University of Macedonia

Department of Balkan, Slavic and Oriental Studies

MA in the Politics and Economics

of Contemporary Eastern and Southeastern Europe

“THE NEW REGULATORY ENVIRONMENT IN THE BANKING SYSTEM - THE IMPORTANCE OF BASEL III IN PREVENTING FUTURE CRISIS”

Vasilis Papathanasiou

Professor: Fotios Siokis

Athens, October 2012

CONTENTS

- 1. Abstract page 1
- 2. European Banking System page 1

2a. Historic Approach page 1

2b. European Central Bank page 3

2c. Basel I page 4

2d. Basel II page 5

- 3. Situation after Basel II page 9

3a. What went wrong in 2007 and further … page 9

3b. Crisis 2007-2012 page 9

3c. How did the Greek Banks react? The Greek Economy before cirisis

- 4. Basel III page 14

4a. Introduction and timing page 14

4b. The Liquidity Coverage Ratio (LCR) page 16

4c. The Net Stable Funding Ratio (NSFR) page 16

4d. Implementation page 17

4e. Capital Assets Portfolio Transactions – Liquidity – Equity - Leverage

4f. Basel III – Banks and the real economy page 18

- Conclusions page 20
- Bibliography – Sources page 22

1. Abstract

The G20 endorsed the new ‘Basel 3’ capital and liquidity requirements at their November 2010 Summit in Seoul. There are many areas of detail needing further development and worldwide debate and lobbying will inevitably continue - most notably in relation to the whole issue of systemically important financial institutions (SIFIs). The core principles, however, are set.The focus of attention is now shifting to implementation – progressing action on the business implications and planning for compliance. There are strong indications that the convergence in principle will become divergence in practice. Although the transitional period appears long, the 2019 deadline to complete implementation should not distract institutions from the need to demonstrate capital and liquidity resilience much sooner, and meet interim deadlines along the way. Despite a lack of absolute clarity, there is no time to waste. Experience from Basel 2 proved that early analysis, strategic evaluation and robust planning are all crucial to success. Firms must also remain flexible to adapt to subsequent changes and developments, with a number of other parallel policy initiatives being put in place, notably Recovery and Resolution Plans (RRPs), enhanced college of regulator arrangements and continuing uncertainty over tax. Changes in any of these will impact a Basel 3 response plan.

2. European Banking System (ESCB)

Since not all the EU states have joined the euro, the ESCB could not be used as the monetary authority of the eurozone. For this reason the Eurosystem (which excludes all the NCBs which have not adopted the euro) became the institution in charge of those tasks which in principle had to be managed by the ESCB. In accordance with the treaty establishing the European Community and the Statute of the European System of Central Banks and of the European Central Bank, the primary objective of the Eurosystem is to maintain price stability (in other words control inflation). Without prejudice to this objective, the Eurosystem shall support the general economic policies in the Community and act in accordance with the principles of an open market economy.

2a. Historic Approach

Global banking and capital market services proliferated during the 1980s after deregulation of financial markets in a number of countries. The 1986 'Big Bang' in London allowing banks to access capital markets in new ways, which led to significant changes to the way banks operated and accessed capital. It also started a trend where retail banks started to acquire investment banks and stock brokers creating universal banks that offered a wide range of

banking services. The trend also spread to the US after much of the Glass–Steagall Act was repealed in the 1980s, this saw US retail banks embark on big rounds of mergers and acquisitions and also engage in investment banking activities.

Financial services continued to grow through the 1980s and 1990s as a result of a great increase in demand from companies, governments, and financial institutions, but also because financial market conditions were buoyant and, on the whole, bullish. Interest rates in the United States declined from about 15% for two-year U.S. Treasury notes to about 5% during the 20-year period, and financial assets grew then at a rate approximately twice the rate of the world economy.

This period saw a significant internationalization of financial markets. The increase of U.S. Foreign investments from Japan not only provided the funds to corporations in the U.S., but also helped finance the federal government.

The dominance of U.S. financial markets was disappearing and there was an increasing interest in foreign stocks. The extraordinary growth of foreign financial markets results from both large increases in the pool of savings in foreign countries, such as Japan, and, especially, the deregulation of foreign financial markets, which enabled them to expand their activities. Thus, American corporations and banks started seeking investment opportunities abroad, prompting the development in the U.S. of mutual funds specializing in trading in foreign stock markets.

Such growing internationalization and opportunity in financial services changed the competitive landscape, as now many banks would demonstrated a preference for the “universal banking” model prevalent in Europe. Universal banks are free to engage in all forms of financial services, make investments in client companies, and function as much as possible as a “one-stop” supplier of both retail and wholesale financial services.

The early 2000s were marked by consolidation of existing banks and entrance into the market of other financial intermediaries: non-bank financial institution. Large corporate players were beginning to find their way into the financial service community, offering competition to established banks. The main services offered included insurances, pension, mutual, money market and hedge funds, loans and credits and securities. Indeed, by the end of 2001 the market capitalisation of the world’s 15 largest financial services providers included four non-banks.

The process of financial innovation advanced enormously in the first decade of the 21 century increasing the importance and profitability of nonbank finance. Such profitability priorly restricted to the non-banking industry, has prompted the Office of the Comptroller of the Currency (OCC) to encourage banks to explore other financial instruments, diversifying banks' business as well as improving banking economic health. Hence, as the distinct financial instruments are being explored and adopted by both the banking and non-

banking industries, the distinction between different financial institutions is gradually vanishing.

The first decade of the 21st century also saw the culmination of the technical innovation in banking over the previous 30 years and saw a major shift away from traditional banking to internet banking.

The Late-2000s financial crisis caused significant stress on banks around the world. The failure of a large number of major banks resulted in government bail-outs. The collapse and fire sale of Bear Stearns to JP Morgan Chase in March 2008 and the collapse of Lehman Brothers in September that same year led to a credit crunch and global banking crises. In response governments around the world bailed-out, nationalised or arranged fire sales for a large number of major banks. Starting with the Irish government on 29 September 2008,[224] governments around the world provided wholesale guarantees to underwriting banks to avoid panic of systemic failure to the whole banking system. These events spawned the term 'too big to fail' and resulted in a lot of discussion about the moral hazard of these actions.

2b. European Central Bank

The European Central Bank (ECB) is the sixth of the seven institutions of the European Union (EU) as listed in the Treaty on European Union (TEU). It is the central bank for the euro and administers the monetary policy of the 17 EU member states which constitute the eurozone, one of the largest currency areas in the world. It is thus one of the world's most important central banks.

The capital stock of the bank is owned by the central banks of all 27 EU member states. The bank was established by the Treaty of Amsterdam in 1998, and is headquartered in Frankfurt am Main, Germany. The current President of the ECB is Mario Draghi, former governor of the Bank of Italy.

The primary objective of the European Central Bank is to maintain price stability within the Eurozone, which is the same as keeping inflation low and prevent deflation. The Governing Council defined price stability as inflation (Harmonised Index of Consumer Prices) of around 2%. Unlike, for example, the United States Federal Reserve Bank, the ECB has only one primary objective with other objectives subordinate to it.

The key tasks of the ECB are to define and implement the monetary policy for the Eurozone, to conduct foreign exchange operations, to take care of the foreign reserves of the European System of Central Banks and promote smooth operation of the financial market infrastructure under the TARGET2 payments system and the technical platform (currently being developed) for settlement of securities in Europe (TARGET2 Securities). Furthermore, it has the exclusive right to authorise the issuance of euro banknotes. Member states could issue euro coins, but the amount must be authorised by the ECB

beforehand (upon the introduction of the euro, the ECB also had exclusive right to issue coins).

On 9 May 2010, the 27 member states of the European Union agreed to incorporate the European Financial Stability Facility. The EFSF's mandate is to safeguard financial stability in Europe by providing financial assistance to Eurozone Member States.

The bank must also co-operate within the EU and internationally with third bodies and entities. Finally it contributes to maintaining a stable financial system and monitoring the banking sector. The latter can be seen, for example, in the bank's intervention during the 2007 credit crisis when it lent billions of euros to banks to stabilise the financial system.

Although the ECB is governed by European law directly and thus not by corporate law applying to private law companies, its set-up resembles that of a corporation in the sense that the ECB has shareholders and stock capital. Its capital is five billion euro which is held by the national central banks of the member states as shareholders. The initial capital allocation key was determined in 1998 on the basis of the states' population and GDP, but the key is adjustable. Shares in the ECB are not transferable and cannot be used as collateral.

The bank is based in Frankfurt, the largest financial centre in the Eurozone (although not the largest in the European Union). Its location in the city is fixed by the Amsterdam Treaty along with other major institutions. In the city, the bank currently occupies Frankfurt's Eurotower until its purpose-built headquarters are built.

The owners and shareholders of the European Central Bank are the central banks of the 27 member states of the EU. The ECB should not be confused with the European Investment Bank (EIB), the development bank owned by the EU member states.

2c. Basel I

Basel I is the round of deliberations by central bankers from around the world, and in 1988, the Basel Committee (BCBS) in Basel, Switzerland, published a set of minimum capital requirements for banks. This is also known as the 1988 Basel Accord, and was enforced by law in the Group of Ten (G-10) countries in 1992 . Basel I is now widely viewed as outmoded. Indeed, the world has changed as financial conglomerates, financial innovation and risk management have developed. Therefore, a more comprehensive set of guidelines, known as Basel II are in the process of implementation by several countries. New updates, Basel III, were developed in response to the financial crisis.

The Committee was formed in response to the messy liquidation of a Cologne-based bank (Herstatt Bank) in 1974. On 26 June 1974, a number of

banks had released Deutsche Mark (German Mark) to the Herstatt Bank in exchange for dollar payments deliverable in New York. On account of differences in the time zones, there was a lag in the dollar payment to the counterparty banks, and during this gap, and before the dollar payments could be effected in New York, the Herstatt Bank was liquidated by German regulators.

This incident prompted the G-10 nations to form towards the end of 1974, the Basel Committee on Banking Supervision, under the auspices of the Bank of International Settlements (BIS) located in Basel, Switzerland.

Basel I, that is, the 1988 Basel Accord, primarily focused on credit risk. Assets of banks were classified and grouped in five categories according to credit risk, carrying risk weights of zero, ten, twenty, fifty, and up to one hundred percent. Banks with international presence are required to hold capital equal to 8% of the risk-weighted assets. The creation of the credit default swap after the Exxon Valdez incident helped large banks hedge lending risk and allowed banks to lower their own risk to lessen the burden of these onerous restrictions.

Since 1988, this framework has been progressively introduced in member countries of G-10, currently comprising 13 countries, namely, Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Spain, Sweden, Switzerland, United Kingdom and the United States of America.

Most other countries, currently numbering over 100, have also adopted, at least in name, the principles prescribed under Basel I. The efficiency with which they are enforced varies, even within nations of the Group

2d. Basel II

Basel II is the second of the Basel Accords which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. Basel II, initially published in June 2004, 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 advantage amongst internationally active banks. Advocates of Basel II believed that such an international standard could help protect the international financial system from the types of problems that might arise should a major bank or a series of banks collapse. 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.

Politically, it was difficult to implement Basel II in the regulatory environment prior to 2008, and progress was generally slow until that year's major banking crisis caused mostly by malpractices in the use of credit default swaps, mortgage-backed security markets and in the use of similar derivatives. As Basel III was negotiated, this was top of mind, and accordingly much more stringent standards were contemplated, and quickly adopted in some key countries including the USA.

Basel II uses a "three pillars" concept – a. minimum capital requirements (addressing risk), b. supervisory review and c. market discipline. The Basel I accord dealt with only parts of each of these pillars. For example: with respect to the first Basel II pillar, only one risk, credit risk, was dealt with in a simple manner while market risk was an afterthought; operational risk was not dealt with at all.

The first pillar deals with maintenance of regulatory capital calculated for three major components of risk that a bank faces: credit risk, operational risk, and market risk. Other risks are not considered fully quantifiable at this stage. The credit risk component can be calculated in three different ways of varying degree of sophistication, namely standardized approach, Foundation IRB, Advanced IRB and General IB2 Restriction. IRB stands for "Internal Rating-Based Approach". For operational risk, there are three different approaches - basic indicator approach or BIA, standardized approach or STA, and the internal measurement approach (an advanced form of which is the advanced measurement approach or AMA).For market risk the preferred approach is VaR (value at risk). As the Basel 2 recommendations are phased in by the banking industry it will move from standardised requirements to more refined and specific requirements that have been developed for each risk category by each individual bank. The upside for banks that do develop their own bespoke risk measurement systems is that they will be rewarded with potentially lower risk capital requirements. In future there will be closer links between the concepts of economic profit and regulatory capital.

The second pillar deals with the regulatory response to the first pillar, giving regulators much improved 'tools' over those available to them under Basel I. It also provides a framework for dealing with all the other risks a bank may face, such as systemic risk, pension risk, concentration risk, strategic risk, reputational risk, liquidity risk, any residual risk due to imperfect mitigation techniques and risks arising from securitization. It gives banks a power to review their risk management system through stress testing. Internal Capital

Adequacy Assessment Process (ICAAP) is the result of Pillar II of Basel II accords

Third pillar aims to complement the minimum capital requirements and supervisory review process by developing a set of disclosure requirements which will allow the market participants to gauge the capital adequacy of an institution. Market discipline supplements regulation as sharing of information facilitates assessment of the bank by others including investors, analysts, customers, other banks and rating agencies which leads to good corporate governance. The aim of pillar 3 is to allow market discipline to operate by requiring institutions to disclose details on the scope of application, capital, risk exposures, risk assessment processes and the capital adequacy of the institution. It must be consistent with how the senior management including the board of directors assesses and manages the risks of the financial institution.

When market participants have a sufficient understanding of a bank's activities and the controls it has in place to manage its exposures, they are better able to distinguish between banking organisations so that they can reward those that manage their risks prudently and penalise those that do not. These disclosures are as wekk as qualitative disclosures providing a summary of the general risk management objectives and policies which can be made annually. Institutions are also required to create a formal policy on what will be disclosed, controls around them along with the validation and frequency of these disclosures. In general, the disclosures under Pillar 3 apply to the top consolidated level of the banking group to which the Basel II framework applies.

Regulators in most jurisdictions around the world plan to implement the new accord, but with widely varying timelines and use of the varying methodologies being restricted. The United States' various regulators have agreed on a final approach. They have *required* the Internal Ratings-Based approach for the largest banks, and the standardized approach for smaller banks. In India, Reserve Bank of India has implemented the Basel II standardized norms on 31 March 2009 and is moving to internal ratings in credit and AMA (Advanced Measurement Approach) norms for operational risks in banks. Existing RBI norms for banks in India (as of September 2010): Common equity (incl of buffer): 3.6% (Buffer Basel 2 requirement requirements are zero.); Tier 1 requirement: 6%. Total Capital : 9% of risk weighted assets. According to the draft guidelines published by RBI the capital ratios are set to become: Common Equity as 5% + 2.5% (Capital Conservation Buffer) + 0-2.5% (Counter Cyclical Buffer), 7% of tier I capital and minimum capital adequacy ratio (excluding Capital Conservation Buffer) 9% of Risk

Weighted Assets.Thus the actual capital requirement is between 11-13.5% (including Capital Conservation Buffer and Counter Cyclical Buffer). In response to a questionnaire released by the Financial Stability Institute (FSI), 95 national regulators indicated they were to implement Basel II, in some form or another, by 2015.

The European Union has already implemented the Accord via the EU Capital Requirements Directives and almost all European banks already report their capital adequacy ratios according to the new system. All the credit institutions adopted it by 2008. Australia, through its Australian Prudential Regulation Authority, implemented the Basel II Framework on 1 January 2008. The role of Basel II, both before and after the global financial crisis, has been discussed widely. While some argue that the crisis demonstrated weaknesses in the framework, others have criticized it for actually increasing the effect of the crisis. In response to the financial crisis, the Basel Committee on Banking Supervision published revised global standards, popularly known as Basel III. The Committee claimed that the new standards would lead to a better quality of capital, increased coverage of risk for capital market activities and better liquidity standards among other benefits.

Nout Wellink, former Chairman of the BCBS, wrote an article in September 2009 outlining some of the strategic responses which the Committee should take as response to the crisis. He proposed a stronger regulatory framework which comprises five key components: (a) better quality of regulatory capital, (b) better liquidity management and supervision, (c) better risk management and supervision including enhanced Pillar 2 guidelines, (d) enhanced Pillar 3 disclosures related to securitization, off-balance sheet exposures and trading activities which would promote transparency, and (e) cross-border supervisory cooperation. Given one of the major factors which drove the crisis was the evaporation of liquidity in the financial markets, the BCBS also published principles for better liquidity management and supervision in September 2008.

A recent OECD study suggest that bank regulation based on the Basel accords encourage unconventional business practices and contributed to or even reinforced adverse systemic shocks that materialised during the financial crisis. According to the study, capital regulation based on risk-weighted assets encourages innovation designed to circumvent regulatory requirements and shifts banks’ focus away from their core economic functions. Tighter capital requirements based on risk-weighted assets, introduced in the Basel III, may further contribute to these skewed incentives. New liquidity regulation, notwithstanding its good intentions, is another likely candidate to increase bank incentives to exploit regulation.

Think-tanks such as the World Pensions Council (WPC) have also argued that European legislators have pushed dogmatically and naively for the adoption of the Basel II recommendations, adopted in 2005, transposed in European Union law through the Capital Requirements Directive (CRD), effective since 2008. In essence, they forced private banks, central banks, and bank regulators to rely more on assessments of credit risk by private rating agencies. Thus, part of the regulatory authority was abdicated in favor of private rating agencies.

3. The Situation after Basel II

3a. What went wrong in 2007 and further…

The economies of the Member States, especially those in southern Europe, began to show a significant lack of capital and liquidity in early 2007. Banks suffered heavy losses in their trading book as a result of sharp decrease in assets value (mainly off balance sheets credit derivatives). The results were:

-Capital problems:

Basel II risk weights did not reflect the real risks in the trading books and banks did not have adequate capital to cover the losses

-Liquidity problems :

There was heavy reliance on short term wholesale funding which disappeared by night (Financial Institutions stops lending one to another). Banks wanted to liquidate their own assets, but there were no markets available.

3b. Crisis 2007-2012

The origins of the global economic crisis are by now well-known. They can be traced back primarily to an unsustainable credit and housing boom in the United States. The problems in the United States and some other large economies, notably the United Kingdom, became evident in the second half of 2007, and the situation in the leading industrialized economies deteriorated rapidly in 2008. The United States entered recession in 4th quarter 2007 and the UK (4th quarter 2008), France (1st quarter 2009), Germany (3rd quarter 2008) and Japan (2d quarter 2008) were all in recession by early 2009.

By mid-2008 it was clear that the shocks to the global financial system were of a type and magnitude that had not been seen since the Great Recession of the 1930s. At this time, however, the economies of SEE continued to boom. Many people there seemed to be blissfully unaware of, or at least unaffected by, what was happening in the global economy. Banks kept on searching aggressively for market share, both on the liability and asset side. Foreign direct investment (FDI) poured into the region in record amounts, and

economic growth continued unabated. Throughout the first eight months or so of 2008 there was a feeling that SEE would be able to escape the worst of the contagion from the crisis. Businesses and governments were still optimistic, after several years of strong growth combined with macroeconomic stability, increasing investment and a sense that the region was on the right path towards integration into the European Union. In fact the main macroeconomic concern in many SEE countries in mid-2008 was not that the global crisis would spill over into their countries, but rather how to tackle inflation, which had started to rise sharply, mainly because of high oil and commodity prices. The situation started to change noticeably in September 2008. The collapse or nationalization of several major financial institutions in the US – Lehman Brothers, AIG, Fannie May and Freddie Mac – caused such upheaval in the world economy that everyone realized there would be dire consequences around the globe, and that no country would be immune. Nevertheless, the prevailing wisdom of the time was that there would be a significant slow-down of growth in SEE in late-2008 and 2009, but that the figures would remain in positive territory in all cases.

3c. How did the Greek Banks react?

The Greek economy before the crisis

Greek banks now operating in 16 countries. In recent years, most Greek banks have developed considerable activity in the area of Balkans. The Greek banks got into difficulties due to their exposure to the Greek State bonds, the debt of the public sector the transfer of deposits /savings abroad. IFurthermore, the cost of funds for banks has increased and this inevitably impacted the interest rate of the loans to households and businesses. In the Greek banking system, the limited impact of the international financial crisis was due to two main reasons:

• Greek banks had in their portfolio, such as foreign banks in trouble solvency "junk bonds" whose prices decreased largely for the reasons mentioned above. Therefore, the Greek banks were not required to record losses of such bonds. It should be noted here that Greek banks (mainly the larger institutions) invested in Greek Government bonds, although their development during the last years was based on the expansion of their business to mortgages and consumer lending, as well as on the expansion of their international activities.

• Greek banks hold high capital adequacy ratios and thus it was deemed they could avoid spill-over effects of the financial crisis and protect their depositors, lenders and shareholders. The solvency of Greek banks is not

threatened by this crisis because there were channels for the transmission and Greece problems encountered in countries affected by primarily by the crisis. The only channel that concern and Greece was the increase in interest rates that occurred in interbank market.

The measures taken in Greece during the financial crisis were :

• enhancing liquidity : The measures taken by the law 3.723/2008 were for strengthening liquidity by twenty-eight billion. This program, terms of which were approved by the European Commission, contrary programs from other countries, it was rescue program banks, but a program to aid economy through banks. The program, which had a specific time duration and defined, by law, expiration date, no for the provision of cash from the state to the banks, but a combination of bonds and guarantees of the Greek public sector. Moreover, guarantees and facilities provided by the program had cost for the banks, which amounted to market conditions. According to Bank of Greece, the end of 2009, the rate of recovery of the aid measures the Greek banking system stood at 33.6% ultimately for all measures and is smaller than the percentage utilization of the corresponding measures to strengthen both area euro (43%) and the European Union of 27 (40%).

• deposit guarantees: The measures taken concerned the strengthening of the Greek guarantee deposits within the context of the EU proposals for the bankink union and the single market of financial services. Specifically, the amendments made to the legal framework concerning the deposits' guarantees in Greece are the following : increase of protected deposits frpm twenty thousands (20.000) to one hundred thousands (100.000) euros per depositor per institution, the annual graduation credit institutions qualitatively etc. The Council of Finance Ministers of the European Union (ECOFIN) decided and proceeded to carry stress tests in order to ensure transparency in relation to the capacity of banks to cope with extreme financial conditions and enhance the reliability of the banking system. The purpose of the stress tests is to assess the overall capacity of the banking sector in the European Union to absorb major economic and financial shocks in the future. Exercise is an important step towards strengthening the stability of the banking sector in the EU and the euro area and performed by 91 banks from 20 EU Member States.

The stress tests simulated the behavior of capital and the financial data of banks in the weaker economic conditions in 2010 and 2011. All banks were tested under three scenarios:

• The first scenario is consistent with the existing convergent macroeconomic estimates. Was the most gentle and based on proper perspective on the evolution of the European economy by 2011.
• The second scenario is a scenario of prolonged pressures and steady deterioration of the economy.
• The third is the most hard, as it provides conditions downturn with additional shock from sovereign debt crisis.
Both include mandatory adverse scenario simulation below extreme cases.

More specifically :

• For the general state of the economy the hypothesis of recession in both years, 2010 and 2011, has been tested considering worst rates than provided.
• For rates tested the hypothesis of a significant increase (which is unlikely to recessionary conditions).
• For government bonds hold in the banks' trading books (Trading books) tested the possibility of renegotiating lower than the current prices (haircuts). The modelling was based on prices observed in the markets from May onwards.

The Greek banking system as a whole and each bank independly have shown strong resistance to the pressures caused by the international financial crisis and the adverse financial development. Based on 2009 data, the Joint Core Capital (Tier I ratio) for banks ranges around 12% and for bank funds around 10%. More specifically in the case of Greece, the exercise was performed by the 6 largest Greek banking groups, i.e. the National Bank of Greece, the EFG Eurobank Ergasias, the Alpha Bank, the Piraeus Bank, the ATEbank and the Hellenic Postbank. These bank organizations represented more than 90% of the Greek banking system's assets (excluding foreign subsidiaries).

The results were positive for five out of the six Greek banks. Only the Agricultural Bank of Greece failed in stress testing. Bank of Greece said that the adverse scenarios, that ATEBank failed, embodied the extreme predictions that were "very unlikely " to occur in Greece.

The dire situation in which the Greek economy came made necessary the development of a dynamic and effective strategy for treatment. The first step in this direction is to understand the extent of the the crisis experienced by

the Greek economy due to endogenous factors or intrinsic forces that led to the crisis of subprime loans.

According to the published data, the Greek financial institutions and insurance companies have had little exposure to Subordinated products and few investors placed their capitals to toxic products. Indeed the last decade, Greek banks turned their business interest in developing countries (eg Turkey, Egypt, the Balkans). The largest Greek banks followed a conservative banking strategy and developed a wide network of branches in Romania, Bulgaria, etc. instead of investing in risky financial products.

Moreover, pension funds, faced the decrease in cash due to their failures and management and were not able to invest large funds in the market. However it is worth mentioning that the erosion of public confidence and market to financial institutions worldwide, manifested by the decline in stock prices, the ongoing commitment capital and the increase of interbank interest rates affected Greek financial institutions.

Subject to the current global crisis, solutions have been sought both nationally and internationally, that will reverse the unfavorable climate and help the global economy return on the track of growth. After the bankruptcy of Lehman Brothers initiatives have been also taken at international level, including packages of billions US dollars to rescue and guarantee the security of the banking system, programs of pulling out the undervalued assets from banks' balance sheets and government bonds market by state governments , in an effort to restore confidence and proper flow of funds in the market.

The new rules will be adopted aiming at strengthening the resilience of the global financial system and. Bankers argue that the most suffocating control will increase banks' operating costs and limit lending to businesses and households. Central banks have a significant role in the recovery of the financial system. The effort include the reduction in FED short-term interest rate starting in autumn 2007. The same trend followed by ECBin autumn 2008, after the Recession got generalized dimensions, movements of the U.S. Central bank. Briefly, the initiatives to date, make the provision of liquidity market facilities to financial institutions and the buy government and corporate bonds while normalizing pressures receives funding for states and large companies.
Leading role to the above initiatives, both at government level and central bank level, have the U.S. It is also worth mentioning that the last time, many governments, under the pressure of social groups, employ state intervention to protect domestic products and to safeguard jobs, ignoring the impact of this policy on exports and international trade.

To strengthen the banking system, the Community should establish mechanisms about international institutions in order to advance initiatives, to strengthen the regulatory framework and to address some of the aforementioned causes of the crisis.

These initiatives relate specifically (Hellenic Banking Association, 2010) to:

• strengthening the regulatory framework on the capital adequacy of credit institutions, which, have launched the process of implementing the new global standards on bank capital and liquidity (Basel III).
• review of the regime for the remuneration of administrative staff of listed companies, especially in the financial sector,
• review of the regulatory framework for market abuse, focusing on provisions and non-regulated markets and permanent control of short selling (short selling),
• the inclusion of credit rating in specific regulatory and supervisory framework,
• strengthening of the regulatory framework on the transparency of transactions in the capital markets and risk management arising from securitized products, and
• reforming the supervisory framework of the European financial system.

4. Basel III

Introduction and timing

On December 16th, 2010 the Basel Committee on Banking Supervision published the final form of a set of reforms to strengthen liquidity risk management by internationally active banks. The Liquidity Paper brings together and, in parts, revises proposals set out in the initial framework for improving liquidity risk management and controlling liquidity risk exposures set out in the Committee paper adopted in September 2008 "Principles for Sound Liquidity Risk Management", the December 2009 Consultation Document, "International framework for liquidity risk measurement, standards and monitoring" and the proposals set out in the Annex to the July 26th Committee Press Release. The 2010 Liquidity Paper is intended to address concerns highlighted by the economic crisis, where a lack of liquidity and inadequate liquidity risk management operated together to amplify difficulties caused by credit losses and, due to the interconnectedness of markets, quickly infected all markets, with dire consequences.

The 2010 Liquidity Paper proposes transitional arrangements to implement the new liquidity standards. The Committee will also carry out an observation period which will be used to monitor the impact of the standards' implementation. During this period further quantitative impact studies will be carried out using data from year end 2010 and mid-year 2011 reference periods. To give banks more time to develop their reporting systems, reporting to supervisors will not first be expected until January 1st, 2012. If any unintended consequences come to light during the observation period, the Committee is prepared to make any necessary revisions to the Liquidity Coverage Ratio (**LCR**) by mid-2013 and to the Net Stable Funding Ratio (the **NSFR**) by mid-2016 at the latest. The LCR, including any revisions, will be introduced on January 1st, 2015, and the NSFR, including any revisions, will become a minimum standard by January 1st 2018.The new CRD4 regulation will be incorporated in the legislation of the Member States upon final resolution by the EC, the European Parliament and the ECB.
This Memorandum summarises the proposals sets out in the 2010 Liquidity Paper and notes any significant changes from the proposals set out in the series of Committee publications outlined above.

The 2010 Liquidity Paper sets out two minimum standards for funding liquidity:

1. the LCR, which is designed to promote the short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient high-quality liquid assets to survive a significant stress scenario lasting for 30 calendar days and

2. the NCR, which is designed to promote longer-term resilience by requiring banks to have capital or longer term high-quality funding which can survive over a one year period of less severe stress. These standards are expressed to be minimum standards and, where appropriate, supervisors of internationally active banks are expected to require an individual bank to apply more stringent standards to reflect that banks liquidity risk profile, including having regard to jurisdiction specific risks.

The 2010 Liquidity Paper also provides a set of monitoring tools to be used in the ongoing monitoring of the liquidity risk exposures of banks and in communicating these exposures among home and host supervisors. These tools are intended to further strengthen and promote global consistency in liquidity risk supervision.

The Liquidity Coverage Ratio (LCR)

The LCR is designed to ensure that a bank has sufficient high quality unencumbered liquid assets to enable it to survive (i.e. to allow it to meet its cash commitments arising over) a short term (30 calendar day) period of significantly severe stress. It therefore requires a bank to consider the cash outflows and cash inflows it can expect to be subject to over the 30 calendar day period of stress, recognising that it is likely to have increased commitments and less available resources as a result of the significantly severe stress, and then maintain a buffer of high quality liquid assets equal to or greater than its expected total net cash outflow. Banks will be required to meet the LCR, explained further below, at all times. Formulaically, the requirement is set out as follows:

$$LCR = \frac{\text{Stock of high-quality liquid assets}}{\text{Total net cash outflow over the next 30 calendar days}} \geq 100\%$$

The Net Stable Funding Ratio (NSFR)

Where the LCR looks at addressing the liquidity risk inherent in a banks short term net cash position, the NSFR test considers the robustness of a bank's funding position (based on the bank's assets/activities) over a one year period, assuming it is then subject to an institution specific stress of which there is public awareness and which results in:

1. a significant decline in profitability or solvency as a result of increased credit, market, operational or other risk;

2. a potential downgrade in debt; counterparty credit or deposit rating by any nationally recognised organisation; and/or

3. a material event which calls into the question the reputation/credit quality of the Bank.

Broadly this is achieved by requiring banks to increase longer term funding. This is particularly so for illiquid assets and off-balance sheet exposures, securitisation structures and other assets which during the economic crisis proved be a significant liquidity drain in times of stress. The NSFR is expressly designed to provide structural changes in liquidity risk profiles of institutions, away from short term funding mismatches and towards more stable longer term funding of assets and business assets.

This approach requires a bank to: assess all its assets (on and off balance sheet), identify the illiquid proportion of each asset being that portion which, in all likelihood, could not be monetised within a year in the stress scenario discussed above (referred to as its weighted amount) and then hold equity capital or particular types of longer term debt expected to be reliable sources of funds overa one year time horizon under conditions of extended stress (as outlined below). These types of liabilities are together referred to as "**Stable Funding**". The amount of Stable Funding which a bank actually holds referred to as its Available Stable Funding (**ASF**), and the aggregate weighted value of its assets referred to as is its Required Stable Funding requirement (**RSF**). The NSFR requires banks to have more ASF than RSF. Formulaically this is represented as:

NSFR = Available amount of Stable Funding (ASF) >100%
Required Amount of Stable Funding (RSF)

Implementation (what does Basel 3 mean for the Greek Banks?)

The shock created by the financial crisis led the Basel Committee on the development of a new regulatory framework of the financial market in order to avoid similar future occurrences respectively.
When the 2007 global financial "turmoil» (turmoil) outbroke Basel II framework was not applied in a few countries. Basel II implementation by all EU Member States took place in 2008, in parallel with the evolution of the financial crisis.

To this transformation contributed the fact that international financial institutions did have insufficient liquidity margins, their funds didn't cover adequately the risk, showed particularly high leverage, and characterized by "cyclical" behavior. Also, there were not important links among institutions of systemic importance to the economy, as it was by the rules of the Committee on Banking Supervision (Basel Committee on Banking Supervision - There were significant deficiencies in the international context of banking supervision. Since weaknesses have not dealt with the Basel II framework, the BCBS adopted by July 2009 onwards a series of additional recommendations, rules, etc., the well known "Basel III."

These rules cover the following areas:

Capital Assets Portfolio Transactions

Since the beginning of the crisis, it became clear that risks inherent in banks' trading book are underestimated, especially those related to either complex financial products with low trading activity, or exposures to corporations. Basel III achieves a more accurate capturing of risks arising from bank's trading activities (trading activities) as it raises capital requirement for the trading book three to four times, on average, than that provided by the previous regulatory framework.

Liquidity

The underestimation of the risks incurred by credit institutions which were employed in these markets led to increased uncertainty and malfunction of money markets with adverse consequences to banks that rely heavily on them for liquidity. This is known in the case of Northern Rock, where a bank with a strong capital base was forced to appeal to the state to cover its needs for liquidity, as the money markets on which it relied, for financing didn't work in essence. The new framework for liquidity introduces two indicators of liquidity of credit institutions: a) The liquidity coverage ratio, which provides that banks should have at all times sufficient reserves of cash or readily realizable assets, so they can "survive "under very difficult financing conditions and b) fixed Index Equity funding to ensure balanced funding structure with emphasis on stable sources of this.

Equity

The equity consists of various financial instruments with specific characteristics, in particular differences in their ability to absorb losses, which for this reason are classified into four categories: basic, main and additional and complementary primary and additives. It is known that the own funds of credit institutions is the foundation of wellbeing. It is therefore very important to be adequate in terms of quantity and quality. The Basel III addresses both of these needs as both sets strict standards for financial instruments that can be included in the various categories of equity and also increases the capital requirements to the risk weighted assets (S.K . E.), both on the whole and, in particular, for the categories with the greatest capacity to absorb losses.

Specifically determined that the "best quality" funds, which are represented by the funds are property of the shareholders and which fully absorb losses, both in operation and in the event of the closure of the institution, should not be less than 4 , 5% CCW This limit, they must be kept after removal from the property of the shareholders of the data currently deducted from the total of either the equity or the basic own funds. Important than semantic terms is the

renaming of the main owners of capital «Core Tier 1» in «Common Equity Tier» that could be attributed as "Assets Common Shareholders." In addition, Basel III provides for the keeping of a "maintenance margin funds", which amounts to 2.5% of CCW and consists entirely of assets of shareholders. This margin is used to absorb losses during periods of economic downturn and the decline will lead to proportionally increasing restrictions on the distribution of dividends, "bonuses" to staff etc. Complementary to the "maintenance margin funds" will operate the "countercyclical margin", which will fluctuate within the range 0 - 2.5% of the CCW, depending on economic conditions. The purpose of this margin is to address the hyper-circle behavior of banks, namely the 'violent' deleveraging in recession after uncontrolled credit growth during economic development. Total regulatory capital should amount to 10.5% of CCW including the maintenance margin, excluding countercyclical margin.

Leverage

Deterrent against hyper-circle behavior of banks is expected to function and the limit will be introduced for the leverage ratio. This index is calculated as the ratio of core capital to total assets, including off-balance sheet exposures and positions in derivatives, and should not exceed a ceiling, originally proposed amounts to 3%. The obligation of this limit will ensure that banks will increase their lending too. We also discourage the use of selective regulation (regulatory arbitrage) that may affect the calculated based on the CCW, capital adequacy ratio, while facing partly "risk model" of improper display of risk weighting of the assets. Finally it should be noted that although it has already decided that the FINANCIAL institutions WITH systemic importance should follow stricter rules, e.g. would have increased capital requirements, such rules have not been published yet at the time of writing.

Basel III, banks and the real economy

The new Basel framework will be phased in by 2019, in order to avoid turbulence not only in the financial sector and the real economy. Specifically for the application of the rules regarding liquidity and leverage comes first follow-up to ensure that the final applicable thresholds are appropriate to achieve the purposes for which these indicators adopted. A new regulatory framework affects, of course, the operation of banks and ultimately the real economy. Reviewed against a tougher supervisory framework is summarized in the idea that if you increase the requirements would increase the cost of money and the financing of the real economy from the banks will be reduced, leading to slow growth and reduce the output of the economy. In assessing

the impact of the new framework in the real economy, however, should take into account the benefit of reducing the likelihood of a new crisis in the financial sector, but the intensity of such a crisis if it occurs.

In the BIS reports indicated that long-term impact on growth of the Index Assets Shareholders of 7% to 8% of CCW, together with coverage set by Basel III liquidity ratios are estimated to result in a net benefit of output growth amounting to 1.23% in relation to the long-term trend thereof. There certainly must not forget that the Basel Committee on Banking Supervision issued no provisions that are legally binding. In the European Union in this context should be "translated" into a Directive, as had happened with the corresponding Basel II "denatured" in Directions 2006/48 & 49/EK («Capital Requirements Directive» or briefly CRD). Already, this Directive has undergone a number of changes with the most important ones introduced by Directive 2009/111/EC. («CRD II»). Also ready for a new Directive «CRD III» and the integration of Basel III will be through under development «CRD IV».

Also worth mentioning that this new framework will be implemented in the European Union by national supervisors in collaboration with new European Supervisory Authorities, and the European Systemic Risk Board. The operation of these new authorities will start from 1.1.2011 and will strengthen cooperation and uniform application of prudential regulation in the European Union.

V. Conclusions

There is no doubt that we are witnessing the biggest financial crisis of the last hundred years. The fact that the current economy has more globalized character of the movement of capital in relation to the past, makes this crisis more serious consequences both in and ways of addressing them. The fact is that while the financial crisis started with the U.S. economy, globalization was able to transfer the crisis rapidly across the globe. ; Therefore, it is essential that a rigorous framework of financial markets through the creation of a single global supervisory body or closer cooperation between the supervisory principles of the EU, the U.S. and other major economies. The rules Basel III, although make a step in this direction, considered sufficiently stringent than countries such as the U.S. and Germany. It is important for the EU as a whole to pursue expansionary fiscal policy, promoting the large-scale development projects to create jobs and promote growth with an order to quickly and effectively combat the economic crisis. It is also important to note that, particularly in times of economic crisis,there should be close and harmonious cooperation between the monetary and

fiscal authorities to better coordinate and promote the objectives and measures together.

Regarding the Greek reality the manifestation of the global financial crisis led to the debt crisis resulting in prolonged recession and economic downturn. Initially, the Greek banking system had to adapt its activities in order to address the implications of the global financial crisis and then banks, as clearly presented in the analysis of their activities in the third chapter, they were not exposed to derivatives, but negatively affected by rising funding costs. The result of this increase was the reduction in their liquidity. Simultaneously, due to the market downturn the percentage of non-performing loans has increased, thus increasing fears for the capital adequacy of banks. To address these two key issues, the Greek Banks have undertaken or undertake share capital increases, underwritten bonds, developed growth forecasts for outstanding loans, reduced operating costs, taken actions to expand in Southeastern European markets, since these markets appear with promising prospects. All these actions have helped Greek Banks to maintain a satisfactory level of capital adequacy and liquidity.

All these changes gave rise to discussions about a second round of mergers and acquisitions in order to furthet strengthen the Greek banking system and protect it against potential future adverse effects. Already Piraeus bank filed a formal proposal to purchase the Agricultural Bank and the Postal Savings, while rumors abound about the merger between NBG and EFG Eurobank Ergasias, between Emporiki Bank and Alpha Bank. The relative speculation also supported by the recent report of IMF (International Monetary Fund), which asks implicitly international bidding competition for the Agricultural Bank and the Postal Savings Bank.

Concluding, the global financial system adjusted after the global crisis. New stricter rules regulatory framework for banks, while, mergers and acquisitions are on the table. The Greek banking system has been affected by the adverse global financial conditions, while the fiscal debt crisis in the Greek economy, has worsened the conditions of banks'operations. The restructuring of the Greek banking system through mergers and acquisitions at this time appears to be the only solution to strengthen it.

BIBLIOGRAPHY – SOURCES

- Basel Committee on Banking Supervision, (June 2006), International Convergence of Capital Measurment and Capital Standards: A Revised Framework, Basel, Bank for International Settlements.

- Bernanke BS and Gertler M (1989), "Agency costs, collateral and business fluctuations", American Economic Review.

- COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
- PARLIAMENT AND THE COUNCIL, A Roadmap towards a Banking Union, Brussels 12.9.2012.

- Dell'Ariccia, G., Detragiache, E., and Rajan, R., (2008), "The real effect of banking crises", Journal of Financial Intermediation.

- European Bank Coordination Vienna Initiative, Working Group on Basel III implementation in Emerging Europe, Report to be submitted to the EBCI Full Forum, 12-13 March 2012.

- Falhenbrach, R., and Stulz, R., (2009), "Bank CEO Incentives and the Credit Crisis", National Centre of Competence in Research Financial Valuation and Risk Management.

- Financial Services Basel 3, "Pressure is Building…", kpmg.com, 2010, Switzerland

- Gavin, M., and Kausmann, R., (1988), "The Roots of Banking Crises : The Macroeconomic Context", Inter-American Development Bank.

- Hutchison, M., and Glick, R., (1999), "Banking and Curency Crises : How Common are Twins?", UCSC Department of Economics.

- Isard, P., Rsin, A., and Rose, A.K., (1999), "International finance and financial
- crises", Essays in honour of Robert Flood Jr, KluwerAcademic Publishers.

- Krugman, P., (2009), Η κρίση του 2008 και η επιστροφή των οικονομικών της ύφεσης, εκδόσεις Καστανιώτη, Αθήνα.

- Παπαγεωργίου Γ. Παναγιώτης, "Η Κεφαλαιακή Επάρκεια", περιοδικό Οικονομική Επιθεώρηση, Μάιος 2005, Αθήνα.

- Summers, L.H., (2000), "International Financial Crises: causes, prevention and cures", The American Economic Review, Vol. 90, No. 2, Papers and Proceedings of the One Hundred Twelfth Annual Meeting of the American Economic Association (May 2000).

- Από την ιστοσελίδα http://el.wikipedia.org
- Από την ιστοσελίδα http://indy.gr
- Από την ιστοσελίδα http://bankofgreece.gr
- Από την ιστοσελίδα http://banksnews.gr
- Από την ιστοσελίδα http://c-ebs.org