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IAS Basel: The Contribution of Losses to the Banks' Capital Adequacy

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ABSTRACT

The main aim of this paper is to examine the consequences of International (Accounting) Financial Reporting Standards / IFRS - IASB and deferred taxation for banks in Eurozone area. The analysis used data from Annual Reports of four systemic Greek banks, which control around 95 percent of the sector's assets and 90 percent of total deposits. The results suggests that increasing banks' losses may improve their capital adequacy. The paper is organized as follows: in the next section we briefly present interactions between IASB and BASEL aiming at preventing banking and accounting problems at international level during the last decades. This is followed by the comparative analysis of banking supervision accords and the presentation of International Accounting Standard 12: Income Taxes. The research methodology, the data sources used in the analysis and research results are presented and discussed in section four. Last section summarizes the conclusions and presents further opportunities for research.

Keywords: Banks in Greece, Capital Adequacy, Deferred Tax, Loss Provisions. JEL Codes: G21, G28, G32, M41. Available Online: 28-02-2017. This is an open access article under Creative Commons Attribution 4.0 License, 2017.

1. INTRODUCTION

A number of interrelated factors, including strong international banking competition during the last 42 years, high degree of leverage in banks, increasing velocity of circulation of money caused by the liberalization of capital markets, increasing complexity of financial instruments and rapid technological development led the banking authorities to create a supervisory framework for the protection of the global financial system. Banks' solvency in correlation with the risk management of assets and liabilities in their balance sheets was considered as a priority issue. The costs and externalities associated with a bank failure are likely to be multiple of those created by the failure of a commercial non-bank entity. They affect not only the employees but also depositors, funded

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enterprises and society on national and/or international level. In order to protect the public interest, one of the significant measure includes the expansion of the banks' capital adequacy towards the overall risks that may occur and the wider disclosure of the respective information. As a result, specific guidelines were established, that should govern the relationships of banking supervisors with internal and external bank auditors, e.g. in cooperation with the International Federation of Accountants. Also, special reports provide guidance to banks and banking supervisors on recognition and measurement of loans, the establishment of loan loss allowances and credit risk disclosure. They set out banking supervisors' views on sound loan accounting and disclosure practices for banks (e.g. Sound Practices for Loan Accounting and Disclosure). Furthermore, opinions and interpretations were expressed on the content of some of the International (Accounting) Financial Reporting Standards - IFRS which have to be adopted or processed by the International Accounting Standards (Committee) Board - IASB.

The adoption of IFRS brings significant, in some cases, changes in the financial statements of banks. These changes also affect the relevant regulatory ratios which are based on the accounting data and are arisen from the occasional decisions of the Basel Committee on Banking Supervision (BCBS) (Basel I, II, III).

Table 1 summarizes supranational interactions which took place almost at the same time between the two new superpowers of the 21st century (IASB, BASEL), aiming at preventing banking and accounting problems at international level during the last 42 years.

Action/Branch	Accounting	Banking
Establishment	1973: The beginning of cooperation	1974: The beginning of cooperation between
of	between accounting organizations	Central Banks and supervisory authorities
supranational	(the United Kingdom, Australia,	(Belgium, Canada, France, Germany, Italy,
organization	France, Germany, the United States,	Japan, the Netherlands, Sweden, the United
with	Japan, Ireland, Canada, Mexico, the	Kingdom, the United States, Switzerland and
international	Netherlands) as International	Luxembourg) initially as Committee on
status	Accounting Standards Committee	Banking Regulations and Supervisory
	(IASC) which developed by the end	Practices until 1988 and subsequently as Basel
	of 2001 IAS 1-41 (International	Committee on Banking Supervision. The main
Changes due	2001: Transformation of IASC to	2004: Transformation of Basel Committee to
to the new	International Accounting Standards	Basel II which use a "three pillars" concept –
international	Board (IASB) which from 2002 has	(1) minimum capital requirements (addressing
financial	edited International Financial	risk), (2) supervisory review and (3) market
conditions	Reporting Standards (IFRS) No 1-16	disclosure. Basel II is the second of the Basel
Common	2005, Compulsory application of IERS	Accords, which are recommendations on 2007: Community directives for the
	2005: Compulsory application of IFRS for companies of EU member states	2007: Community directives for the implementation of the decisions of Basel II
policy	whose shares or other securities are	with the calculation of capital requirements
	listed on a regulated stock market in	based on predetermined rates by risk category
	any EU member state. There is an	and since 2010 with the most advanced
	additional (special) interest for banks	methodologies in the case of three years
	in the case of IAS 21, 32, 39 and IFRS 7	experience in using internal rating systems.
New facts	2018: It is expected the application of	2010: Decisions of Basel III refer to common
new facts	IFRS 9 to replace the IAS 39 mainly	accounting standards, solvency and capital
	related to the classification,	adequacy of banks with 4.5% minimum
	measurement and valuation of	requirement for common equity Tier I capital
	incusar cinent and valuation of	requiremente foir common equity fiel i cupital

Table 1: International interactions of bank accounting during the last 42 years

2. BASEL I, II, III

Credit risk in financial institutions is correlated with the potential that a bank borrower will fail to meet obligations, partially or totally, in accordance with agreed terms and may be expressed by the probability of default. According to the proposed reference definition of a default event: "A default is considered to have occurred with regard to a particular obligor when one or more of the following events has taken place: 1/. It is determined that the obligor is unlikely to pay its debt obligations (principal, interest, or fees) in full; 2/. A credit loss event associated with any obligation of the obligor, such as a charge-off, specific provision, or distressed restructuring involving the forgiveness or postponement of principal, interest, or fee; 3/. The obligor is past due more than 90 days on any credit obligation; or 4/. The obligor has filed for bankruptcy or similar protection from creditors (BCBS, 1998).

To determine the probability of default in a satisfactory way, several major variables have to be consider e.g. the financial health of the borrower, his debt ratios and his past credit history, information from balance sheets, income statements, statements of cash flows and firms' organization and management.

The Basel Committee provides the following information for banks' portfolios, where the counterparties are companies and the rate of 8% should be associated with the default rate (internal rating system) and their respective weight (Table 2).

Default RateWeightCapital Adequacy(1)(2) $(3) = (2) * 8\%$ 0.030.05141.120.1191.520.2292.320.3453.600.4705.600.5816.480.71008.00112510.00219215.36324619.68533126.481048238.561558847.042062550.00	Table 2: The calculation of capital adequacy					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Default Rate	Weight	Capital Adequacy			
0.0514 1.12 0.1 19 1.52 0.2 29 2.32 0.3 45 3.60 0.4 70 5.60 0.5 81 6.48 0.7 100 8.00 1 12510.00 2 19215.36 3 24619.68 5 33126.48 10 482 38.56 15 588 47.04	(1)	(2)	(3) = (2) * 8%			
	0.03					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.05	14	1.12			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.1	19	1.52			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.2	29	2.32			
0.5816.480.71008.00112510.00219215.36324619.68533126.481048238.561558847.04	0.3	45	3.60			
0.71008.00112510.00219215.36324619.68533126.481048238.561558847.04	0.4	70	5.60			
112510.00219215.36324619.68533126.481048238.561558847.04	0.5	81	6.48			
219215.36324619.68533126.481048238.561558847.04	0.7	100	8.00			
324619.68533126.481048238.561558847.04	1	125	10.00			
533126.481048238.561558847.04	2	192	15.36			
1048238.561558847.04	3	246	19.68			
15 588 47.04	5	331	26.48			
	10	482	38.56			
20 625 50.00	15	-	47.04			
	20	625	50.00			

Table 2: The calculation of capital adequacy

Each bank has the ability to use different internal rating systems, depending on the type of its counterparties, to assess the relative credit risk and calculate the capital required to cover it. According to the Basel I all banks are obliged to constantly meet the aforementioned requirement of 8% by the Capital Adequacy Ratio (1) originally formed (1993) as the ratio of bank's capital to its risk-weighted assets (in and off-balance sheet).

Capital Adequacy Ratio =
$$\frac{\text{Regulatory Capital (Equity, Retained earnings, Bonds)}}{\text{Credit Risk (since 1993)+ Market Risk (since 1998)}}$$
(1)

Total risk-weighted assets are determined by multiplying the capital requirements for market risk and operational risk by 12.5 (i.e. the reciprocal of the minimum capital ratio of 8%) and adding the resulting figures to the sum of risk-weighted assets for credit risk.

According to the Basel I banks may also, at the discretion of their national authority, employ a third tier

of capital (Tier 3), consisting of short-term subordinated debt for the sole purpose of meeting a proportion of the capital requirements for market risk.

Later, in the Basel II, the minimum required Capital Adequacy Ratio remained at 8%. There were some changes in the determination of the regulatory capital partly due to the application of International Financial Reporting Standards (IAS/IFRS). Also, the risk weighting methods were altered, the measuring method of credit risk was changed and an operational risk was added (see formula 2). The Basel Committee has proposed the application of new methods since 2006 (BSBC, 2005). In Greece, new methods are used from 2008 and in others Member States of the European Union from 2011.

Capital Adequacy Ratio =
$$\frac{\text{Regulatory Capital}}{\text{Credit Risk+ Market Risk + Operational Risk}}$$
(2)

The recent turmoil caused by the financial crisis (2007-8) has raised questions about the effectiveness of the Basel II framework, on one hand and has shown that the banks' capabilities were overestimated and the risks underestimated. Operational risk can be defined as the risk of loss resulting from inadequate or failed internal processes, people or systems or from external events. Operational risk can lead to a financial crisis or, as it did in 2008, worsen a financial crisis through the supply chain and may cause bank's bankruptcy. Operational risk is a qualitative rather than quantitative risk and as so, it is difficult to measure. During the last twenty years, the negative impact of operational risk was experienced by Barings Bank, National Westminster Bank, Orange County, Metallgesellschaft, Allfirst Financial and Household Finance. Furthermore, Baverez (2012) presents the cases of JPMorgan, which lost many billions in the derivatives market, Barclays, which was accused of manipulation of Libor and Euribor rates, HSBC, which was accused of money-laundering on behalf of criminal or terrorist organizations and Knight Capital, which went almost bankrupt, following a 440 million dollars loss, caused by software malfunction.

Finally, Basel III focuses on the quality of capital and the level of requirements of capital to the risk-weighted assets. It relates more to the Basel I which had given more weight to the equity (numerator) than to Basel II which gave greater weight to the banking risks (denominator). It should be underline that the impact of the adjustments in available capital is about 12.5 times greater than of the adjustments of the capitals (BSBC, required 2010). According to the Basel III "Core Tier I" becomes "Common Equity Tier" and includes only common shares and retained earnings. This improves the capital structure's consistency and transparency. The reserves, general provisions, subordinated claims and hybrid capital are included in "Tier 2". "Tier 3" capitals are deleted. The differences in required minimum capitals between the Basel II and III are

shown in Figure 1.



Figure 1: Comparison of Basel II and III proposals

The weighting rate has to do more with the portfolio risk since it is expressed in fair values. It should be clarified that the weighted assets are far greater in absolute terms and its changes have a relatively

small impact, while the same changes on some capitals have a relatively greater impact. The Basel Committee's research has shown that in 2007 the average loss accounted for 5.4% of risk-weighted assets. In systemic crises of Japan (2000-02) and Sweden / Norway average loss accounted for 4-5% of risk-weighted assets, while for less systemic crises accounted for 1-2%.

For full implementation of the proposals of Basel III, a transition period is provided from 2014 until 2019. The Bank of Greece has published the methodology for determining the respective proportion of the countercyclical buffer and set the lowest rate (0%) for the first quarter of 2016 which will not affect the banks' capital requirements. The Bank of Greece has determined Other Systemically Important Institutions (O-SII) among banks that are authorized in Greece, as opposed to those that are characterized as Globally Systemically Important Institutions (G-SII). The conservation buffer of O-SII consists of common equity CET 1 and the rate is determined by the Bank of Greece at up to 2% of the total risk exposure and reviewed at least annually. As O-SII for the year 2015 four systemic banks were identified: Alpha Bank, National Bank of Greece, Eurobank and Piraeus Bank (Bank of Greece, 2011-2015).

An important factor for the soundness of banks and depositors' protection are their accounting capital, which according to the IFRS and the Basel III are displayed between these specific bank accounts in Table 3.

rable ji me specificity of barnis accounts						
Balanc	Balance Sheet					
Assets Liabilities and Owner's Eq						
a. Held to maturity (HTM)	Common Equity Tier I					
b. Loans and receivables (L&R)	Additional Tier I					
c. Fair value through profit and	Tier 2					
loss (FVTPL)	Liabilities					
d. Available for sale (AFS)	(Deposits, Loans)					
Cash items						
Fixed assets						

Table 3: The specificity of banks' accounts

The above distinction of portfolios can provide an insight of the loss of banks which owned Greek government bonds. The majority of them were characterized as AFS (evaluated in their fair value). During the debt crisis and when their prices decreased were transferred, under restrictions, from AFS to HTM (valuation at cost) as shown in Table 3. However, the Private Sector Involvement (PSI) program forced to register losses, equal to the difference in the value of the bonds they had and the value of the new bonds. These losses are removed from the accounting capital and negatively affects the supervisory capital.

During the financial crisis, many banks continued to pay dividends to their shareholders and bonuses to their staff while recording losses in the credit portfolio. The priority of creditors to shareholders was violated. Banks had the possibility to solve some problems caused by the crisis using as an instrument profit distribution. For banks with Capital Adequacy Ratio (CAR) within the reserve percentages, limitations were established in profits distribution. Indicatively, the Basel III states that in banks where the equity ratio (core Tier I) ranges between 4.5% and 5.125%, it is required to capitalize 100% of their profits. Finally, although it is expected that in the future the calculation of capital will be based on internal models of banks, the Capital Adequacy Ratio remains the main tool of micro-prevention policy (Kalfaoglou, 2012).

3. IASB - INTERNATIONAL (ACCOUNTING) FINANCIAL REPORTING STANDARDS - IFRS/IAS 12: INCOME TAXES

The existing laws and interpretations in different countries (members or not of the European

Balance Sheet

Union) often cause deviations between accounting profits and taxable profits. These differences may be created in the following two manners:

1. **Permanent differences** are differences that never reverse. These are expense items that are included in bookkeeping but are nondeductible, such as tax or insurance penalties etc.

2. **Temporary differences** are differences between the tax basis of assets or liabilities and they are reported amounts in the financial statements that will result in taxable or deductible amounts in future years, when the reported amounts of the assets or liabilities are recovered or settled, respectively. If such a temporary difference exists, an amount will be recorded and reported as either a deferred tax liability or a deferred tax asset depending upon the relationship between the reported net financial (book) value and the tax basis of the related asset or liability. When the temporary difference reverses, the recorded deferred tax amount is removed from the balance sheet and the amount removed results in an increase or decrease in income tax expense (see Figure 2).

Under International Financial Reporting Standards, these differences should be accounted for using the principles of IAS 12: Income Taxes.

Income Statement

The revised IAS adopts only the liability method based on the balance sheet and temporary differences.

For banks, the temporary differences arise from the valuation of financial assets (securities, derivatives) and assets, the credit risk provisions, and losses from the Private Sector Involvement (PSI).

The following example assumes that a company has accounting profit 20 million euros and taxable profits are 24 million euros. The applicable rate of corporate income tax is assumed to be 26%.

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Deferred tax assets - the amounts of income taxes recoverable in future periods

Figure 3: Balance sheet - Liability method

inen:		i igaie of Dalarice Sileet Diability liter
20.000.000 * 26	5% = 5.200.000	Taxes based on accounting profits
24.000.000 * 26	5% = 6.240.000	Taxes based on taxable profits
Difference	1.040.000	Deferred tax assets

In this case, the paid tax is 6.240.000 euros, but the amount of 1.040.000 euros is payable in the future tax period.

It should be noted that in 2015 the deferred tax assets for each of the four systemic banks in Greece ranged around 5 billion euros.

Finally, it should be clarified that according to IAS 12 if the company considers the possibility of setting off any losses against future profits, it is able to recognize deferred tax assets (Article 34). According to the Greek law 4172/2013, the use of losses can be offset against profits which will arise in the next five accounting periods (Article 27). If these profits are not enough to cover all the

losses, this right is lost partially or totally.

4. RESEARCH METHODOLOGY AND RESULTS

In this part of the paper, we present the potential contribution of losses to the banks' capital adequacy using as a sample four systemic banks in Greece for the years 2011-2015. We examine three variables: deferred tax assets from the balance sheet, provisions for loan losses



Figure 4: IASBasel - Alpha Bank, Source: Author's work

and impairments and profits/losses after taxes from the income statement. Figure 4 shows the results for Alpha Bank (Alpha Bank, 2016).

We observe that during the analyzed period the losses after taxes were higher in 2011. In this year, the provisions for loan losses and impairments were 5.7 billion euros, which include losses of PSI (4.8 billion euros).

As mentioned in part three of this paper, according to standard *an* of IASB, the losses can be offset against future profits through deferred taxes. In this way, the Capital Adequacy Ratio improves. We propose the term "IASBasel" to describe the distance (cover) between profit (loss) after taxes and deferred tax assets, to highlight the contribution of losses to the banks' capital adequacy which stems from the decisions of two supranational organizations.

This distance (cover) is maximized in the years 2011 and 2015, when banks faced more financial difficulties and are minimized, for example in the profitable year of 2013, when banks faced less financing difficulties.

Figure 5 shows the corresponding results for the National Bank of Greece. In 2011, the losses after taxes were highest because of the highest provisions for loan losses and impairments (13.9 billion euros). This amount includes the losses of PSI (10,6

billion euros). The IASBasel is maximized in

the years 2011, 2015 and minimized during the year 2013 which was profitable for this bank (National Bank of Greece, 2016).

Also, from the data of Eurobank (Figure 6) we can observe that the IASBasel is maximized in the years 2011 and 2015 with the largest losses after taxes and the highest provisions for loan losses impairments. The IASBasel and is minimized in 2013 (Eurobank, 2016), which is associated with the better financial results after taxes (losses



Figure 5: IASBasel - National Bank of Greece, Source: Author's work





reduction compared to the previous year).

Finally, Figure 7 shows the data for Piraeus Bank. The IASBasel during the analyzed years is maximized and minimized according to the negative and positive financial results after taxes (Piraeus Bank, 2016).

In Figure 8, we can see the contribution of losses to the capital adequacy in the case of four systemic banks in Greece. We observe that the IASBasel (in billion euros) is highest in 2011, the year with the highest provisions for loan losses and impairments (and losses of PSI). It confirms the contribution of losses to the banks' capital adequacy. Thus, the coexistence of decisions of IASB and Basel is represented schematically as a "hug" or a "safety net" for the capital adequacy of banks.



Figure 7: IASBasel - Piraeus Bank, Source: Author's work

The relevant Capital Adequacy Ratio (CAR) between the years 2011 to 2015 is shown in Figure 9 for the four systemic banks in Greece.

At the beginning of the crisis, Greek banks had satisfactory Capital Adequacy Ratios. The losses which occurred after 2010 and especially after PSI caused a capital deficit at the end of 2011. During the period 2008-2013, the accumulated provisions of banks for credit risk were more than tripled. After the process of recapitalization at the end of 2012 and the first half of 2013, the value of the Capital Adequacy Ratio for systemic banks in Figure 8: IASBasel - Greek systemic banks Greece was restored. During this period, the

12 to 2011 2012 2015 2014 2015 ASBasel Alpha Bunk IASBARI NATIONAL BANK OF GREECE ASBani FIRAEUS BANK

quality of capital was improved, which now consists almost exclusively of the Common Equity Tier I, in contrast to 2008, where supplementary capital accounted for 20% of total capital. Furthermore, in the third quarter of 2015 Comprehensive Assessment (Asset Quality Review and Stress test) took

place. The main aim of the assessment was the revaluation of bank capital needs.

In 2015 the ratios Common Equity Tier I and CAR are estimated at 18%, while the corresponding European averages were 12.5% and 16% (Bank of Greece, 2011-2015). Consequently, a sufficient capital reserve was formed to absorb the negative impact of the formation of any increased credit risk/impairment provisions.





increase in tax rates works in the favor of unprofitable banks. At the same time, the EU Commission is reportedly collecting evidence on the use of so-called Deferred Tax Credits (DTC's) in banks in Greece, Portugal, Spain and Italy, to see whether some recent regulatory changes and recognition practices actually constitute hidden state aid (Merler, 2015).

Recent Greek legislation allows Deferred Tax Assets (DTAs) to be optionally converted to claims against the State, in the case of accounting losses after taxes. In this way, statutory reserve funds are formed, which may subsequently be capitalized for the increase of Share Capital (L. 4302/2014, Article 23, Par. 1). Consequently, the DTAs of 2016 transform into DTCs of 2017, i.e. these are not deducted from Common Equity Tier 1 (CET 1) ratio but improve CAR ratio instead.

The actual value of DTCs may be computed through the following ratio:

(3)

Recognizing the fact that ratio (3) results from a combination of IASB and Basel committee decisions, as adopted by the Greek legislation, we will henceforth refer to (3) as IBG Index.

Applying actual outturn data from all four Greek systemic banks for 2015, the corresponding IBG Indexes are computed as follows (amounts in billion euros):

$$IBG_{National Bank of Greece} = \frac{4,906 \times 4,540}{8,315 \cdot 4,540} = \frac{22.273,240}{3,775} = 5,90$$

$$IBG_{Piraeus Bank} = \frac{5,013 \times 2,389}{9,608 \cdot 2,389} = \frac{11.979,958}{7,219} = 1,66$$

$$IBG_{Eurobank} = \frac{4,902 \times 1,051}{6,131 \cdot 1,051} = \frac{5.152,002}{5,080} = 1,01$$

$$IBG_{Alpha Bank} = \frac{4,372 \times 1,032}{8,418 \cdot 1,032} = \frac{4.513,612}{7,386} = 0,61$$

Rearranging the terms appearing in (3), it becomes immediately apparent that IBG Index is intimately connected to the well-known and widely studied Return-on-Equity ratio (ROE).

$$ROE = \frac{\Pr ofits (or \ Losses) \ after \ Taxes}{Equity} = \frac{L}{E}$$
(4)

Through the relation:

$$IBG = \frac{DTA's}{|ROE|^{-1} - 1}.$$
(5)

Straightforward computation shows:

$$\frac{\P IBG}{\P ROE} = \frac{DTA's}{\left(1 - \left| ROE \right| \right)^2} > 0$$
(6)

whereby the positive association of IBG and |ROE| is readily revealed.

Our previous analysis may be illustrated through the use of financial data for the year 2015. The corresponding ratios IBG and |ROE| of all four Greek systemic banks are gathered in Table 4:

Table 4: IBG and	ROE	of four systemic Greek banks (in 2015)
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	Losses after Taxes (billion euros)	Equity (billion euros)	ROE	IBG
National Bank	4,540	8,315	0,546	5,90
Piraeus Bank	2,389	9,608	0,249	1,66
Eurobank	1,051	6,131	0,171	1,01

Alpha Bank	1,032	8,418	0,123	0,61
Source: Author's work				

The DTA's of the banks for 2015 are certainly not identical. Nevertheless, their variance around their arithmetic mean $(4.798.250 \in)$ is small enough to allow the verification of the positive association of IBG and |ROE| via the computations in Table 4.



An additional indication of the strong positive relation between IBG and |ROE| is provided

Figure 10: Scatterplot, Author's work

through Pearson's correlation coefficient. In fact, as attested by Figure 10 and Table 5, correlation is statistically significant, identifying a 99 percent confidence level.

Table 5:	Correlations				
		ROE	IBG		
ROE	Pearson Correlation	1	,995**		
1 1	Sig. (2-tailed)		,005		
	Ν	4	4		
IBG	Pearson Correlation	,995**	1		
	Sig. (2-tailed)	,005			
	Ν	4	4		
**. Corr	**. Correlation is significant at the 0.01 level (2-tailed).				
Source	Author's work				

Source: Author's work

The coefficient of determination $R^2 = 0.99$ indicates, as expected, that 99% of the variance in the dependent variable IBG is predictable from the independent variable |ROE|.

5. CONCLUSIONS

The social cost of a bank failure exceeds the direct losses to the claim holders of the failing bank. Simultaneously the costs and externalities associated with a bank failure are likely to be much larger than those created by the failure of a commercial non- bank entity. Consequently, it becomes obvious that the interest of banking supervisors (Basel Committee) is directed to the expansion of the capital adequacy of banks and to the wider disclosure of the respective comparable information through International (Accounting) Financial Reporting Standards / IFRS - IASB. One of the major accounting issues for banks (at the end of each year) is the deferred taxation. The term is used to indicate the temporary differences that arise when comparing the taxable profit and accounting profit. Thus, the allowance for loan and lease losses and impairment of assets cause the differences between taxable and accounting profit. As deferred tax assets, they are offset during the next years against potential income tax resulted from the banks' activities. Then, the "right" for capitals offsetting is guaranteed, without real capitals, but is measured and counted, subject to conditions, for the calculation of capital adequacy of banks. Furthermore, for some banks in the South of the Euro area, legislative changes have been introduced that enable the biggest part of losses to contribute to the banks' capital adequacy. The computed IBG values confirm the contribution of losses to the banks' capital adequacy. In fact, recalling the definition of IBG in (3), note that greater losses lead to an increase of IBG through two different routes: enlarging the nominator, as well as shrinking the denominator of the ratio (3). Hence, were the National Bank, which suffered the greatest losses (4.540) in 2015 (when compared with either Piraeus Bank, Eurobank or Alpha Bank – with respective losses 2.389, 1.051 and 1.032), to transform its losses into DTCs, it becomes clear that it would enjoy the largest

possible gain in CAR. This conclusion is supported by the fact that the IBG Index for 2016 assumes its largest value for the National Bank (5,90), in comparison with Piraeus Bank (1,66), Eurobank (1,01) or Alpha Bank (0,61). Finally, it is not a simple matter of coincidence that the National Bank is the first one to have already decided the application of the new Law, converting its Deferred Tax Assets (DTAs) into Deferred Tax Credits (DTCs), through the creation of a special reserve and the issuance and allocation to the Greek State of securities (conversion rights).

REFERENCES

- Acharya, V., H. Mehran, T. Schuermann and A. Thakor (2011). Robust Capital Regulation. Federal Reserve Bank of New York, Staff Report No. 490.
- Alpha Bank (2016). Financial Information. Athens.

Bank of Greece (2011-2015). The Governor's Annual Report. Athens.

- Baverez, N. (2012). *De l' urgence de réguler la finance*. Retrieved from http://www.lemonde.fr/idees/article/2012/08/20/de-l-urgence-de-reguler-la
 - finance_174812_3232.html.
- BCBS (1998). International Convergence of Capital Measurement and Capital Standards. Bank for International Settlements.
- BCBS (2005). An Explanatory Note on the Basel II IRB Risk Weight Functions.
- BCBS (2010). Calibrating regulatory minimum capital requirements and capital buffers: a topdown approach.
- Blundell-Wignall, A., & Atkinson, P. (2010). Thinking beyond Basel III: Necessary solutions for capital and liquidity. OECD Journal: Financial Market Trends, Vol. 2010/1.
- Bolton, P., & Jeanne, O. (2011). Sovereign default risk and bank fragility in financially integrated economies. NBER Working Papers, No 16899, March.
- CGFS (2011). The impact of sovereign credit risk on bank funding conditions. CGFS Papers No. 43.

De Weert, F., (2011). Bank and Insurance Capital Management. Wiley Finance.

- Drehmann M., Borio, C., & Tsatsaronis, K. (2011). Anchoring countercyclical capital buffers: the role of credit aggregates. *BIS Working Papers, No.* 355.
- Engelmann, B., & Rauhmeier, R. (2011). The Basel II Risk Parameters: Estimation, Validation and Stress Testing. Springer.
- Eurobank (2016). Annual Reports. Athens.
- Gregory, J. (2010). Counterparty credit risk: The new challenge for global financial markets. Wiley Finance.
- Gregoriou, G. (2009). Operational Risk toward Basel III: Best Practices and Issues in Modeling, Managemen, and Regulation. John Wiley & Sons, Inc.
- Hildebrand, P.M. (2008). Is Basel II Enough? The Benefits of a Leverage Ratio. Financial Markets Group Lecture, London School of Economics. London, December 15.
- Hytis, E. (2015). Why does the increase in taxation rates benefit the banks with losses? *EURO2day*. Athens, (in greek).
- Hyz, A., Gikas, G., (2016), CAMELS and Greek banking sector performance during the crisis. An analysis and review of the evidence, Acta Universitatis Lodziensis. Folia Oeconomica 5(316)
- International Accounting Standards Board (2012). IAS 12 Income Taxes. London.
- Kalfaoglou, F. (2012). The framework of the banks' capital adequancy. Economic Bulletin of Bank of Greece 36, April (in greek).
- Law 4302/2014. Regulation of issues related to logistics. Athens (in greek).
- Merler, S. (2015). Deferred tax credits may soon become deferred troubles for some European banks. Retrieved from http://bruegel.org.
- Miles, D., Yang, J., & Marcheggiano, G. (2011). Optimal bank capital. Bank of England Discussion Paper No. 31.
- National Bank of Greece (2016). *Financial Report*. Athens.
- Papadeas, P. (2008). A modern approach to the capital demands for risk cover and their disclosure in the banks' financial statements (IFRS 7). Monography in Bank Accounting. Athens (in greek).
- Papadeas, P. (2011). Bank Business & Derivatives through Sectoral Accounting Plan. Athens (in greek).

Papadeas, P. (2012). Auditing effectiveness for hedging of fair value and its disclosure in the banks' financial statements (IFRS 9). Monography in Bank Accounting. Athens (in greek).

Papadeas, P.& Sykianakis N. (2016). Analysis and interpretation of financial statements. Athens (in Greek).

Perotti, E., Ratnovski, L., & Vlahu, R. (2011). Capital regulation and tail risk. International Journal of Central Banking, December.

Piraeus Bank (2016). Financial Results. Athens.

- Rafael, R., & Saurina, J. (2011). The countercyclical capital buffer of Basel III: A critical assessment. CEPR Discussion Paper No. 8304.
- Saunders, A., & Allen, L. (2010). Credit Risk Measurement In and Out of the Financial Crisis: New Approaches to Value at Risk and Other Paradigms, Third Edition. John Wiley & Sons, Inc.
- Tsitsakis, C., Karasavvoglou, A., & Eleftheriadou, G. (2014). The Cure of a big Patient–An Accountant's Perspective. *Procedia Economics and Finance*, 9, 200-207.

APPENDIX

Table A1. Alpha Bank: Accounting data and IASBasel (in '000 ϵ)					
Year	Deferred Tax Provisions for Profits		IASBasel		
	Assets	Loan Losses and	(Losses) after		
		Impairments	Taxes		
2011	1.487.782	-5.685.460	-3.842.666	5.330.448	
2012	1.786.612	-1.374.711	-1.732.934	3.519.546	
2013	2.740.649	-1.609.775	2.857.021	-116.372	
2014	3.604.079	-1.386.598	-58.529	3.662.608	
2015	4.372.486	-2.699.237	-1.032.276	5.404.762	

Table A2. National Bank: Accounting data and IASBasel (in '000 €)

Year	Deferred Tax	Provisions for	Profits	IASBasel
	Assets	Loan Losses and	(Losses)	
		Impairments	after Taxes	
2011	1.000.326	-13.962.983	-12.144.748	13.145.074
2012	1.085.038	-2.645.470	-2.935.625	4.020.663
2013	2.189.000	-1.026.000	618.000	1.571.000
2014	3.855.000	-2.370.000	-382.000	4.237.000
2015	4.906.000	-4.344.000	-4.540.000	9.446.000

Table A3. Eurobank: Accounting data and IASBasel (in '000 €)

Year	Deferred Tax	Provisions for	Profits	IASBasel
	Assets	Loan Losses and	(Losses)	
		Impairments	after Taxes	
2011	1.718.000	-1.086.000	-3.155.000	4.873.000
2012	2.037.000	-1.355.000	-1.368.000	3.405.000
2013	3.024.000	-1.587.000	-1.007.000	4.031.000
2014	3.871.000	-1.901.000	-1.383.000	5.254.000
2015	4.902.000	-2.503.000	-1.051.000	5.953.000

Table A4. Piraeus Bank: Accounting data and IASBasel (in '000 €)

Year	Deferred Tax	Provisions for	Profits (Losses)	IASBasel
	Assets	Loan Losses and	after Taxes	
		Impairments		
2011	1.132.455	-7.578.403	-6.428.843	7.561.298
2012	1.754.746	-2.338.542	-804.665	2.559.411
2013	2.706.304	-2.298.793	2.506.328	199.976

2014	3.950.983	-4.038.759	-2.065.200	6.016.183
2015	5.012.800	-4.397.490	-2.389.397	7.402.197