities) and the adjustment of profits to cover expected losses in relation to the provision (taking cost of banking activities), it becomes easier to compare between different business, portfolio or products and consequent reallocation of capital, which is weighted according to risk, efficiency is higher. Basel II is expected to push financial institutions in the

implementation of programs of long-term planning of capital needs and the use of weighted according to risk, regulatory capital efficiency as a key tool for making strategic decisions (eg the allocation of capital to business / subsidiaries, acquisitions, system return / bonus).

At the tactical level, the Basel II is expected to bring significant changes and benefits for credit institutions that adopt the most advanced approaches for calculating capital requirements and risk management. In summary, the creation of added value for the shareholder can be achieved through increased profitability or reduce operating costs by:

- Reduce losses from credit risk by strengthening discipline and efficiency in credit policies and procedures, recoveries and write-offs of bad debts, the traceability and segregation of borrowers and loan forms depending on the level of risk, based on internal credit rating systems risk.
- Improve policy and procedure provisioning for bad loans. The correct information about its risk both at counterparty and asset (loan) to provide management of the credit institution with a clear picture of the most profitable loans or portfolios.
- Improve pricing integrating risk parameters (risk adjusted pricing). Increased traceability and segregation of borrowers and loan forms, depending on the level of risk, can support a differentiated pricing policy, rewarding customers with consistent lower rate.
- Reduce operational losses and / or operating costs through regular structured log (a database of operational risk) and analysis of data loss, the development of an operational risk management framework structured and focused on processes using specialized tools / methodologies (eg X. Risk Control Self Assessment-RCSA and Key Risk Indicators-Chris). These tools will have the ability to forecast possible events and possible damage and will provide an early warning system (early warning system) for specific actions.

On proposals to market-disclosure (Pillar III) indicated that greater transparency is undoubtedly desire supervisors, investors, analysts and credit rating agencies. However, if the market is not able to fully understand the complex anecdotal evidence of risk management and capital adequacy may be confused and greater volatility in the prices of stocks and bonds of financial institutions. Credit institutions should develop an effective policy-disclosure to the market and to "educate" and update them periodically to analysts, investors and rating agencies in strategic risk management and capital.

Overall, the new regulatory framework for capital adequacy leads to a supervisory unprecedented change, which is expected to result in cascading effects on all aspects of the business of credit institutions, relationships with shareholders and customers. Perhaps the Basel II to be a "revolution" in the international financial system, but bringing up the mantle of regulatory compliance.

The most innovative feature of the proposed framework on capital adequacy is, as we already mentioned, the use of evaluations of specialized companies (Moody's, Standard & Poor's, Fitch IBCA etc.) in order to distinguish between exposure to risks of varying quality. There seem to be, however, some risks from the introduction of this innovation:

a) Rating agencies have limited databases and files, which reduces their credibility.
b) This innovation creates incentives for borrowers to seek new favorable evaluation or rating agencies. The result could be a fierce competition among rating

agencies to make more favorable evaluations. Of course, any relaxation of the quality of evaluations by specialized companies could be avoided by a rigorous evaluation of the companies themselves evaluated by the Basel Committee or some other international body.

c) The Basel Committee has not provided until now some external criterion of comparability between scales.
d) The Commission's proposals include some obvious logical inconsistencies. For example, the design of the proposed framework provides significant incentives for borrowers who are at risk to be assessed at less than B-, to decide whether or not they will be evaluated according to their predictions about the outcome of the evaluation. Of course, in many cases, borrowers are not able to seek or not the evaluation of the time have developed a relationship with a company evaluation. That is to say, be preferable to one borrower cannot be evaluated at all if there is a serious risk weighting of 150%.
e) There is extensive use of evaluations outside the U.S. border, especially for businesses.

CHAPTER 3: COMPARISON AND ANALYSIS OF RATIOS, OF 6 BIG GREEK MERCHANT BANKING INSTITUTIONS

3.1. introduction

The purpose of this module is to make the financial analysis of companies listed on the Athens Stock Exchange six major Greek commercial banks and provide their economic trend with the changes of the Basel II. For the financial analysis used published balance sheets and income statements for the years 2008-2009-2010-2011. The six major commercial banks selected are Commercial Bank, Piraeus Bank, National Bank of Greece, Alpha Bank, the Eurobank EFG and the Agricultural Bank of Greece. The financial analysis of banks was based on calculating and interpreting financial ratios (Profitability, Liquidity, Capital Adequacy and Asset Quality). These ratios, calculated, are:

→ Profitability - Profitability
  - Return on Equity (ROE)
  - Return on Assets (ROA)
  - Net Profit before Tax / Total Equity
  - Net Profit before Taxes / Total Assets
  - Net Profit before Tax / (Loans / Deposits)
  - Net Interest Margin
  - Cost of revenue
  - Cost Assets

→ liquidity
  - Loans / Deposits
  - Total Assets / Total Loans

→ capital Adequacy
  - Total Equity / Total Assets
  - Total Equity / Loans
  - Total Equity / Deposits

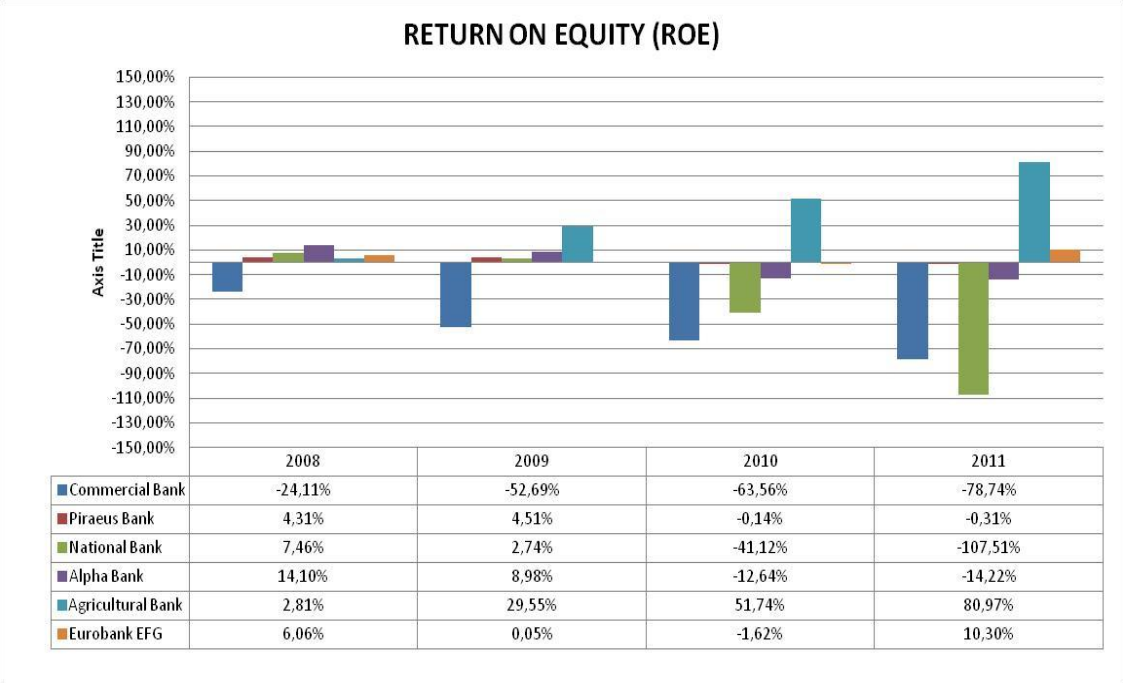
→ Asset quality
  - Provisions / Operating Income
  - Provisions / Total Assets

In Annex outlines the key figures of the balance sheets, 6 Commercial Banks (Commercial Bank, Piraeus Bank, National Bank, Alpha Bank, Agricultural Bank and Eurobank), used to calculate the ratios. Also, the results of the indicators

(Performance Indicators, Indices Liquidity, Capital Adequacy and Asset Quality Indicators) commercial banks.

3.2. Analysis of Ratios

3.2.1. Performance Indicators - Efficiency

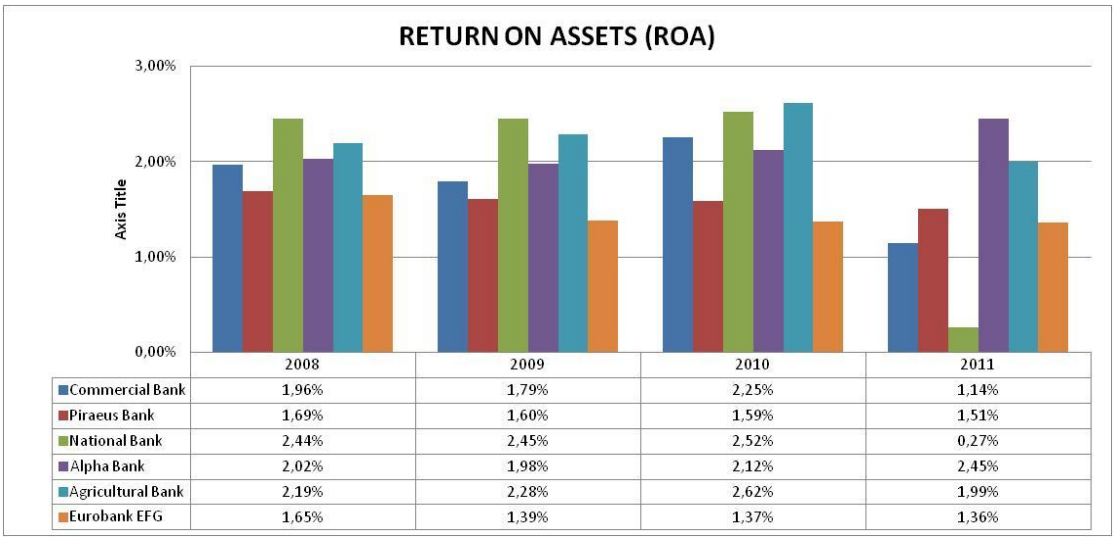


	2008	2009	2010	2011
Commercial Bank	-24,11%	-52,69%	-63,56%	-78,74%
Piraeus Bank	4,31%	4,51%	-0,14%	-0,31%
National Bank	7,46%	2,74%	-41,12%	-107,51%
Alpha Bank	14,10%	8,98%	-12,64%	-14,22%
Agricultural Bank	2,81%	29,55%	51,74%	80,97%
Eurobank EFG	6,06%	0,05%	-1,62%	10,30%

The indicator ROE is calculated as the ratio of net profit after tax to total equity. Is the most important benchmark with similar businesses or with the sector average. This indicator measures the effectiveness and proper utilization of working capital and the effect of taxes in shaping gains. A low ratio ROE reflects the credit institution suffers in some field. In contrast, a high ratio is an indication that the credit institution prospers.

Throughout the reporting period, in the years 2008-2011, all banks shows fluctuations in the indicator. The lower indicator values are presented in the Commercial Bank during the years 2008 to 2011, which is -24.11%, -52.69%, -63.56% and -78.74% respectively. Alpha Bank follows with index -14.22% in the year 2011. The highest ratio 107.51% displayed in the National Bank of Greece in 2011. The Commercial Bank presents a negative value in the index for 2008 to 2011, due to the fact that during the year 2008 showing the amount of damage -487.000.000 € and continues getting more losses up to 2011 with the amount of -611.000.000. The index of Piraeus Bank in the period 2008-2009 shows an increase of 4.31% in 2008 to 4.51% in 2009, due to higher net profits. The period 2009-2010 the ratio plummets. The decline in the ratio in 2010 (-0.14%), due to the increase in net worth of the Bank, which emanated from the corresponding increase in equity, capital and share premium reserves. The price index continued to decline in 2011 reaching 43%, due to lower net profit by 62% and its equity by 44%. The index at the National in 2008-2009 decreased from 7.46% to 2.74% due to the increase in equity of the bank. However, during the year 2010, the index shows big reduction (6.65%) in 2010, due to losses of the Bank and even more bigger reduction in index (38.24%) in 2011, because of the huge fall of losses of the bank at 32%,reduction of its current assets at 10% and the increase of the equity 21%. The index of Alpha Bank during the

period 2008-2011 shows a big decrease from 14.10% to -14.22% due to the decrease in net profit to losses. In fiscal year 2010 and 2011 shows a decrease of up to 14.11%. The index of Eurobank the years 2008-2010 shows a decrease from 6.06% to -1.62%, due to an increase in equity and reduction of net income of 236.000.000 € in the year 2008 in the -83.000.000 € year 2010. However, the year 2011 appears sharp increase in the ratio of 15.75%, due to change in net losses to profits. A similar behavior shows the index of the Agricultural Bank, which increased over the four years 2008-2011 from 2.81% to 80.97%. This is due to the increase in net income from 25.000.000 to 600.000.000.

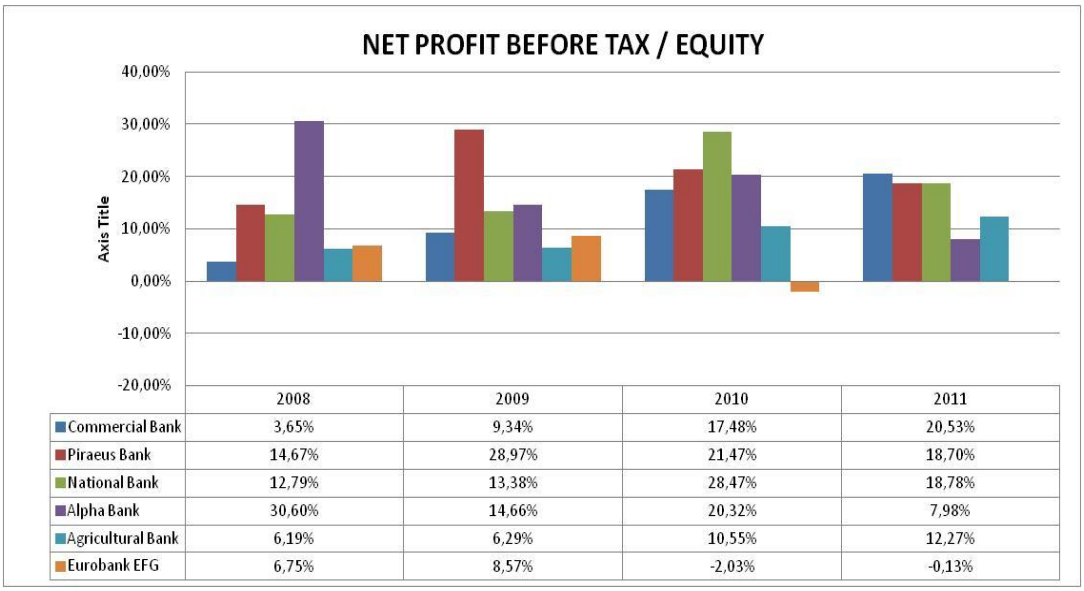


	2008	2009	2010	2011
Commercial Bank	1,96%	1,79%	2,25%	1,14%
Piraeus Bank	1,69%	1,60%	1,59%	1,51%
National Bank	2,44%	2,45%	2,52%	0,27%
Alpha Bank	2,02%	1,98%	2,12%	2,45%
Agricultural Bank	2,19%	2,28%	2,62%	1,99%
Eurobank EFG	1,65%	1,39%	1,37%	1,36%

The ratio of return on assets shows a reliable picture of the profitability or not managing the resources of the Bank. Specifically, the index shows the percentage (%), the utilization of the total assets of banks in the production of net profits. The higher the index so efficient is called the Credit Institution. The return on assets shows specific changes in the period 2008-2011 for all banks. The National Bank for the year 2011 shows the lowest ratio (0.27%), followed by commercial banks, which displays the same year 1.14%. The highest ratio (2.62%) occur in the year 2010 the Agricultural Bank.

In particular, the Commercial Bank in 2008 and 2009 shows at discounted prices index from 1.96% to 1.79% respectively. This is due to the damage that exhibits these years and the decrease in net income. In 2010, a small increase in net income and a slight decline in total assets gave a boost to the index and reached 2.25% but in 2011 was just the opposite where has resulted in the significant drop in 1.14% The index of Piraeus Bank in the four years 2008-2011 falls. In the period 2008 -2010, the fall of the index (in 1.69% of 1.59%), due to a slight decline in net revenue and a large reduction in total assets. The year 2011, the fall of the index in 1.51%, due to the large increase in losses of the bank and as a result, the large decrease in total assets. The index of the National Bank has increased from 2.44% in 2008 to 2.52% in 2010, while the year 2011 there is significantly reduced in 0.27%. The decrease is due to lower net profit of the bank and in the temporal analysis of total assets. The years 2008 and 2009 showed a decrease of the index 2.02% and 1.98% respectively, due to lower net interest income and the increase in total assets.

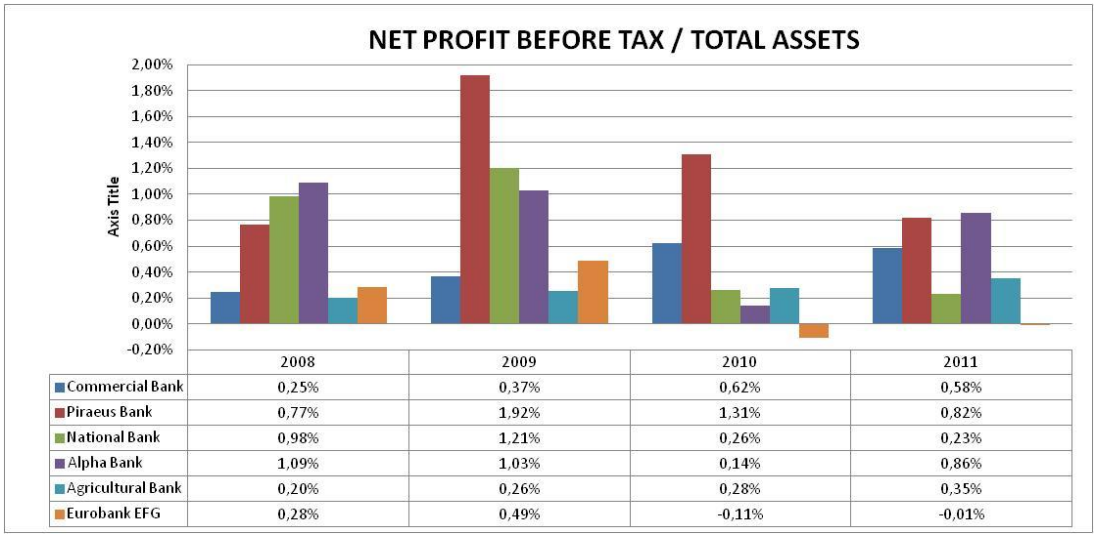
During the period 2010-2011, Alpha Bank is increasing its rate from 2.12% to 2.45% due to the decrease in assets and the increase in net interest income of 1.351.000.000 € in 2010 to 1.354.000.000 € in 2011. The index of the Agricultural Bank in the years 2008 -2010 shows very high ratio compared with the results of the index of other banks. The increase in the index in these years due to the sharp increase in net profit (of 606.000.000 € in 2008 to 796.000.000 € in 2010). The last year, 2011, the index dropped in 1.99% due to the reduction of these revenues. Finally, Eurobank shows significant drop of the index the three years 2008 -2011 (in 1.65% to 1.36%) due to the sharp drop in drop in net interest income.



	2008	2009	2010	2011
Commercial Bank	3,65%	9,34%	17,48%	20,53%
Piraeus Bank	14,67%	28,97%	21,47%	18,70%
National Bank	12,79%	13,38%	28,47%	18,78%
Alpha Bank	30,60%	14,66%	20,32%	7,98%
Agricultural Bank	6,19%	6,29%	10,55%	12,27%
Eurobank EFG	6,75%	8,57%	-2,03%	-0,13%

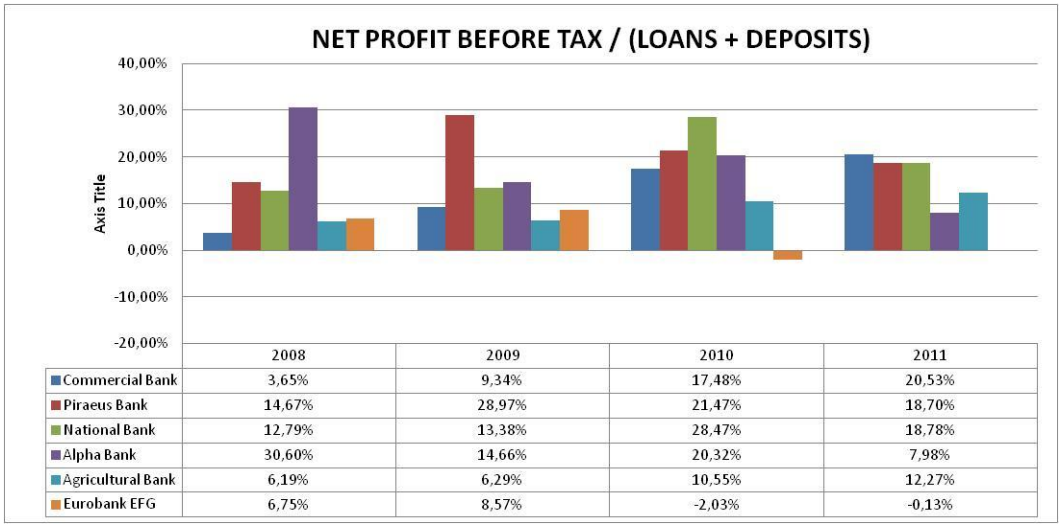
The Ratio Net profit before tax to equity is calculated as the ratio of net profit before tax to total equity which was available to the credit institution the use in question. This indicator reflects the correct use of equity on the part of the institution, to produce profits and the impact of taxes in shaping gains. This index can be calculated before taxes and after taxes (ROE), in order to demonstrate clearly the effect of change in tax rate on equity returns. This indicator relates directly to shareholders as it provides information about the success or otherwise of the placement and performance of their funds. A low ratio indicates that the credit institution obviously suffers in some field. On the other hand, a high value of the index, probably due to an efficient administration, a targeted use of funds or the favorable economic conditions prevailing at that period.

Comparing the results of the indicators Profit before tax / equity and net profit after tax / equity (ROE), for all banks considered the four years 2008-2011, we examine the effect of the tax rate. In 2010, Eurobank EFG seems to be more affected by the tax, compared with the other banks, an index change by 23.73%. The banks, Alpha Bank and Piraeus in 2008 and 2009 respectively, have the highest rates, which means that the management of their finances these 2 years was very satisfactory. The National Bank for the years 2008-2010 shows fine change in the index from 12.79% to 28.47%, but in 2011 there is a decrease in the index, this is due to the potential tax refund that was in use in 2008. Finally, Commercial Bank, Agricultural Bank and Eurobank EFG, during the years 2008-2009 with low ratios compared with the total



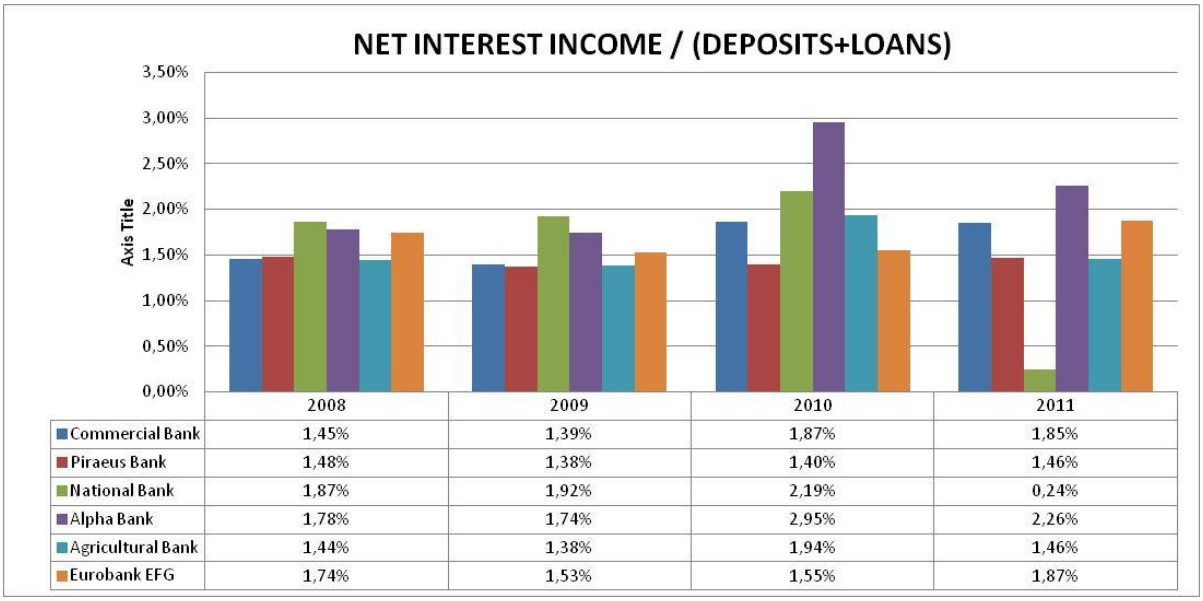
	2008	2009	2010	2011
Commercial Bank	0,25%	0,37%	0,62%	0,58%
Piraeus Bank	0,77%	1,92%	1,31%	0,82%
National Bank	0,98%	1,21%	0,26%	0,23%
Alpha Bank	1,09%	1,03%	0,14%	0,86%
Agricultural Bank	0,20%	0,26%	0,28%	0,35%
Eurobank EFG	0,28%	0,49%	-0,11%	-0,01%

The Net Profit Before Tax to Total Assets shows the ratio of net profit before taxes for the year to total assets. The index measures in (%) efficiency of assets of the institution. The higher the ratio, the more profitable characterized the lending institution. Observing the results of the indicators Profit before taxes / Total Assets and Net profit after taxes / Total Assets (ROA), we see that to a small extent affected by the tax rate. The higher index changes are banks and Commercial National Bank, in 2009, at 1.92%, 1.21% respectively.



	2008	2009	2010	2011
Commercial Bank	3,65%	9,34%	17,48%	20,53%
Piraeus Bank	14,67%	28,97%	21,47%	18,70%
National Bank	12,79%	13,38%	28,47%	18,78%
Alpha Bank	30,60%	14,66%	20,32%	7,98%
Agricultural Bank	6,19%	6,29%	10,55%	12,27%
Eurobank EFG	6,75%	8,57%	-2,03%	-0,13%

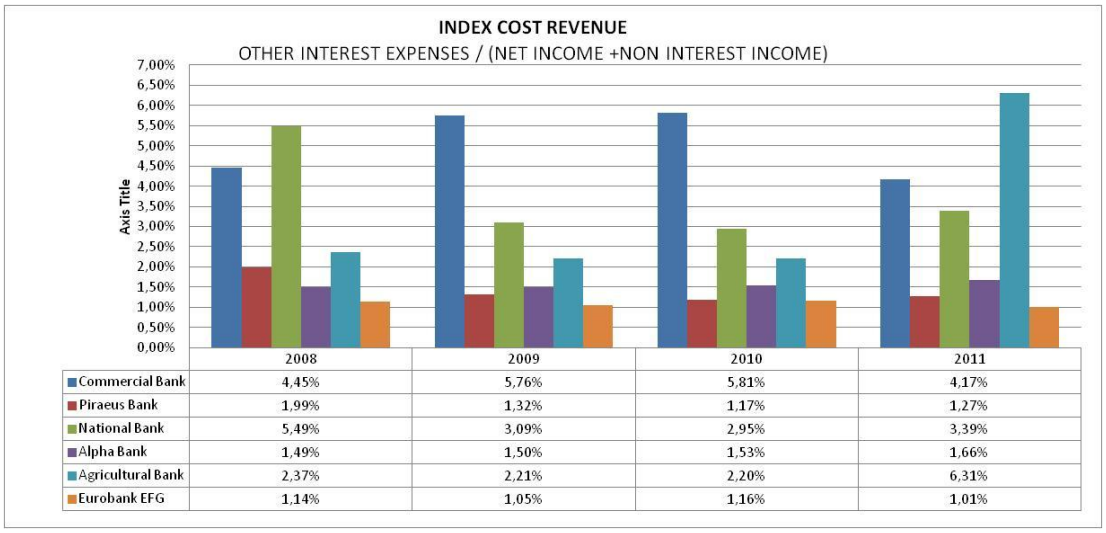
The Net Profit before Tax to (Loans / Deposits) calculates the profits of the credit institution in relation to total loans and deposits, which are the main sources of income of a bank. Based on the results of the index, the index of the banking sector shows little variation during the years 2008, 2009 and 2011 with prices 12.44%, 13.53% kai13.02% respectively. In 2010, the index has risen markedly, reaching the value 16.04%. Specifically, Eurobank EFG displays the lowest index values for the years 2010 and 2011 (-2.03% and -0.13%, respectively) due to the damage that displays these years. The Commercial and Rural Banks for the year 2008 show a large reduction in the price index reaching 3.65%, 6.19% respectively, and Alpha Bank, in the last year timi7.98% due to lower profits when using the mentioned years.



	2008	2009	2010	2011
Commercial Bank	1,45%	1,39%	1,87%	1,85%
Piraeus Bank	1,48%	1,38%	1,40%	1,46%
National Bank	1,87%	1,92%	2,19%	0,24%
Alpha Bank	1,78%	1,74%	2,95%	2,26%
Agricultural Bank	1,44%	1,38%	1,94%	1,46%
Eurobank EFG	1,74%	1,53%	1,55%	1,87%

The Net Interest Margin indicator measures the banking net interest income in proportion to the profitable assets. The index reflects the effect of the profitable assets, ie the bank operating activities (investments), to generate income from interest. The growth rates of the index as an indicator for the pricing of the bank and for the ability to generate profits from operations.

Interpreting the results of the index for 2010 observed a large increase in the index for all banks which is followed by a decline in 2011. In 2010, Alpha Bank has the highest index value of 2.95%. It follows the same year the National Bank 2.19%. These high values of the index indicate that financial institutions manage their resources more effectively in order to have benefits from changes in interest rates.

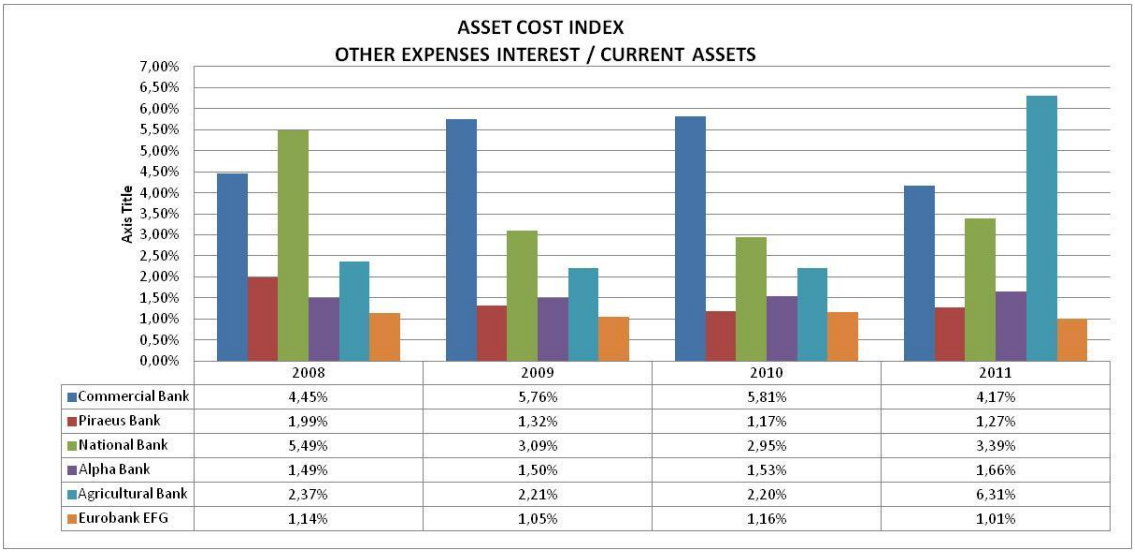


	2008	2009	2010	2011
Commercial Bank	4,45%	5,76%	5,81%	4,17%
Piraeus Bank	1,99%	1,32%	1,17%	1,27%
National Bank	5,49%	3,09%	2,95%	3,39%
Alpha Bank	1,49%	1,50%	1,53%	1,66%
Agricultural Bank	2,37%	2,21%	2,20%	6,31%
Eurobank EFG	1,14%	1,05%	1,16%	1,01%

Cost income ratio shows the relationship between costs and volume of banking operations (revenues). Higher costs in relation to the proceeds of a credit institution, therefore, a high index value, indicating low profitability for particular institutions.

The Commercial Bank during the four years 2008-2011 shows an increase of 73.82% from index in 2008 92.02% in the year 2011. Due to the large increase in total net revenues. The Piraeus Bank, National Agricultural and show a decrease of the index

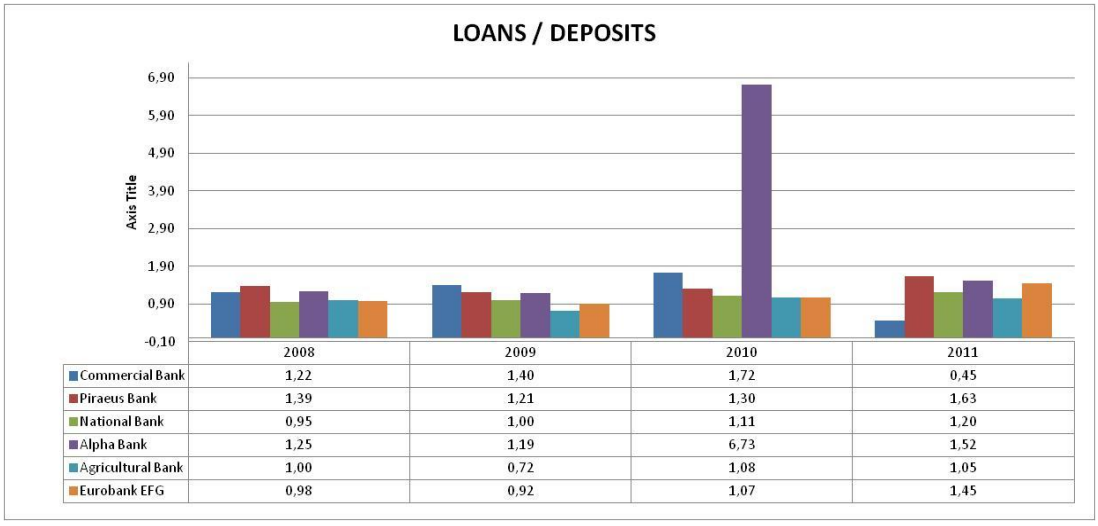
within the period 2008-2009 and changes over the next 2 years. The index of the Agricultural Bank and Eurobank not vary, except for 2010 and 2011 respectively, which presented increased, reaching the timi125, 01% and 26.51% correspondingly. The sharp increase in the ratio of the Agricultural Bank due to the sharp drop in operating expenses and a decrease in operating income. The Bank Alpha Bank during the years 2008 - 2010 shows an increase of 20.60% from index to 25.63%, while the next year is reduced to 21.58%.



	2008	2009	2010	2011
Commercial Bank	4,45%	5,76%	5,81%	4,17%
Piraeus Bank	1,99%	1,32%	1,17%	1,27%
National Bank	5,49%	3,09%	2,95%	3,39%
Alpha Bank	1,49%	1,50%	1,53%	1,66%
Agricultural Bank	2,37%	2,21%	2,20%	6,31%
Eurobank EFG	1,14%	1,05%	1,16%	1,01%

The Cost Assets shows what percentage of income covered by current assets. All banks for the years 2008-2010 showed a decrease of the index. However, the index of Commercial Bank in 2010 and the Agricultural Bank in the year 2011 shows the highest index values of 6.31% and 5.81% respectively. In contrast, in the years 2009 and 2011, Eurobank EFG has the lowest index values of 1.05% and 1.01% respectively.

3.2.2. Liquidity Ratios

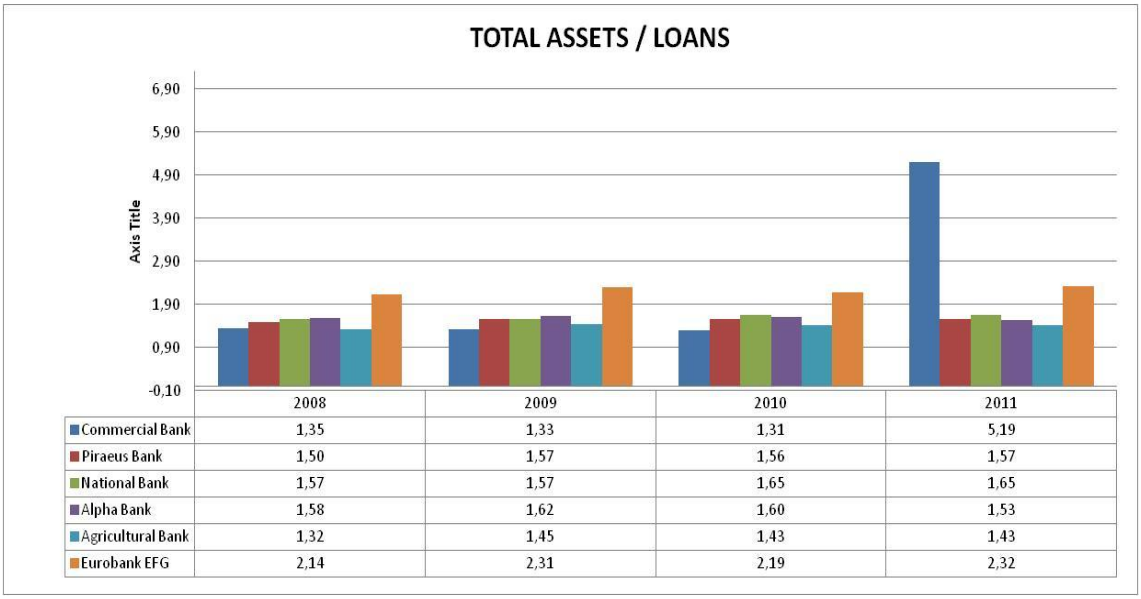


	2008	2009	2010	2011
Commercial Bank	1,22	1,40	1,72	0,45
Piraeus Bank	1,39	1,21	1,30	1,63
National Bank	0,95	1,00	1,11	1,20
Alpha Bank	1,25	1,19	6,73	1,52
Agricultural Bank	1,00	0,72	1,08	1,05
Eurobank EFG	0,98	0,92	1,07	1,45

The loans to deposits ratio is indicative of how well used the deposits to the Bank. The greater the ratio of loans to deposits, the lower the liquidity of the Bank. Conversely, the reduced this ratio, the greater the liquidity and the more uses its cash. During the period 2008-2011, the Piraeus Bank, National Bank and Eurobank

show continuous increase of the index. The historical growth of this indicator banks due, apparently, to the fact that institutions increase lending to their customers every year in relation to their deposits, while not putting their assets productively.

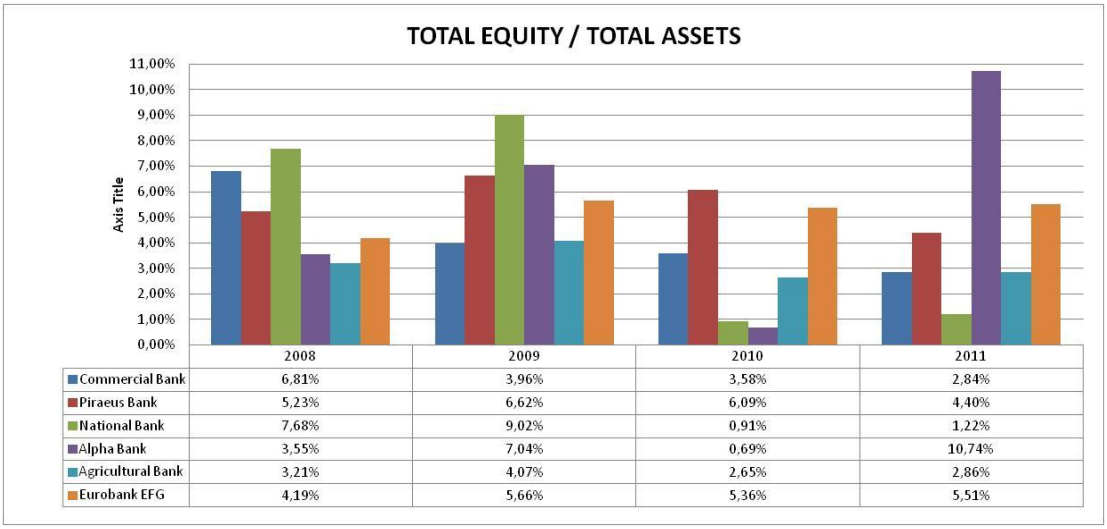
The index of the Agricultural Bank remains almost unchanged over the four years 2008-2011. The index of Alpha Bank is high touching the year 2010 the rate 6.73% (maximum value of all the years under all the banks). The increase in Alpha Bank was happened, because the deposits in 2010 decreased significantly and returned to normal levels in 2011.. Finally, the Commercial Bank shows in three years 2008 - 2010 a small increase in the index, while last year the index decreased sharply from 1.72% to 0.45%. This decline is due to the sharp decrease in loans Commercial Bank at about 15000.



	2008	2009	2010	2011
Commercial Bank	1,35	1,33	1,31	5,19
Piraeus Bank	1,50	1,57	1,56	1,57
National Bank	1,57	1,57	1,65	1,65
Alpha Bank	1,58	1,62	1,60	1,53
Agricultural Bank	1,32	1,45	1,43	1,43
Eurobank EFG	2,14	2,31	2,19	2,32

The Total Assets to Total Loans shows the proportion of loans that retains the bank. The index of the banking industry over time increased from 1.58% in 2008 reaching 2.28% in the year 2011. The highest index values appear in Bank Eurobank in the four years 2088-2011 (above 2%) and Commercial Bank last year 2011 (over 5%). The increase in the ratio of Commercial Bank has relationship with the significant reduction in loans last year. While lower index values appear in Commercial Bank while using 2008-2010 (1.31% -1.35%) and the Agricultural Bank in the year 2008 (1.32%). Banks with higher risk and also the higher efficiency, characterized by Piraeus Bank, National Bank, Alpha and Rural bearing index score kept low (below the banking industry) throughout the test four years 2008-2011. Finally, as a low-risk bank yet low efficiency, presented the Bank Eurobank, for the reason that keeps prices index over the banking industry.

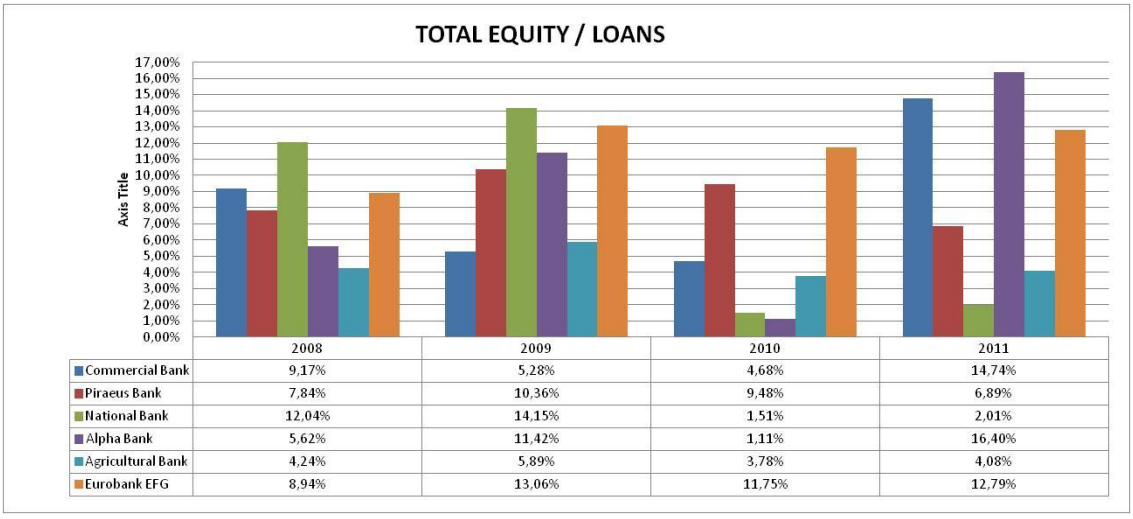
3.2.3. Capital Adequacy Ratios



	2008	2009	2010	2011
Commercial Bank	6,81%	3,96%	3,58%	2,84%
Piraeus Bank	5,23%	6,62%	6,09%	4,40%
National Bank	7,68%	9,02%	0,91%	1,22%
Alpha Bank	3,55%	7,04%	0,69%	10,74%
Agricultural Bank	3,21%	4,07%	2,65%	2,86%
Eurobank EFG	4,19%	5,66%	5,36%	5,51%

The equity ratio to total assets shows what percentage of the total funds are Equity. A high index value indicates that the need of a credit institution for external financing is low. Furthermore, a high index increases the efficiency of the total capital.

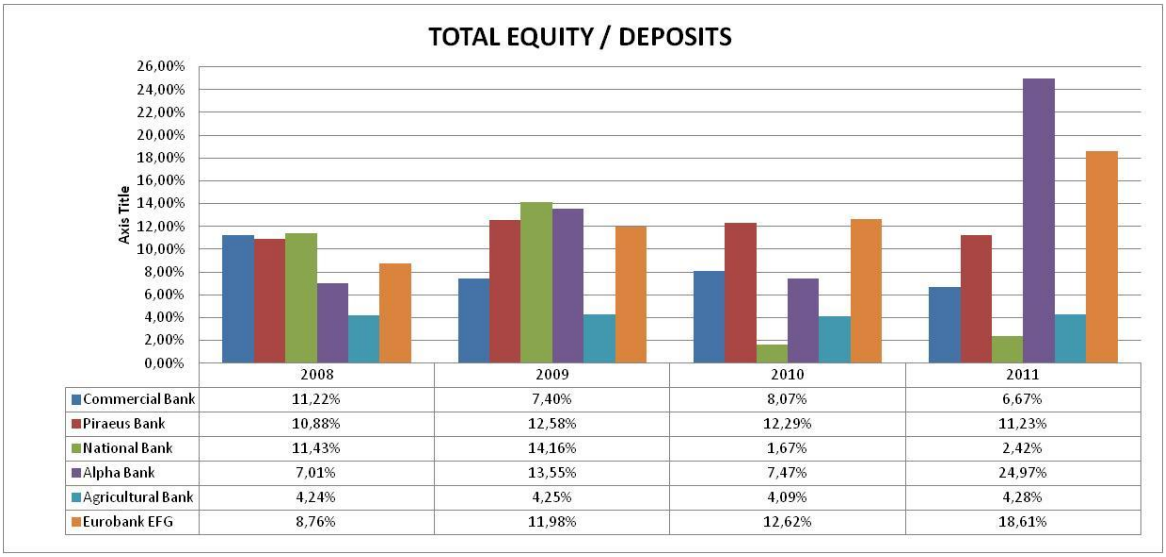
During the four years 2008-2011 shows a decrease in the index of Emporiki Bank, with a sharp drop in 2011 (2.84%), due to the large reduction of the total equity of 2.020.000.000.000 € in 2008 to 776,000 .000.000 € in 2011. The index of the National Bank, and in the years 2008-2009 has increased significantly reduced and maintained at lower levels compared with the results of the indicators of other banks in the years 2010-2011 (0.91% and 1.22% respectively). The index of Eurobank shows the best performance across the four years in question, which remained almost unchanged.



	2008	2009	2010	2011
Commercial Bank	9,17%	5,28%	4,68%	14,74%
Piraeus Bank	7,84%	10,36%	9,48%	6,89%
National Bank	12,04%	14,15%	1,51%	2,01%
Alpha Bank	5,62%	11,42%	1,11%	16,40%
Agricultural Bank	4,24%	5,89%	3,78%	4,08%
Eurobank EFG	8,94%	13,06%	11,75%	12,79%

The index for Equity Loans shows the percentage of loans in relation to total equity of the Bank. The behavior of the examined banks in the index over the four years 2008-2011 fluctuate. The progress indicator in the banking industry from 2008 to 2009 shows an increase of about 2% next year falls by 5%. However, a large increase is the year 2011 with a value reaches 9.49%. Furthermore, in 2008, the largest decline of the indicator banks Alpha Bank (1,11%), the National (1.51%), Agricultural (3.78%) and Commercial (4.68%) . Higher values of the index shows the Alpha Bank in 2011

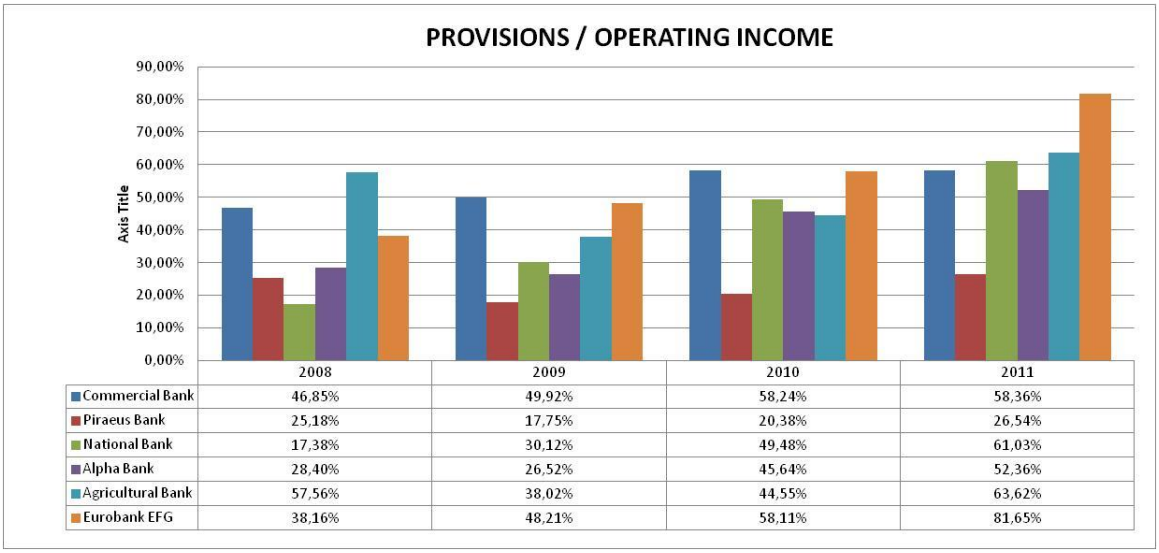
with price 16.40%, the Commercial 2011 with price 14.74% and the National Bank in 2008 and 2009 to 12.04% and 14.15% respectively. However, the National Bank, in the use of 2010-2011 remains at a low level (1.51% - 2.01%) compared with other banks following the general decline of the index.



	2008	2009	2010	2011
Commercial Bank	11,22%	7,40%	8,07%	6,67%
Piraeus Bank	10,88%	12,58%	12,29%	11,23%
National Bank	11,43%	14,16%	1,67%	2,42%
Alpha Bank	7,01%	13,55%	7,47%	24,97%
Agricultural Bank	4,24%	4,25%	4,09%	4,28%
Eurobank EFG	8,76%	11,98%	12,62%	18,61%

Equity ratio to deposits shows the percentage of deposits in relation to the total equity of the Bank. The total number of banks in the year 2009-2010, has been a decline in the index score. The biggest drop in prices index appears in National banks with price 1.67% and Agricultural price with 4.09% in 2010. On the other hand, higher values of the index are the Alpha Bank in the year 2011 with price 24.97% and Eurobank also the year 2011 with price 18.61%. However, the best indicator of behavior exhibited by Eurobank, with prices rising over the period 2008-2011.

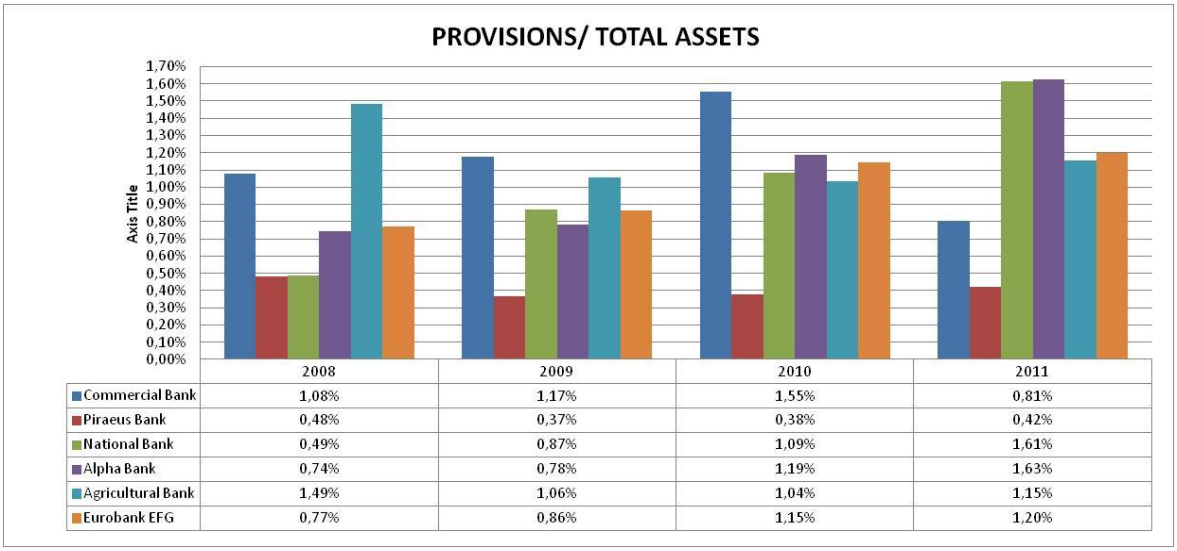
3.2.4. Asset's Quality Indicators



	2008	2009	2010	2011
Commercial Bank	46,85%	49,92%	58,24%	58,36%
Piraeus Bank	25,18%	17,75%	20,38%	26,54%
National Bank	17,38%	30,12%	49,48%	61,03%
Alpha Bank	28,40%	26,52%	45,64%	52,36%
Agricultural Bank	57,56%	38,02%	44,55%	63,62%
Eurobank EFG	38,16%	48,21%	58,11%	81,65%

The index Provisioning Operating income shows the amount of operating income can be predicted. Observed that the ratio of the banking industry varies during the period 2008-2011, with an upward increase the price

reaches 57.26% in 2011. The year 2011, Eurobank has the highest index value (71.65%), due to the sharp drop in revenue and strong growth forecasts of the Bank. On the other hand, the National Bank in 2008 shows the lowest index value (17.38%) due to the low price of the Bank's forecasts. During the years 2010-2011, while all banks have a large increase in the index score, Piraeus Bank maintains the index value at low levels (20.38% - 26.34%).



	2008	2009	2010	2011
Commercial Bank	1,08%	1,17%	1,55%	0,81%
Piraeus Bank	0,48%	0,37%	0,38%	0,42%
National Bank	0,49%	0,87%	1,09%	1,61%
Alpha Bank	0,74%	0,78%	1,19%	1,63%
Agricultural Bank	1,49%	1,06%	1,04%	1,15%
Eurobank EFG	0,77%	0,86%	1,15%	1,20%

A high index value means poor quality assets. This has an impact on efficiency, if there is a reduction of interest income, impose higher provisioning and lower net profits. All the banks in their entirety show changes during the reporting period of four years 2008-2011. Specifically, higher index values occur in the year 2011 by the Alpha Bank and National Bank (1.63% and 1.61% respectively). This is due to the large increase in provisions. Lower index values are shown in Piraeus Bank in the years 2009-2010 (0.37% and 0.38% respectively).

CHAPTER 4: CONCLUSIONS

4.1. The contribution of the Basel II in risk management

The recent financial crisis that started in the mortgage subordinated loans in the U.S., showed that there are weaknesses in many areas. Should, therefore, take corrective measures to effectively deal with such crises, but also to limit the already existing one.

The Treaty of Basel II puts barriers in excessive risk-taking by banks. In particular, under Pillar I, banks should adopt specific methods of assessing the risks undertaken. With an emphasis on credit risk, which is the most complex part of Pact. For measuring credit risk, the Basel II Accord proposes two methods of calculating capital requirements: a) the standard method and b) the method of internal rating systems, which analyzed the fundamental and advanced method. The risk assessment will be done at the individual level. We examined qualitative and quantitative criteria to evaluate the borrower, depending on the riskiness of the loan. The other banks will follow individually pricing service depending on the profile and creditworthiness of each customer. Consistent customers will enjoy better conditions and more favorable lending terms. Contrast, the weakest customers will pay more.

The rating of creditworthiness (rating) is the most important factor for banks:

- ✓ decision making
- ✓ the pricing of products for
- ✓ the calculation of capital adequacy.

The guarantees and collateral loan against dangerous (for example the bad mortgages) play an important role. Contributing to a portfolio of good quality. One of the major innovations provided is the use of securitization and the use of credit derivatives as techniques of credit risk. This helps in better management and the sharing of risk. Under Pillar II necessitated the establishment of procedures for the ongoing assessment of the capital adequacy of banks by supervisory authorities, and the need to consolidate internal control mechanisms will follow and assess the capital adequacy of the bank and the validity of calculation methods. The Pillar III deals with publication of detailed data of the institution.
In summary, the implementation of the Agreement provides effective management of risk exposure that leads to:

- ✓ More rational allocation of available funds
- ✓ Liberalization and regulatory capital for credit opportunity expansion into new activities
- ✓ Pricing of loans depending on the level of real hazard.

Therefore, the integration of the Basel II creates the conditions for a healthy portfolio for the best possible illustration of the assumed risks, the use of the measurement model, designed to reduce bad debts.

4.2. General trend in the banking industry during the period 2008 - 2011

According to the results of the average indices of the examined banks, return on equity is very low specific indicator values are negative in the four years in question because of the large loss instead of profit had Commercial Bank these years. In 2008, there was a significant improvement in the profitability of the banking sector, despite strong competition. This is due to the increase in revenue from consumer credit and maintaining the high demand for housing loans. This expansion in consumer and mortgage loans, which constitute the bulk of banks' assets, led to substantial growth in retail banking. In parallel, the capital adequacy of banks. According to the results of the average indices of the examined banks ROA is low rate of 1.99%. The loans to deposits ratio occurs at a satisfactory level due to the large amount of funds. The same year, the activation of the Greek Banks in Southeast Europe is dynamic. The competition of the three major banks (National, Eurobank and Alpha Bank) for expansion is strong. Finally, it is worth noting that there were two major advantages of Greek banks, for the year 2008, the high liquidity and comparatively low cost of funding. In 2009, the return on assets of banks under consideration is around about the same low level as compared to the previous year rate of 1.91%. During the year 2010, the efficiency of the tested banks maintained at relatively higher levels (Return on Assets 2.08%). Profit after tax is decreasing in 2010 compared to the previous year 2009. Furthermore, despite the reduced provision of the Agricultural Bank in the year 2010, the provisions held other financial institutions to cover credit risk is maintained at higher levels than in 2009, providing assurance to shareholders and depositors. The high profitability led the net interest margin to increase in 2010 to 1.98% from 1.56% in 2009, reflecting both the low competition in the domestic market and the reduced use of term deposit accounts

from bank customers, as these accounts offer a significantly higher rate than other savings deposits.

The global crisis has adversely affected the Greek economy in 2011. The financial activity declined, both due to the application of stricter criteria for granting credit to businesses and households from credit institutions, thus limiting the supply of loans, and secondly because of the reduction of the disposal of businesses and consumers for investment and consumption, thus reducing the demand for credit. The profit after tax of checked banks, declined significantly in 2011 compared with 2010. The decline in profits contributed to the fact that banks maintained high amounts of provisions for credit risk. Moreover, the decline has contributed the increased cost of funding. This cost is due to the effort made of banks, due to lack of liquidity, to attract capital in the form of time deposits, despite its high cost compared to other types of deposits.

Therefore, affected and the financial indicators. According to the average of the tested banks, the return on assets fell in price 1.45%, from 2.08% in 2010, the return on equity showed a significant drop in price -18.25% from -11.22 % in the year 2010 and the net interest margin shows a decrease of 30.18%. Nevertheless, the efficiency of the Greek banking system remained comparatively better level to that of the major European banking groups.

4.3. Prospects and developments of the Greek Banking System

In 2011, it was the increased exposure of Greek commercial banks to credit risk, which is the main form of temporal risk for them. The ratio of NPLs (Loans in Delay) to total loans increased by half a percentage point compared with 2010, due to increased delays in mortgage and consumer loans. Marginal improvement was observed in the ratio of corporate NPLs to total business loans, while the concentration of loans to individual customers or business sectors remained low. Unlike credit risk, market risk showed a small decline in 2011, despite the high variability observed in the money and capital markets throughout the year. This was due to the reduction of the position of Banks in products that involve market risk, which anyway are a relatively small percentage of their assets. The liquidity of commercial banks held up well, despite a slight deterioration experienced prudential liquidity ratios, due mainly intensities observed in the international money markets.

Also, in 2008, calculated for the first time, due to the implementation of the framework "Basel II", the capital requirements for operational risk, which constitute a small percentage of total capital requirements. And those four risk categories (credit, market, liquidity and operational) were adversely affected by the activities of the Greek banking groups abroad, especially in countries of Emerging Europe. The growth potential of these countries was halted due to the financial and economic crisis, thus increasing the risks faced by Greek banks from expanding their activities in this area. The Greek banking groups, however, have already adapted to their lending policy and the provisioning policy to the adverse conditions created, resulting in non-performing loans in these countries fully covered by the accumulated provisions for credit risk.

Another positive is the fact that international organizations provide support to these countries and therefore is expected to reduce the impact of the global economic crisis on the local economy, and by extension the banks operating there. In 2011, after three years of continuous growth, the profitability of Greek commercial banks and their groups receded significantly. The unfavorable international financial and macroeconomic conditions and their effect on the Greek economy and the

economies of other countries in which Greek banks operate, had the effect of limiting credit growth, lower non-interest income and higher provisions for credit risk.

The decrease in profitability was lower in group level than at banks, as revenues from international operations of banking groups continued to have a positive effect on overall figures and results. Showed a decline and the capital adequacy of Greek commercial banks and their groups. This reflects both the reduction of regulatory capital and the further increase of the weighted risk-based assets, mainly due to the implementation of the framework "Basel II" and secondarily due to the expansion of banking operations. The use of the measure of capital enhancement and integration of capital increases that have launched some banks are expected to contribute positively to capital ratios.

Encouraging were the results of stress tests conducted by the Bank of Greece as part of a regular annual consultation with the International Monetary Fund. The stress took a sample of nine banks, which constitute 80% of the total assets of Greek credit institutions. The results showed that the banking sector is able to handle even very severe disorders, the incidence of which is extremely low. The Bank of Greece will continue to conduct stress tests in the future, considering that they provide useful information that helps the supervisory work, and notes where failures will take appropriate measures.

Overall, the fundamentals of the Greek banking system remains fundamentally sound. However, the highly volatile economic conditions internationally necessitates continuous monitoring and controlling their risks and their potential impact and do not allow any complacency. (Source: Bank of Greece, 'Report on Financial Stability ", June 2009).

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ANNEX

TABLE 1: Balance Sheet of Commercial Bank

Commercial Bank				
RESULTS	financial statements in millions €			
	2008	2009	2010	2011
Net interest income	582	503	595	312
Net fee and commission income	123	115	106	58
Total operating revenue	683	661	704	377
Total operating costs	1.079	1.230	1.439	834
Earnings before taxes	73,70	104	165	159
Provisions	320	330	410	220
Net profit / loss after tax	-487	-587	-600	-611
BALANCE SHEET				
Total assets	29.655	28.100	26.403	27.328
Current Assets	24.251	21.367	24.773	19.988
Loans	22.019	21.111	20.175	5.264
Deposits	17.999	15.061	11.704	11.633
equity	2.020	1.114	944	776

TABLE 2: Balance Sheet of Piraeus Bank

Piraeus Bank				
RESULTS	financial statements in millions €			
	2008	2009	2010	2011
Net interest income	850	784	773	706
Net fee and commission income	108	86	102	105
Total operating revenue	957	1.014	898	746
Total operating costs	799	550	532	495
Earnings before taxes	385	938	635	385
Provisions	241	180	183	198
Net profit / loss after tax	113	146	-4	-6,429
BALANCE SHEET				
Total assets	50.213	48.922	48.586	46.840
Current Assets	40.202	41.658	45.294	38.966
Loans	33.483	31.245	31.190	29.898
Deposits	24.110	25.730	24.052	18.332
equity	2.624	3.238	2.957	2.059

TABLE 3: Balance Sheet of National Bank

National Bank				
RESULTS	financial statements in millions €			
	2008	2009	2010	2011
Net interest income	2.048	2.231	2.429	233
Net fee and commission income	279	279	201	44
Total operating revenue	2.353	2.636	2.112	2.307
Total operating costs	4.217	2.493	2.510	2.541
Earnings before taxes	823	1.100	250	200
Provisions	409	794	1.045	1.408
Net profit / loss after tax	480	225	-361	-1.145
BALANCE SHEET				
Total assets	83.820	91.220	96.305	87.307
Current Assets	76.857	80.652	85.073	75.028
Loans	53.440	58.130	58.243	52.891
Deposits	56.291	58.081	52.471	44.025
equity	6.434	8.224	878	1.065

TABLE 4: Balance Sheet of Alpha Bank

Alpha Bank				
RESULTS	financial statements in millions €			
	2008	2009	2010	2011
Net interest income	1.351	1.344	1.351	1.354
Net fee and commission income	317	279	242	220
Total operating revenue	1.743	2.006	1.661	1.715
Total operating costs	852	906	857	812
Earnings before taxes	725	700	90	473
Provisions	495	532	758	898
Net profit / loss after tax	334	429	-56	-843
BALANCE SHEET				
Total assets	66.738	67.849	63.771	55.197
Current Assets	57.066	60.393	55.867	48.800
Loans	42.189	41.811	39.919	36.152
Deposits	33.816	35.258	5.934	23.749
equity	2.369	4.776	443	5.930

TABLE 5: Balance Sheet of Agricultural Bank.

Agricultural Bank				
RESULTS	financial statements in millions €			
	2008	2009	2010	2011
Net interest income	606	730	796	517
Net fee and commission income	71	61	63	30
Total operating revenue	714	889	707	470
Total operating costs	505	541	513	1.385
Earnings before taxes	55	82	85	90,90
Provisions	411	338	315	299
Net profit / loss after tax	25	385	417	600
BALANCE SHEET				
Total assets	27.661	31.988	30.431	25.937
Current Assets	21.315	24.507	23.328	21.954
Loans	20.955	22.133	21.350	18.170
Deposits	20.990	30.685	19.723	17.316
equity	889	1.303	806	741

TABLE 6: Balance Sheet of Eurobank

Eurobank EFG				
RESULTS	financial statements in millions €			
	2008	2009	2010	2011
Net interest income	1.536	1.342	1.307	1.235
Net fee and commission income	226	251	281	162
Total operating revenue	1.884	1.734	1.881	1.330
Total operating costs	902	898	892	674
Earnings before taxes	263	470	-104	-6,64
Provisions	719	836	1.093	1.086
Net profit / loss after tax	236	3	-83	515
BALANCE SHEET				
Total assets	93.065	96.856	95.372	90.782
Current Assets	79.110	85.416	76.985	66.823
Loans	43.570	42.015	43.539	39.087
Deposits	44.467	45.807	40.522	26.864
equity	3.895	5.486	5.115	5.000

TABLE 7: Ratios of Commercial Bank.

Results of the Commercial Bank's indicators					
		2008	2009	2010	2011
Performance Indicators					
NET PROFIT BEFORE TAX / EQUITY		3,65%	9,34%	17,48%	20,53%
NET PROFIT BEFORE TAX / TOTAL ASSETS		0,25%	0,37%	0,62%	0,58%
NET PROFIT BEFORE TAX / (LOANS + DEPOSITS)		0,33%	0,49%	0,82%	3,03%
RETURN ON ASSETS (ROA)	NET INCOME / TOTAL ASSETS	1,96%	1,79%	2,25%	1,14%
RETURN ON EQUITY (ROE)	NET PROFIT / EQUITY	-24,11%	-52,69%	-63,56%	-78,74%
NET INTEREST MARGIN	NET INTEREST INCOME / (DEPOSITS+LOANS)	1,45%	1,39%	1,87%	1,85%
INDEX COST REVENUE	OTHER INTEREST EXPENSES / (NET INCOME +NON INTEREST INCOME)	73,82%	88,94%	91,66%	92,02%
ASSETS COST INDEX	OTHER EXPENSES INTEREST / CURRENT ASSETS	4,45%	5,76%	5,81%	4,17%
LIQUIDITY RATIOS					
LOANS / DEPOSITS		1,22	1,40	1,72	0,45
TOTAL ASSETS / LOANS		1,35	1,33	1,31	5,19
CAPITAL ADEQUACY					
TOTAL EQUITY / TOTAL ASSETS		6,81%	3,96%	3,58%	2,84%
TOTAL EQUITY / LOANS		9,17%	5,28%	4,68%	14,74%
TOTAL EQUITY / DEPOSITS		11,22%	7,40%	8,07%	6,67%
ASSET QUALITY					
PROVISIONS / OPERATING INCOME		46,85%	49,92%	58,24%	58,36%
PROVISIONS/ TOTAL ASSETS		1,08%	1,17%	1,55%	0,81%

TABLE 8: Ratios of Piraeus Bank

Results of the Piraeus Bank's indicators					
		2008	2009	2010	2011
Performance Indicators					
NET PROFIT BEFORE TAX / EQUITY		14,67%	28,97%	21,47%	18,70%
NET PROFIT BEFORE TAX / TOTAL ASSETS		0,77%	1,92%	1,31%	0,82%
NET PROFIT BEFORE TAX / (LOANS + DEPOSITS)		1,15%	3,00%	2,04%	1,29%
RETURN ON ASSETS (ROA)	NET INCOME / TOTAL ASSETS	1,69%	1,60%	1,59%	1,51%
RETURN ON EQUITY (ROE)	NET PROFIT / EQUITY	4,31%	4,51%	-0,14%	-0,31%
NET INTEREST MARGIN	NET INTEREST INCOME / (DEPOSITS+LOANS)	1,48%	1,38%	1,40%	1,46%
INDEX COST REVENUE	OTHER INTEREST EXPENSES / (NET INCOME +NON INTEREST INCOME)	34,74%	19,49%	22,09%	25,49%
ASSETS COST INDEX	OTHER EXPENSES INTEREST / CURRENT ASSETS	1,99%	1,32%	1,17%	1,27%
LIQUIDITY RATIOS					
LOANS / DEPOSITS		1,39	1,21	1,30	1,63
TOTAL ASSETS / LOANS		1,50	1,57	1,56	1,57
CAPITAL ADEQUACY					
TOTAL EQUITY / TOTAL ASSETS		5,23%	6,62%	6,09%	4,40%
TOTAL EQUITY / LOANS		7,84%	10,36%	9,48%	6,89%
TOTAL EQUITY / DEPOSITS		10,88%	12,58%	12,29%	11,23%
ASSET QUALITY					
PROVISIONS / OPERATING INCOME		25,18%	17,75%	20,38%	26,54%
PROVISIONS/ TOTAL ASSETS		0,48%	0,37%	0,38%	0,42%

TABLE 9: Ratios of National Bank

Results of the National Bank's indicators					
		2008	2009	2010	2011
Performance Indicators					
NET PROFIT BEFORE TAX / EQUITY		12,79%	13,38%	28,47%	18,78%
NET PROFIT BEFORE TAX / TOTAL ASSETS		0,98%	1,21%	0,26%	0,23%
NET PROFIT BEFORE TAX / (LOANS + DEPOSITS)		1,54%	1,89%	0,43%	0,38%
RETURN ON ASSETS (ROA)	NET INCOME / TOTAL ASSETS	2,44%	2,45%	2,52%	0,27%
RETURN ON EQUITY (ROE)	NET PROFIT / EQUITY	7,46%	2,74%	-41,12%	-107,51%
NET INTEREST MARGIN	NET INTEREST INCOME / (DEPOSITS+LOANS)	1,87%	1,92%	2,19%	0,24%
INDEX COST REVENUE	OTHER INTEREST EXPENSES / (NET INCOME +NON INTEREST INCOME)	76,63%	39,91%	50,28%	91,27%
ASSETS COST INDEX	OTHER EXPENSES INTEREST / CURRENT ASSETS	5,49%	3,09%	2,95%	3,39%
LIQUIDITY RATIOS					
LOANS / DEPOSITS		0,95	1,00	1,11	1,20
TOTAL ASSETS / LOANS		1,57	1,57	1,65	1,65
CAPITAL ADEQUACY					
TOTAL EQUITY / TOTAL ASSETS		7,68%	9,02%	0,91%	1,22%
TOTAL EQUITY / LOANS		12,04%	14,15%	1,51%	2,01%
TOTAL EQUITY / DEPOSITS		11,43%	14,16%	1,67%	2,42%
ASSET QUALITY					
PROVISIONS / OPERATING INCOME		17,38%	30,12%	49,48%	61,03%
PROVISIONS/ TOTAL ASSETS		0,49%	0,87%	1,09%	1,61%

TABLE 10: Ratios of Alpha Bank

Results of the Alpha Bank's indicators					
		2008	2009	2010	2011
Performance Indicators					
NET PROFIT BEFORE TAX / EQUITY		30,60%	14,66%	20,32%	7,98%
NET PROFIT BEFORE TAX / TOTAL ASSETS		1,09%	1,03%	0,14%	0,86%
NET PROFIT BEFORE TAX / (LOANS + DEPOSITS)		1,72%	1,67%	0,23%	1,31%
RETURN ON ASSETS (ROA)	NET INCOME / TOTAL ASSETS	2,02%	1,98%	2,12%	2,45%
RETURN ON EQUITY (ROE)	NET PROFIT / EQUITY	14,10%	8,98%	-12,64%	-14,22%
NET INTEREST MARGIN	NET INTEREST INCOME / (DEPOSITS+LOANS)	1,78%	1,74%	2,95%	2,26%
INDEX COST REVENUE	OTHER INTEREST EXPENSES / (NET INCOME +NON INTEREST INCOME)	20,60%	20,93%	25,63%	21,58%
ASSETS COST INDEX	OTHER EXPENSES INTEREST / CURRENT ASSETS	1,49%	1,50%	1,53%	1,66%
LIQUIDITY RATIOS					
LOANS / DEPOSITS		1,25	1,19	6,73	1,52
TOTAL ASSETS / LOANS		1,58	1,62	1,60	1,53
CAPITAL ADEQUACY					
TOTAL EQUITY / TOTAL ASSETS		3,55%	7,04%	0,69%	10,74%
TOTAL EQUITY / LOANS		5,62%	11,42%	1,11%	16,40%
TOTAL EQUITY / DEPOSITS		7,01%	13,55%	7,47%	24,97%
ASSET QUALITY					
PROVISIONS / OPERATING INCOME		28,40%	26,52%	45,64%	52,36%
PROVISIONS/ TOTAL ASSETS		0,74%	0,78%	1,19%	1,63%

TABLE 11: Ratios of Agricultural Bank

Results of the Agricultural Bank's indicators					
		2008	2009	2010	2011
Performance Indicators					
NET PROFIT BEFORE TAX / EQUITY		6,19%	6,29%	10,55%	12,27%
NET PROFIT BEFORE TAX / TOTAL ASSETS		0,20%	0,26%	0,28%	0,35%
NET PROFIT BEFORE TAX / (LOANS + DEPOSITS)		0,26%	0,37%	0,40%	0,50%
RETURN ON ASSETS (ROA)	NET INCOME / TOTAL ASSETS	2,19%	2,28%	2,62%	1,99%
RETURN ON EQUITY (ROE)	NET PROFIT / EQUITY	2,81%	29,55%	51,74%	80,97%
NET INTEREST MARGIN	NET INTEREST INCOME / (DEPOSITS+LOANS)	1,44%	1,38%	1,94%	1,46%
INDEX COST REVENUE	OTHER INTEREST EXPENSES / (NET INCOME +NON INTEREST INCOME)	34,92%	30,70%	31,07%	125,01%
ASSETS COST INDEX	OTHER EXPENSES INTEREST / CURRENT ASSETS	2,37%	2,21%	2,20%	6,31%
LIQUIDITY RATIOS					
LOANS / DEPOSITS		1,00	0,72	1,08	1,05
TOTAL ASSETS / LOANS		1,32	1,45	1,43	1,43
CAPITAL ADEQUACY					
TOTAL EQUITY / TOTAL ASSETS		3,21%	4,07%	2,65%	2,86%
TOTAL EQUITY / LOANS		4,24%	5,89%	3,78%	4,08%
TOTAL EQUITY / DEPOSITS		4,24%	4,25%	4,09%	4,28%
ASSET QUALITY					
PROVISIONS / OPERATING INCOME		57,56%	38,02%	44,55%	63,62%
PROVISIONS/ TOTAL ASSETS		1,49%	1,06%	1,04%	1,15%

TABLE 12: Ratios of Eurobank

Results of the Eurobank Bank's indicators					
		2008	2009	2010	2011
Performance Indicators					
NET PROFIT BEFORE TAX / EQUITY		6,75%	8,57%	-2,03%	-0,13%
NET PROFIT BEFORE TAX / TOTAL ASSETS		0,28%	0,49%	-0,11%	-0,01%
NET PROFIT BEFORE TAX / (LOANS + DEPOSITS)		0,60%	1,12%	-0,24%	-0,02%
RETURN ON ASSETS (ROA)	NET INCOME / TOTAL ASSETS	1,65%	1,39%	1,37%	1,36%
RETURN ON EQUITY (ROE)	NET PROFIT / EQUITY	6,06%	0,05%	-1,62%	10,30%
NET INTEREST MARGIN	NET INTEREST INCOME / (DEPOSITS+LOANS)	1,74%	1,53%	1,55%	1,87%
INDEX COST REVENUE	OTHER INTEREST EXPENSES / (NET INCOME +NON INTEREST INCOME)	23,07%	23,65%	26,51%	24,78%
ASSETS COST INDEX	OTHER EXPENSES INTEREST / CURRENT ASSETS	1,14%	1,05%	1,16%	1,01%
LIQUIDITY RATIOS					
LOANS / DEPOSITS		0,98	0,92	1,07	1,45
TOTAL ASSETS / LOANS		2,14	2,31	2,19	2,32
CAPITAL ADEQUACY					
TOTAL EQUITY / TOTAL ASSETS		4,19%	5,66%	5,36%	5,51%
TOTAL EQUITY / LOANS		8,94%	13,06%	11,75%	12,79%
TOTAL EQUITY / DEPOSITS		8,76%	11,98%	12,62%	18,61%
ASSET QUALITY					
PROVISIONS / OPERATING INCOME		38,16%	48,21%	58,11%	81,65%
PROVISIONS/ TOTAL ASSETS		0,77%	0,86%	1,15%	1,20%