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The Regulation Framework for the Banking Sector: The EMU, European Banks and Rating Agencies before and during the Recent Financial and Debt Crisis

Eleftherios Thalassinos[1]

Abstract: A regulation framework for the banking sector should be characterised by transparency, responsibility and performance in several important areas. These areas are the global and European framework for corporate financial reporting (CFR), risk management (RM), stockholder value creation (SVC), corporate governance (CG), corporate social responsibility (CSR) and sustainable development (SD). The regulation framework for the banking sector must also consider the fiscal and monetary environment in which a banking institution operates. The global rating system and the rating agencies will also have an important impact on any regulation framework for the banking sector. These two factors play a key role when a financial, credit or debt crisis occurs. In this article, a holistic regulation framework for the banking sector is presented. The article is based on European banks that are part of the European Monetary Union (EMU). Initially, it focuses on the timelines and review the integration of the European Monetary Union, relevant legislation and information on member countries' banking sectors. This information creates the framework for the proposed model. The article considers all of the above factors in creating a holistic regulation framework for the banking sector to present in the context of the recent financial, credit and debt crises that have taken place in the EMU.

Keywords: Banking; Regulations; Financial Crisis; Debt Crisis; EMU

JEL Classification: G01; G21; G28; G30; H12;

1. Introduction

This current crisis is not under control yet and it may lead to a new global monetary system. The new system must be independent from the rating agencies, the speculators, the CDSs, the country deficits and the exchange rate fluctuations. Maybe this is a unique opportunity to redesign the global monetary system with one reserve currency, with an extended cooperation among the hard currency areas and a very sensitive and effective regulatory framework.

Unfortunately euro-currency failed to convince the international markets in its role as a reserve currency. Actually euro failed to follow the description given to reserve currencies in 1960 by the Belgian-American Professor Robert Triffin stating that "a reserve-currency nation must run a current-account deficit to provide liquidity for the international monetary system". The reward of the nation for providing liquidity has been the modest returns of the seigniorage-equivalent to 2% of the amount that is lent for providing that liquidity to the monetary union. This is the Triffin Dilemma which nobody in the EU took it seriously.

The main aim of this paper is an attempt to examine and evaluate the role of the rating agencies before during and after the recent financial crisis. Which is the methodology used by the rating companies Moody's, S&P, FITCH and others, in evaluating a bank's financial health or a country's economic performance? A question that has been arisen and it is still open refers to the methodology used by

[1] Professor, PhD, University of Piraeus, Greece. European Chair Jean Monnet and General Editor - European Research Studies Journal, Address: 80, Karaoli & Dimitriou St., 185 34 Piraeus, Greece, Tel: 30 1 4142000, Fax: 30 1 4142328, Corresponding author: thalassinos@ersj.eu

these rating companies in their attempt to evaluate banks or nations, the regulatory framework and the evaluation method used.

There are also other questions open regarding the role of the rating companies in the last period especially for their high interest to make evaluation reports almost every two to three weeks for selected countries, among them Portugal, Ireland, Italy, Greece and Spain, the so called PIIGS in the Eurozone.

2. The Methodology

The methodology is to demonstrate a holistic framework for measuring a bank's financial health by classifying its main responsibilities between conformance and performance. This framework should be characterised by transparency, responsibility and performance in several important areas such as:

- Corporate financial reporting (CFR);
- Risk management (RM);
- Stockholder value creation (SVC);
- Corporate governance (CG);
- Corporate social responsibility (CSR);
- Sustainable development (SD).

The regulation framework for the banking sector must also consider the fiscal and monetary environment in which a banking institution operates, in addition to the Nationally Recognized Statistical Rating Organizations (NRSROs) which are the responsible bodies for the independent evaluation of all different kind of financial companies including state economies. Based on this framework, the research correlates all qualitative and quantitative components, with the banks' ratings taking into consideration the macroeconomic environment as well.

However it is interesting to see what and how the NRSROs perform their role in the world economy. Who is responsible for the licensing of these organizations? Who is responsible for controlling them? Who is responsible for the transparency in their reports? Actually no body was responsible until 2006.

Ten rating companies actually only three, all based in the USA, are responsible for all the reports made which are more than 2,8 million for the financial institutions and state economies with 2,2 million of them for government securities. The three organizations, S & P, Moody's and Fitch amount to 2,7 million of the total, more that 96,43% of the market.

The 2011 report of the Securities and Exchange Commission (SEC) in the USA has imposed several measures for the effective control of the NRSROs far after the current financial crisis. As it is stated in the document: "In 2006, Congress passed the Credit Rating Agency Reform Act (the "Rating Agency Reform Act") that provided the Commission with the authority to establish a registration and oversight program for credit rating agencies"

In 2007 the Commission adapted a measure for better control of the agencies and in July 2010 has imposed a law in order to evaluate the analysts and the methodology used.

3. The Rationale

In order to give a better understanding about the framework in the European banking industry it is necessary to mention all different developments starting from the period of the establishment of the first customs union in Europe in 1957 with the treaty of Rome until now. By going on through the years, we have seen a number of changes in the European Financial System, the Maastricht treaty in 1991, the establishment of the European Monetary Union with the common currency in circulation in 2002. Year after year Europe has been expanded with new members joining, Slovenia, Cyprus and Malta, Slovakia and Estonia.

At the same period a number of legislative changes have been taken place in Europe, first and second directive, Basel I establishes minimum capital adequacy requirements for banks (8% ratio), defines Tier 1 (equity) and Tier 2 (near-equity) capital and creates risk weightings based on credit risk for banks while Basel II creates a single EU banking license, introduces principles of home country control (home regulators had ultimate supervisory authority over foreign activity in their banks) and ensures mutual recognition. EU bank regulators recognise equivalent regulations. This Directive is passed in conjunction with the Own Funds and Solvency Directives, which incorporate capital adequacy requirements similar to those of Basel I into EU law. However both of them failed to protect the EU banking system during the recent crisis. Then the Financial Services Action Plan, the Directive on the Reorganization and Winding-Up of Credit Institutions, the White paper on Financial Services Policy, the Capital Requirements Directive updates Basel I and incorporates the measures suggest in the International Convergence of Capital Measurement and Capital Standards as it is stated in Basle II.

Improved consistency of international capital regulations, improved risk-sensitivity of regulatory capital, and promotion of improved risk-management practices among international banks etc., even though they have also failed in an unforeseen crisis. Probably no body in the European organizational or political bodies was in a position to predict such a crisis or to propose a defensive measure to protect the system.

The European banking industry has been expanded seriously during the period 1985-2008. Table 1 shows the Time Line of Main Figures for the Banking Industry for the first 15 EU countries for the period 1985 to 2008. Number of banks, total assets in billions of euros, number of branches and total number of employees are presented in the table. The percentage change in total assets, given in the middle of the table, has great interest especially for the case of Greece Ireland and Spain with a total change of 101%, 96% and 123% respectively. It seems that there was an extensive bank expansion in these countries during the period 1985 to 2008 while all over figures remained unchanged.

Table 1. Time line of Main figures for the Banking Industry per (first 15) EU country (1985-2008)

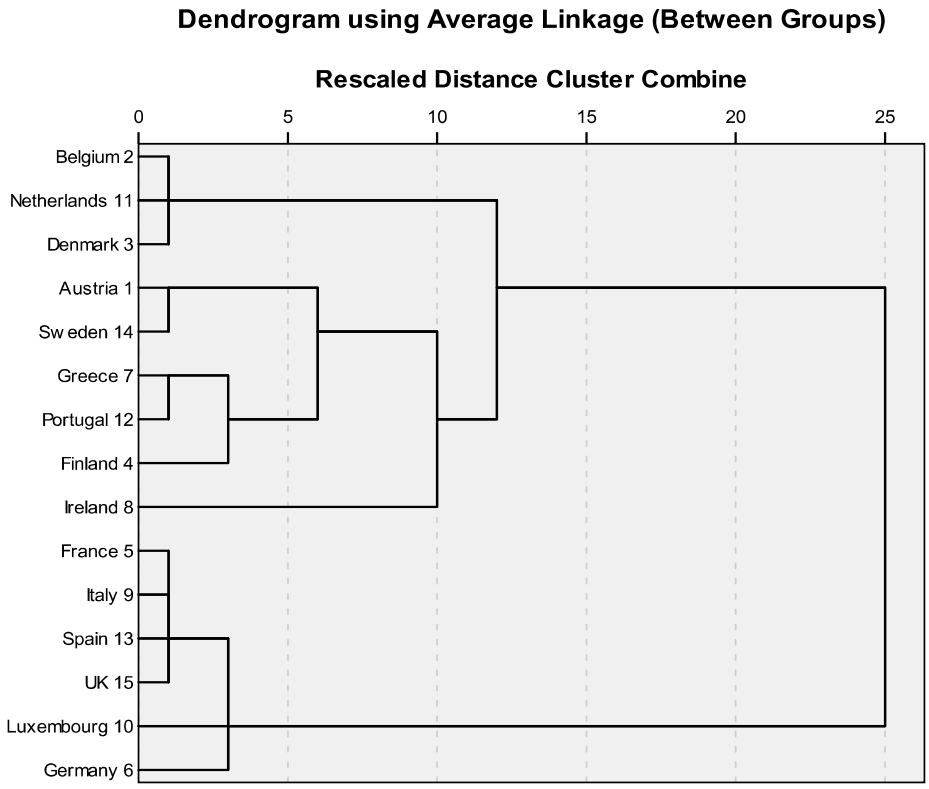
	Number of banks				Assets (billion euro)					Number of branches				Employees ('000s)			
Country	1985	1995	2004	2008	1985	1995	2004	2008	Δ%	1985	1995	2004	2008	1985	1995	2004	2008
EMU countries																	
Austria	1406	1041	796	803	–	–	635	1068	68%	–	–	4360	4243	–	–	73	79
Belgium	120	143	104	105	286	589	914	1272	39%	8207	7668	4837	4316	71	77	71	65
Denmark	259	202	202	171	96	126	607	1092	80%	3411	2215	2021	2192	52	47	44	53
Finland	498	381	364	357	–	–	212	384	81%	–	1612	1585	1672	–	31	25	26
France	1952	1469	897	728	1349	2514	4415	7225	64%	25,782	26,606	26,370	39,634	449	408	425	492
Germany	4739	3785	2148	1989	1495	3584	6584	7875	20%	39,925	44,012	45,505	39,531	591	724	712	686
Greece	41	53	62	66	69	94	230	462	101%	1815	2417	3403	4095	27	54	59	66
Ireland	42	56	80	501	21	46	722	1412	96%	–	808	909	895	–	–	36	41
Italy	1101	970	801	818	547	1070	2276	3628	59%	13,033	20,839	30,946	34,139	319	337	337	340
Luxembourg	177	220	169	152	170	445	695	932	34%	120	224	253	229	10	19	23	27
Netherlands	178	102	461	302	227	650	1678	2235	33%	6868	6729	3649	3421	92	111	115	116
Portugal	226	233	200	175	38	116	345	482	40%	1494	3401	5408	6391	59	60	53	62
Spain	364	506	346	362	311	696	1717	3831	123%	32,503	36,405	40,621	46,065	244	249	246	276
Other EU countries																	
Sweden	598	249	222	182	–	–	583	900	54%	–	–	2018	2025	–	–	39	50
UK	772	564	413	391	1294	2000	6970	8840	27%	2,224	17,522	13,386	12,514	350	383	511	496

Sources: Central Bank Reports (various), ECB Structural indicators for the EU banking sector January 2010, Authors' Calculations

The data indicate the similarities between the banking sectors of several European countries based on hierarchical cluster analysis using all available methods, including Pearson correlation and Euclidian

distances. The main conclusions according to the resulting dendrogram (correlation method, between groups) are as shown in Table 2 below.

Table 2



There are two large groups, one comprised of large countries like France, Germany, the UK, Italy, and Spain plus Luxembourg and another group comprised of all other countries, including Austria, Belgium, Denmark, Finland, Greece, the Netherlands, Portugal and Sweden. Ireland remains in an uncertain position; based on the within-group analysis, it belongs to first group, but based on the between-groups analysis, it belongs to the second group. The subgroup within the first group includes France, the UK, Italy and Spain, whereas Luxembourg and Germany stand alone. There are three subgroups within the second group: the Netherlands, Belgium and Denmark; Austria and Sweden; and Greece and Portugal. Finland stands alone.

Table 1 show the Time Line of the Main Figures for the European Banking Industry and this is actually the first data set used for the empirical analysis below. The limitation of the proposed methodology is the fact that up to now the study has analyzed statistical data only from the Greek and the Spanish banking industries. In both cases the proposed model performs quite well.

The global rating system and the 3 main rating companies are presented in Table 3. All the 3 rating companies used an identical rating system with 21 different levels. The first 10 levels provide "Adequate credit quality" with positive investment grade, while the last 11 non investment grade. Levels below 10 represent junk situations or non – investment or speculative areas. On the other hand the credit ratings of Moody's, Standard and Poor's, and Fitch's play a key role in pricing credit risk and on investment strategies.

Table 3. Rating Agencies – Rating Rank, Grade and Definitions

Index - score – Rank	Moody's	Long Term Ratings - definitions	S&P's - FITCH	Long Term Ratings - definitions	Grade
1	Aaa	Exceptional credit quality	AAA	Highest credit Quality	Investment Grade
2	Aa1	Excellent credit quality	AA+	High credit Quality. Very strong capacity to meet financial commitments	
3	Aa2		AA		
4	Aa3		AA-		
5	A1	Good credit quality	A+	Good credit Quality. Strong capacity to meet financial commitments	
6	A2		A		
7	A3		A-		
8	Baa1	Adequate credit quality	BBB+	Weakened capacity to meet financial commitments	
9	Baa2		BBB		
10	Baa3		BBB-		
11	Ba1	Questionable credit quality	BB+	Inadequate capacity to meet financial commitments	Non-Investment Grade or
12	Ba2		BB		Speculative Grade
13	Ba3		BB-		
14	B1	Generally poor credit quality	B+	Limited capacity to meet financial commitments	
15	B2		B		
16	B3		B-		
17	Caa1	Extremely poor credit quality	CCC+	Vulnerability to nonpayment	
18	Caa2		CCC-		
19	Caa3		CC	High vulnerability to nonpayment	
20	Ca	In Default	C	Bankruptcy or similar action	
21	C	In Default, low recovery value	SD/D	Debt in selective default/default	

The future role of these rating agencies seems to be further expanded with and after implementation of Basel II but nowadays there is, especially from the side of Europe, a critical position against these agencies for non transparency in methodologies that they use (nobody knows the rating method) and for not consistent rating which they give before and after a financial crisis.

4. The Empirical Evidence

This problematic situation was clear in the case of Greece and very recently in Portugal and Spain. Table 4 represents the timeline of rating levels for the four biggest Greek banks and for the Greek

economy as a whole according to rating agencies before and after the financial and the government debt crisis. The correlation between the levels of Greek Bank's ratings and the country's rating is obvious. In a very short period of time the 4 biggest Greek banks went down more than 10 rating levels by the three rating companies almost simultaneously. By comparing the ratings, the level of devaluation, the period of the rating and other details it is clear that rating companies have a common strategy. To lead the international market against Greece, to make Greek financing very expensive, to increase deficits etc., in an attempt to patronage the economy. Interest rates spreads went up to the sky and the Greek economy started to shake.

Table 4. Bigest Greek banks' ratings

	Moody's		**S&P's**		**FITCH**
NBG		**NBG**		**NBG**	
15 June '10	από Baa2 (On Review) / P-2 σε Ba1 (Stable) / NP				
30 Apr. '10	Downgraded to Baa2(On review) from A3 (On review)	27 April '10	Downgraded by 3 notches from BBB+(Neg)/A-2 to BB+(Neg)/B	9 Apr. '10	Downgrade to BBB- (Rating Watch Negative) from BBB(Neg.)
23 Apr. '10:	Downgraded to A3 (On Review) from A2 (Neg)	16 Mar. '10	Removes Credit Watch Negative - Affirms Negative Outlook	23 Feb. '10	BBB (Neg)
31 Mar. '10:	Downgraded to A2 (Neg) from A1 (Neg)	Dec.' 09	Credit Watch Negative	Dec '09	BBB+ (St.), following downgrade of Greek Sovereign Rating
3 Mar. ' 10	On Review for possible downgrade	May '09	BBB+ (Negative)	March '09	A- (Negative)
Dec. '09	A1 (Negative)	Dec.' 08	BBB+ (Stable)		
Dec.'0 8	Aa3 (Negative)				
June '03	A2 (Stable)				
ALPHA		**ALPHA**		**ALPHA**	
15 June '10	από Baa3 (On Review) / P-3 σε Ba1 (Stable) / NP				
30 Apr. '10	Downgraded to Baa3(On review) from A3 (On review)	27 April '10	Downgraded by 3 notches from BBB(Neg)/A-2 to BB (Neg) /B	9 Apr. '10	Downgrade to BBB- (Rating Watch Negative) from BBB(Neg.)
23 Apr. '10:	On review for possible downgrade	16 Mar. '10	Removes Credit Watch Negative - Affirms Negative Outlook	23 Feb. '10	BBB (Neg)
31 Mar. '10	Downgraded to A3 (Neg) from A2 (Neg)	Dec.' 09	Downgrade to BBB with Credit Watch Negative	Dec '09	BBB+ (Negative), following downgrade of Greek Sovereign Rating
3 Mar. ' 10	On Review for possible downgrade	May '09	BBB+ (Negative)	March '09	A- (Negative)
Febr.'0 9	A2 (Negative)	Dec.' 08	BBB+ (Stable)		
Dec.'0 8	A1 (Negative)				
April '07	A1 (Stable)				
EFG EUROBANK		**EFG EUROBANK**		**EFG EUROBANK**	
15 June '10	από Baa3 (On Review) / P-3 σε Ba1 (Stable) / NP				

30 Apr. '10	Downgraded to Baa3(On review) from A3 (On review)	27 April '10	Downgraded by 3 notches from BBB(Neg)/A-2 to BB (Neg) /B	9 Apr. '10	Downgrade to BBB- (Rating Watch Negative) from BBB (Neg.)
23 Apr. '10:	On review for possible downgrade	16 Mar.' 10	Removes Credit Watch Negative - Affirms Negative Outlook	23 Feb. '10	BBB (Neg)
31 Mar. '10	Downgraded to A3 (Neg) from A2 (Neg)	Dec.' 09	Downgrade to BBB with Credit Watch Negative	Dec '09	BBB+ (Negative), following downgrade of Greek Sovereign Rating
3 Mar. ' 10	On Review for possible downgrade	May '09	BBB+ (Negative)	March ' 09	A- (Negative)
Febr.'09	A1 (Negative)	Dec.' 08	A- (Negative)		
	Moody's		**S&P's**		**FITCH**
PIRAEUS BANK		**PIRAEUS BANK**		**PIRAEUS BANK**	
15 June '10	από Ba1 (On Review)/NP σε Ba1 (Negative) / NP				
30 Apr. '10	Downgrade to Ba1 (On review) /ST: NP / SenD: Ba1 / SubD: Ba2	27 Apr ' 10 :	Downgraded by 3 notches from BBB(Neg)/A-2 to BB (Neg) /B	9 Apr. '10	LT: BBB- (RWN) / ST : F3 (RWN) / Senior debt: BBB- / Sub Debt : BB+
23 Apr. '10	Baa1 On review for possible downgrade	16 Mar. '10	Removal of CW Negative - Ratings Affirmation - Negative Outlook	23 Feb. '10	LT: BBB (Neg.) / ST : F3 / Senior debt: BBB / Sub Debt : BBB-
31 Mar. '10	Baa1 (Neg) from A2 (Neg) / ST: P - 2 / SenD:Baa1 / SubD: Baa2	Dec.' 09	LT : BBB / ST : A -2 / Senior debt: BBB / Sub Debt : BBB - (CW-Neg.)		
3 Mar. ' 10 : On Review for possible downgrade		May '09	BBB (Stable)	Dec '09	BBB+ (Negative), following downgrade of Greek Sovereign Rating
Jan. '10	LT : A2 / ST: P -1 / Senior debt: A2 / Sub Debt : A3	Dec.' 08	BBB+ (Negative)	Marc h '09	A- (Negative)
Feb '09	A2 (Negative)	Oct.' 08	BBB+ (Stable)	July '07	A- (Positive)
Dec.'08	A1 (Negative)	Feb. '08	BBB+ (Positive)	Aug.' 06	BBB+ (Positive)
April '07	A1 (Stable)	Oct.' 06	BBB+ (Stable)	Dec.' 03	BBB+ (Stable)
June '04	Baa1 (Stable)				

With respect to the country itself the rating companies have followed the same path. Devaluation of the economy in a very short period of time following an identical policy, leading to devaluation of the economy eliminates credibility increasing the country risk. Rating companies have devaluated the Greek economy by 7 to 9 levels in an 11 month period. This development has damaged the economy to a great extend. Spreads went up and investment confidence disappeared.

The proposed model in this research consists of 6 different components each one taking into consideration certain variables with a strong rationale behind them. Starting from corporate financial reporting, which is actually the only component used by the rating companies, the model goes around and considers other components in an attempt to create an independent holistic framework able to evaluate to the greatest degree the financial health of a bank or a country from the start point of conformance to performance.

Therefore the corporate financial reporting consists of:

- International Accounting Standards
- Foundation- Structure (IASB, IASC, IFRIC);
- Implementation of IFRS for publicly traded companies in Europe;
- The impact of accounting differences between IASs and US GAAP is narrowing;
- SEC should consider accepting IASB standards without condition;

• The exact content of IASs may not be the same as U.S. GAAP, but in many ways the approach and degree of detail are similar. IAS and U.S. GAAP are more similar than dissimilar and the movement toward harmonization is bringing them closer and closer.

Financial statements are also considered seriously by the rating companies:

• Balance sheet;
• Income statement or P&L Account;
• Performance key metrics indicators (profitability, liquidity, solvency).

The structure of the bank's balance sheet is characterized by three features:

- Low cash to assets (fractional reserve banking);
- Low capital to assets (high leverage)
- Maturity mismatch (combination of short-term liquid liabilities withdraw able on demand on a first-come-first served basis and longer-term highly illiquid assets).

These three features which define the business of banking are also the source of financial fragility and the cause of regulatory practices. For the banking industry the most common financial ratios used, arising from a bank's financial statements, are:

- Size of the firm. Total assets of the bank and sometimes the total amount of the interest bearing assets of a bank.
- Financial accounting variables. Equity to total assets, Loan-loss reserves to total assets, Loans past-due 90 days to total assets, Non-accrual loans to total assets, Loan-loss provisions to total assets, Charge-offs to total asset, Annual return-on-assets, Annual return-on-equity, Historic and Current Profitability, Liquid assets to total assets, deposits to total assets, loan to deposits, spread or margin.

Risk Policy in Europe consisting of:

- Basel Committee on Banking Supervision;
- Basel I;
- Basel II.

The capital requirements is the widely spread regulatory tool but no panacea. According to the CAMEL procedure, which used for supervisory purposes in the USA, there are five elements; Capital, Asset quality, Management, Earnings and Liquidity.

The new capital framework (Basel II) consists of three pillars:

- Pillar I - Minimum capital requirements (sets minimum acceptable Capital level) to cover: Credit risk. Market risk. Operational risk;
- Pillar II – Supervisory review process of capital adequacy In order to ensure banks have good monitoring and management of risk processes;
- Pillar III - Market discipline and disclosure.

Basel II provides three approaches of increasing sophistication, to calculate credit risk-based capital:

- Standardized approach, which relies on external ratings;
- Foundation, internal ratings-based approach, which allows banks to calculate their credit risk based capital on the basis of their internal assessment of the probability that the counterparty will default;
- Advanced and most sophisticated approach, internal ratings-based (IRB) approach which allows banks to use their own internal assessment.

The appropriate indexes for RMP could be summarized from the above analysis at the following indexes:

- Economic Capital to total assets;
- Regulatory Capital to total assets;
- Regulatory Capital to total Risk Weighted Assets;
- Risk Adjusted Return On Capital (RORAC) which is the Return On Capital index.
- Furthermore, consistent risk-adjusted performance measures based on RAROC or value added targets may subsequently play a role in the compensation process.

Corporate Governance in Europe is a new development which must be taken into account seriously. Some of its components are:

- Internal audit;
- Audit committees;

- Sarbanes- Oxley Act 2002;
- Accounting Oversight Board;
- Auditor Independence;
- Corporate Responsibility;
- Enhanced Financial Disclosures;
- Crime-Fraud Accountability.

The quality of corporate governance is represented by the level of a Governance Index. These Indexes incorporates answers for the following questions which are referred to several governance positions of a Bank.

Audit comprises measures such as:

- Does the audit committee consist solely of independent outside directors?
- Were auditors' ratified at the most recent annual general meeting?
- Are consulting fees paid to auditors less than audit fees?
- Does company have a formal policy on auditor rotation?

Board of directors comprises measures including, among others:

- Size of board
- Is the CEO and chairman the same or are their duties separated?
- Is shareholder approval required to change board size?
- Is board controlled by more than 50% outside directors?
- Is the compensation committee comprised solely of independent outside directors?

Charter/by laws comprise measures, including among others:

- Is a simple or supermajority vote required to approve a merger?
- Are shareholders allowed to call special meetings?
- Can board amend bylaws without shareholder approval?

Director education:

- Has at least one member of the board participated in an ISS accredited director education program?

Executive and director compensation, including among others:

- Were stock incentive plans adopted with shareholder approval?
- Is option reprising prohibited?
- Do directors receive all or a portion of their compensation in stock?

Ownership, including among others:

- Do directors with more than one year of service own stock?
- Are executives/directors subject to stock ownership guidelines?
- Extent of officers' and directors' ownership of stock to a level over 30%?

Progressive practices, including among others:

- Does mandatory retirement age for directors exist?
- Is performance on board reviewed regularly?
- Is a board-approved CEO succession in place?
- Do director term limits exist?

State of incorporation:

- Is company incorporated in a state without any anti-takeover provisions?

Corporate Social Responsibility and Sustainable Development in Europe:

- Global Reporting Initiatives (GRI) Directives;
- Economical;
- Environmental;
- Social: Society, Labor Practices and Decent Work, Human Rights, Product Responsibility;
- ISO;
- Social Accountability International (SAI) - SA 8000;
- Accountability AA 1000 Series.

Especially for the part of environmental corporation policies there are the following councils:

- CEP, Council on Economic Priorities Corporate Environmental Data Clearing House Reports;
- EPA, Environmental Protection Agency Online Databases;

- FEC, Federal Election Commission;
- IRRC, Investor Responsibility Research Center Corporate Environmental Problems;
- AA1000 focuses on the process of reporting on how businesses must link the principles of accountability and sustainability.

The social disclosure rating based on Global Reporting Initiatives GRI 2002 Guidelines is presented here. The rating covers wide range of firms' social impacts measures and it can accommodate the users of firms' CSR reports to assess firms' social performance both in hard and soft disclosure items.

A number of methods are available for Stockholders' Value Creation (SVC) as:

- Strategic Balanced Scorecard;
- Balanced Scorecard;
- EVA, Residual Income (RI);
- Other Business Performance Management Tools (ROI, Residual Income)

For our analysis it seems to be suitable the usage of a Residual Income Models. Especially for the banks the most famous profitability ratio is Return on Risk Average Capital (RORAC) or from an equivalent way Return on risk weighted assets of the bank which is applied in residual income models for banks. The residual income according to the residual method is equivalent with historical profitability metric which is defined as the movements of equity accounts arising from operational activities of the bank. The banking industry is strongly affected and affects in the external economic environment. Generally, the main characteristics of the banking industry are:

- Banks have dominant position in economy financial system of a country, and are the most important engines of economic growth;
- Banks are typically the most important source of finance for the firms in a country and with this way affect the macroeconomic figures;
- Banks are usually the main depository for the economy's savings;
- Economies have recently liberalized their banking systems through privatization/disinvestments and reducing the role of economic regulation.

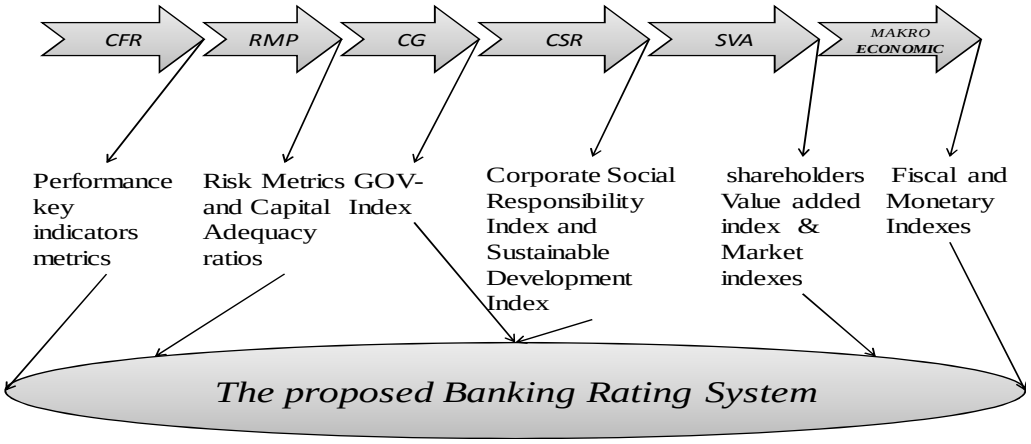
The indicators for financial structure of a country which may have influence in bank's rating system generally are:

- Equities % GDP;
- Government bonds or Government Debt % GDP;
- Private bonds % GDP;
- Private bonds plus banking loans and credit allowances % GDP or Private Debt;
- Bank assets % GDP;
- Total (the sum of Equities, Government bonds, Privet bonds and Bank Assets) % GDP.

5. The Model

The proposed rating framework requests to take into account all the components which have been mentioned above, CFR, RMP, CSR&SD, SVA and, MACROECONOMIC by using the appropriate ratios into a holistic model. Table 5 represents the structure of the model.

Table 5
The framework of transparency and responsibility as a framework for rating purposes in the banking industry



A model for measuring banks financial health has to fulfill the European Central Bank's (2006) acceptance criteria for third-party rating tools within the Euro system, Credit Assessment Framework and the proposed banking rating system. The study constructs a model using all the above mentioned components using data from the Greek banking industry. In fact 11 biggest Greek banks for the period 2005 to 2009 have been used. Besides the fact that there are limitations regarding sufficient ratios and data for all factors as they are described above, such as CAD ratio, social rating indexes, CG indexes, alternative ratios are used in order to solve partially the problem.

The dependent variable which is used is:

$SCORE_{jt}$: $rating\ of\ financial\ strength$,

- Taking values from 1 (very good strength) to 21 (bad strength), according to Table 2.
- For j= 1…m: for m=11 Greek Banks and
- For t=2005S1… 2009S2 (semi-annual), 10 time series data per bank.
- The source of data is the demonstrated Rating Agencies Reports and in the case that different rating agencies give different rating level the proposed model takes the arithmetic mean.

The independent variables are presented in Table 6.

(please insert Table 6 here)

Thus, the proposed model is represented by the following equation:

$$SCORE_{jt} = b_0 + b_1 LEV_{jt} + b_2 LM_{jt} + b_3 CPMR_{jt} + b_4 ASLN_{jt} + b_5 CG_{jt} + b_6 CSR_{jt} + b_7 ASE_t + b_8 CR_t + b_9 GDI_t + b_{10} TASLN_t + b_{11} SM_{jt} + b_{12} BVP_{jt} + b_{13} HPMR_{jt} + u_t$$

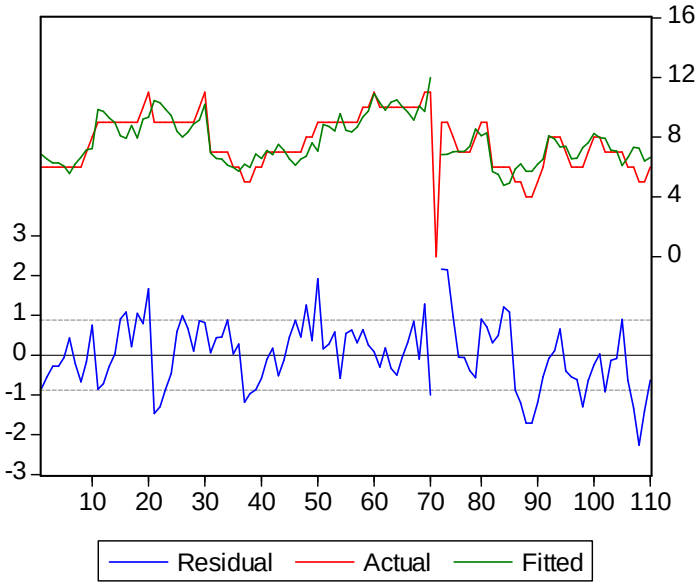
Where all variables as defined in the text and u the stochastic term.

Because of cross sectional data the most suitable estimation method is the Panel Least Squares. Also because of multicolinearity among the independent variables GDP has been selected as a proxy variable for ASE, CR, GDI and TASLN variables.

Dependent Variable: SCORE
Method: Panel Least Squares
Date: 06/27/10 Time: 18:22
Sample: 2005S1 2009S2
Cross-sections included: 11
Total panel (unbalanced) observations: 109

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	25.03542	2.631235	9.514701	0.0000
LEV	-2.436842	0.862338	-2.825855	0.0057
LM	1.209894	0.796271	1.519449	0.1319
CPMR	-77.74614	18.47378	-4.208458	0.0001
ASLN	-0.555242	0.124110	-4.473774	0.0000
CG	0.328670	0.112096	2.932049	0.0042
CSR	-0.137698	0.076179	-1.807566	0.0737
SM	-35.60282	4.900772	-7.264738	0.0000
BVP	0.556057	0.222915	2.494477	0.0143
HPMR	15.99010	5.865622	2.726070	0.0076
GDP	-1.84E-05	6.95E-06	-2.645714	0.0095

R-squared	0.763872	Mean dependent var	7.724771
Adjusted R-squared	0.739777	S.D. dependent var	1.726008
S.E. of regression	0.880471	Akaike info criterion	2.678736
Sum squared resid	75.97251	Schwarz criterion	2.950340
Log likelihood	-134.9911	F-statistic	31.70294
Durbin-Watson stat	0.703800	Prob(F-statistic)	0.000000



6. Summary, Conclusions and Recommendations

A holistic framework for measuring a bank's financial health by classifying its main responsibilities between conformance and performance has been proposed using well known measures related to European legislation of the banking sector such as corporate financial reporting (CFR), risk management procedures (RMP), corporate governance (CG), corporate social responsibility and sustainable development (CSR and SD), stockholders' value creation (SVC) and macroeconomic environment.

The main conclusions for each of the above components have been summarized as follows:

For the CFR component: It remains important especially for the financial ratios, categories and amounts. The framework in which these ratios are produced, in fact, the exact content of IASs may not be the same as U.S., GAAP, but in many ways the approach and the degree of detail are similar. IAS and U.S. GAAP are more similar than dissimilar, especially for the quality of financial ratios which are used in the proposed model. Many movements toward harmonization have already occurred, bringing them closer and closer.

For the RMP component: It is clear that this component is required in a rating model. Quantitative approaches like CAMEL, Basel I and II as well as CAD I, II and III are serious attempts to finalize the framework of regulation and supervision for the global banking system to be used as a managerial tool of risk in the banking industry and thus a financial health model has to take these ratios into account.

For the CG component: The quality of management could be represented by quantitative indexes, which are highly correlated with profitability and financial health in the banking industry. For these reasons the proposed model of banks' financial health has to take into account CG indexes.

For the CSR and the SD components: Through these procedures a company can affect the economy, the society and the environment. Corporate social responsibility and actions for sustainable development depend on management's initiatives. Quantitative indexes which describe CSR and SD in a bank rating model of financial health, have to be intergraded especially those according to Global Reporting Initiatives (GRI) 2002 or to AA1000.

For the SVC component: Besides the fact that SVC retains main instruments for corporate management with a traditional way the indexes of SVC could be transposed with elements to manage totally risk and total performance of a bank and for this reason it has been included in the proposed framework of the model.

For the macroeconomic environment component: This remains a main feature of the rating system of the banking industry. This is because the banking industry has a direct influence on the macroeconomic environment, while at the same time it is influenced by it.

According to this article a holistic framework for measuring a bank's financial health have to incorporate all the above mentioned factors. The future role of rating agencies seems to be further expanded with and after the implementation of Basle II. Nowadays there is, especially from the side of Europe, a critical position against these agencies mainly because lack of transparency in methodologies (nobody knows the rating method) and for not consistent ratings, especially before and after a financial crisis or a debt crisis with no any forecasting ability.

With respect to the empirical evidence and with the use of data from the Greek banking sector for the period 2005-2009, it is concluded that the financial rating scores as proposed by the rating houses are of limited reliability since they fail to support funding with real market data.

There is no visibility in the variables used and there is no comparison among them. On the contrary the proposed model takes into account not only financial variables but also the macroeconomic environment of the country where the bank operates as well as the monetary environment. The existing rating system has arrived in a clear conclusion. Rates proposed by rating companies need improvement. The proposed model takes ten independent variables and by using the Panel Least Squared method it has calculated the coefficients of the model with quite good results.

In the future the use of all the components mentioned above will permit more accurate estimations and an opportunity to construct a holistic way for global banks' rating.

7. References

Ampofo A. A., Sellani J. R. (2005). Examining the differences between United States Generally Accepted Accounting Principles (U.S. GAAP) and International Accounting Standards (IAS): Implications for the harmonization of accounting standards. Elsevier Ltd, *Accounting Forum Vol*. 29, pp. 219–231.

Ashbaugh - Skaife Hollis, Collins W. Daniel, La Fond Ryan, (2006). The Effects of Corporate Governance on Firms' Credit Ratings. *Journal of Accounting and Economics* 42, pp. 203–243.

Barros Pestana Carlos, Ferreira Candida, Williams Jonathan, (2007). Analyzing the Determinants of Performance of Best and Worst European Banks: A Mixed Logit Approach. *Journal of Banking & Finance* Vol. 31, pp. 2189–2203.

Bebchuk, L., Cohen, A., & Ferrel, A. (2005). What Matters in Corporate Governance?, Harvard *Law School Working Paper*.

Bhiman Alnoor, Soonawalla Kazbi, (2005). From Conformance to Performance: The Corporate Responsibilities Continuum. *Journal of Accounting and Public Policy* Vol. 24, pp.165-174.

Bruggink Bert and Buck Eugen, (2002). Case Study: Practical Aspects of Implementing a Basel II-Compliant Economic Capital Framework. *Journal of Financial Regulation and Compliance* Volume 10, Number 3.

Caruana Jaime, Governor of the Banco de Espania, (2003). A Comment. *Journal of Financial Regulation and Compliance* Vol. 11, No. 4.

Christofakis M., Mergos G., Papadaskalopoulos A. (2009). Sustainable and Balanced Development of Insular Space: The *Case of Greece*. *Sustainable Development*, Vol. 17 (6), pp. 365-377.

Clarkson, P.M., Li, Y., Richardson, G.D. and Vasvari, F.P. (2006). Revisiting the Relation between Environmental Performance and Environmental Disclosure: An Empirical Analysis. *Paper presented at the AFAANZ Conference Paper*, Wellington.

Coulson B. Andrea, (2009). How Should Banks Govern the Environment? Challenging the Construction of Action versus Veto. *Journal of Business Strategy and the Environment* Vol. 18, pp. 149–161.

D'Amato Alessia and Roome Nigel, (2009). Leadership of Organizational Change Toward an Integrated Model of Leadership for Corporate Responsibility and Sustainable Development: A Process Model of Corporate Responsibility Beyond Management Innovation. Emerald Group Publishing Limited, *Corporate Governance* Vol. 9, No. 4, pp. 421-434.

Davis E. Philip Bank of England, London, (1999). Institutionalization and EMU: Implications for European Financial Markets. International Finance 2:1, pp. 33–61.

Dinger Valeriya, and Jurgen von Hagen, (2009). How Small Are the Banking Sectors in Central and Eastern European Countries Really? *Journal of Financial Regulation and Compliance* Vol. 17, No. 2, pp. 96-118.

ECB (2006). *Acceptance Criteria for Third-Party Rating Tools within the Eurosystem Credit Assessment Framework*. Frankfurt, Germany.

ECB (2010). *Structural Indicators for the EU Banking Sector*. Frankfurt, Germany.

European Commission (2004). *ABC of the Main Instruments of Corporate Social Responsibility*. *European Communities*, Luxembourg.

Garside Thomas, Bech Jens, (2003). Dealing with Basle II: The Impact of New Capital Accord. MCB UP Limited, *Balance Sheet*, Vol. 11, No. 4, pp. 26-31.

Gobbels, M. and Jonker, J. (2003). AA1000 and SA8000 Compared: A Systematic Comparison of Contemporary Accountability Standards. *Managerial Auditing Journal*, Vol. 18, No. 1, pp. 54-8.

Goddard John, Molyneux Philip, Wilson O.S John, Tavakoli Manouche, (2007). European Banking: An Overview. *Journal of Banking & Finance* Vol. 31, pp. 1911–1935.

Gompers, P., Ishii, J., Metrick, A. (2003). Corporate Governance and Equity Prices. *Quarterly Journal of Economics*, pp. 107−155.

Isaksson Raine, Steimle Ulrich, (2009). What Does GRI-Reporting Tell us About Corporate Sustainability? *The TQM Journal* Vol. 21, No. 2, pp. 168-181.

Jardet Caroline, Le Fol Gaelle (2009). Euro Money Market Interest Rate Dynamics and Volatility: How they Respond to Recent Changes in the Operational Framework. *International Journal of Finance and Economics*, DOI: 10.1002/ijfe.403.

Jiang Wei, Lee Picheng, Anandarajan Asokan, (2008.) The Association between Corporate Governance and Earnings Quality: Further Evidence Using the GOV-Score. *Journal of Advances in Accounting, Incorporating Advances in International Accounting* Vol. 24, pp. 191–201.

Kieso, D. E., & Weygandt, J. J. (2001). *Accounting Principles with CD* (6th edition). USA: John Wiley and Sons.

Koutoupis G. Andreas, Tsamis Anastasios, (2009). Risk Based Internal Auditing within Greek Banks: A Case Study Approach. *Journal of Management Governance* Vol. 13, pp. 101–130.

Laslo Castro Kathia, Laslo Alexander, (2002). Evolving Knowledge for Development: The Role of Knowledge Management in a Changing World. *Journal of Knowledge Management* Vol. 6, No. 4, pp. 400-412.

Lastra Rosa Maria, (2004). Risk-based Capital Requirements and their Impact upon the Banking Industry: Basel II and CAD III. *Journal of Financial Regulation and Compliance* Vol. 12, No 3.

Liapis J. K, (2010). The Residual Value Models: A Framework for Business Administration. *European Research Studies*, Volume XIII, Issue (1), pp. 83-102.

Markus Will, (2008). Talking about the Future within an SME? Corporate Foresight and the Potential Contributions to Sustainable Development. *Management of Environmental Quality: An International Journal* Vol. 19, No. 2, pp. 234-242.

Pantos D. Themis, Saidi Reza, (2005). The Greek Three-Pillar Functional System in the Presence of the European Union Banking Directives. *Journal of Financial Regulation and Compliance*. Vol. 13, No. 2.

Papadaskalopoulos A., Karaganis A., Christofakis M. (2005). The Special Impact of EU Pan-European Transport Axes: City Clusters Formation in the Balkan Area and Development Perspectives. *Transport Policy*, Vol. 12 (6), pp. 488-499.

Prado-Lorenzo Jose-Manuel, Gallego-Alvarez Isabel, Garcia-Sanchez M. Isabel, (2009). Stakeholder Engagement and Corporate Social Responsibility Reporting: The Ownership Structure Effect. *Journal of Corporate Social Responsibility and Environmental Management* Vol. 16, pp. 94–107.

Rogers H. John, (2007). Monetary Union, Price Level Convergence and Inflation: How Close is Europe to the USA? Journal of Monetary Economics. Vol. 54, pp.785–796.

Sarens Gerrit, De Beelde Ignace, (2006). The Relationship between Internal Audit and Senior Management: A Qualitative Analysis of Expectations and Perceptions. *International Journal of Auditing* Vol. 10, pp. 219–241.

Savva S. Christos, Neanidis, C. Kyriakos and Osborn R. Denise, (2009). Business Cycle Synchronization of the Euro Area and the New and Negotiating Member Countries. *International Journal of Finance and Economics*, DOI: 10.1002/ijfe.

Street, D. L., Nichols, N. B., Gray, S. J. (2000). Assessing the Acceptability of International Accounting Standards in the US: An Empirical Study of the Materiality of US GAAP Reconciliations by non-US Companies Complying with IASC Standards. *The International Journal of Accounting*, Vol. 35 (1), No. 27.

Sutantoputra Widiarto Aries, (2009). Social Disclosure Rating System for Assessing Firms' CSR Reports. *Corporate Communications: An International Journal* Vol. 14, No. 1, pp. 34-48.

Thalassinos, E. J., Curtis, G. P., (2005). Equity Fund Raising and "Creative" Accounting Practices: Indication from Athens Stock Exchange for the 1999-2000. *European Research Studies Journal*, Vol. VIII Issue (1-2), pp. 127-135.

Thalassinos, E. J., Kyriazidis, Th., Thalassinos, E., (2006). The Greek Capital Market: Caught in Between Poor Corporate Governance and Market Inefficiency. *European Research Studies Journal*, Vol. IX, issue (1-2), pp. 3-24.

Wilson Ian, (2004). Implementing Basel II: A Case Study Based on the Barclays Basel II Preparations. *Journal of Financial Regulation and Compliance*, Volume 10, Number 3.

Wood Dorothy, Ross G Donald, (2006). Environmental Social Controls and Capital Investments: Australian Evidence. *Journal of Accounting and Finance Vol.* 46, pp .677–695.

Zain Mat Mazlina, Subramaniam Nava, Stewart Jenny, (2006). Internal Auditors' Assessment of their Contribution to Financial Statement Audits: The Relation with Audit Committee and Internal Audit Function Characteristics. *International Journal of Auditing*, Vol. 10, pp. 1–18.