The Portuguese Banking System and Capital Agreements (2005-2011)

Margarida Filipe[1] and Rita Martins de Sousa[2]
1 ISEG - School of Economics and Management, University of Lisbon.
margaridafilipe89@gmail.com
2 ISEG - School of Economics and Management, University of Lisbon.
martins@iseg.utl.pt

Abstract - **Basel III is set to come into force on 1 January 2014. This capital agreement will include the three pillars enshrined in Basel II and is designed to strengthen regulation and the microprudential supervision of each bank, while also adding the macroprudential dimension (system-wide risks). The purpose of this article is to analyse to what extent banking institutions of Portuguese origin, operating within the national banking sector, have implemented and observed the measures imposed by the Capital Agreements prior to Basel III.**
Our main results made it possible to identify three different groups of banks as far as the disclosure of information and the application of the risk measurement methods of Basel I and Basel II are concerned. An international comparison also allowed us to conclude that there has been a convergence of Portuguese and Spanish banking institutions in relation to some economic and financial indicators. However, as far as supervision is concerned, Portugal is to be numbered among the countries with more positive results, while Spain displays some weaknesses.
Keywords - *Bretton Woods; Basel; supervision; Portugal; Spain.*

1. Introduction

The 1970s were marked by changes in both the internal and external monetary and financial context of the Portuguese economy. The political and economic upheavals occurring in Portugal in 1974 had direct repercussions for the banking system, resulting most immediately in its nationalisation, followed by its reprivatisation in the 1980s and 1990s together with a series of mergers and acquisitions (Valério *et al.*, 2010). Externally, the end of the Bretton Woods system marked a turning point in the international monetary system[1]. The demonetisation of gold, the emergence of the dollar-mark-yen monetary triad and the switch to a floating exchange rate regime, enshrined in the 1976 Jamaica Agreements, were just some of the consequences arising from the declaration of the inconvertibility of the dollar in 1971 (Eichengreen, 1996; Bordo, 2003). At the same time, attempts to readjust parities through the Smithsonian Agreement met with difficulties arising from a decade marked by two oil crises. These shocks brought disequilibrium to the balances of payments of those economies that were most dependent on this energy source, resulting in stop-go policies that interrupted the monetary and financial solidarity of the two most important European economies – France and Germany (Eichengreen, 1996; Crockett, 2003). If, in some theoretical frameworks, there exists one endogenous relationship between financial development and economic growth, the resulting international monetary instability had repercussions on the banking system, most notably the increase in market frictions, and the rise in transaction costs in particular (Levine, 1997)[2].

Uncertainty and volatility once again returned to the markets from the 1970s onwards. But, bearing in mind that crises "are to the financial system what heart attacks are to the cardiovascular system. The organs central to its operation begin functioning erratically; in extreme cases they stop functioning entirely" (Eichengreen, 2012: 13), it was crucial to create control instruments to reduce the uncertainty and risks involved in financial activity. Thus, immediately following the first oil shock, in 1974, the G10 countries decided to form the Basel Committee on Banking Supervision (BCBS)[3] under the auspices of the Bank for International Settlements (BIS). At a time when, for most economies, the banking system was the supplier of credit and liquidity, its supervision was a guarantee of the system[4]. It was the Basel

[1] The most complete study on the Bretton Woods system is still considered to be that produced by Bordo, Eichengreen (ed.), 1993.

[2] Levine (1997) considers that market frictions include both information costs and transaction costs.

[3] BCBS is a Standing Committee set up by the governors of the central banks of the G10 group of countries.

[4] Even though economies can be historically subdivided into those financed by the capital market (USA, UK) and those financed by the banking system (Germany, France), since the 1990s there has been an increase in the importance of the capital market in all economies.

IJLTFES, E-ISSN: 2047-0916
Copyright © ExcelingTech, Pub, UK (http://excelingtech.co.uk/)

Concordat, approved by the BCBS in 1975, that established these supervisory principles, later revised in 1983. However, the foreign debt crisis of some Latin American countries drew attention to the fact that the financial institutions held levels of capital that ran counter to the solidity of the system (DeLong *et al*., 1996).

It was only in 1988 that the BCBS drew up the Basel Accord I, where, for the first time, international rules were established for fixing the equity levels of credit institutions, while assets were differentiated according to their degree of risk. The liberalisation of capital movements in the 1990s called for an enlargement of the Accord (1997), with it being envisaged that the losses to be covered by equity would include not only those linked to credit risk, but also those arising from market risk (Goodhart, 2012). After the first two phases of the Accord had been identified, it became clear that the regulation of banking activity was a form of prudential supervision (Eichengreen, 2012).

2004 brought Basel II with its enshrinement of the New Capital Adequacy Framework for Credit Institutions, which came into force at the end of 2006. As we already know that, on 1 January 2014, Basel III will be brought into force, which includes the three pillars enshrined in Basel II and strengthens regulation and the microprudential supervision of each bank, while also adding the macroprudential dimension (system-wide risks), the purpose of this article is to analyse to what extent banking institutions of Portuguese origin, operating within the national banking sector, have implemented and observed the measures imposed by the previous Capital Agreements. This will involve questioning the solidity of the financial system on the eve of the introduction of other reforms dictated by the BCBS. This research has been centred, above all, on the first pillar of Basel II during the period from 2005 to 2011. This time interval made it possible to analyse the implementation of Basel I and the changes introduced for Basel II, since in 2006 the use of simple methodologies was authorised, followed in late 2007/early 2008 by complex or advanced methodologies.

Our main results allow us to identify the Portuguese banking institutions that followed the criteria and guidelines of the Capital Agreements, as well as those institutions that need to make a greater effort in disclosing information and implementing risk measurement methodologies.

The remainder of the paper is organised as follows. Section two presents a comparative approach between Basel I and Basel II. Section three briefly reviews the evolution of banking supervision in Portugal. Section four studies the implementation of the guidelines of Basel I and Basel II by the Portuguese banking system. Section five compares Portuguese banking institutions and their Spanish counterparts, for the years 2001 and 2010. Section six concludes.

2. I and Basel II: a comparative approach

Basel I (1988) was the consequence of the international monetary events that occurred in the 1970s and 1980s. The main aims of this agreement were to fix the minimum regulatory capital of banks at 8% of their total assets, as well as to guarantee greater solidity, stability and equity of the international banking system.

Basel I did, however, prove to have certain limitations. The most immediate of these was the lack of any guarantee that the supervisory authorities would be capable of imposing the necessary requirements (as in the case of Japan). Secondly, the loans granted to OECD member countries were classified as being of lower risk[5]. On the other hand, the established levels of capital adequacy were the same (8%) for both developed countries and emerging markets, even though it is known that the latter always have volatile markets. Finally, no differentiation was made between risks, or, in other words, the risk coefficients applied to banks were the same regardless of their rating. Thus, according to Eichengreen, “the Basel Accord limited the pressure to do better” (Eichengreen, 2012: 37).

In 2004, in order to overcome the limitations of Basel I, the BCBS signed the New Capital Adequacy Framework for Credit Institutions, known as Basel II. This agreement addressed other risks from banking activity, namely operational risk. It also allowed for greater flexibility in the risk coverage methods used by banks, enabling them to choose ones that were better adapted to their characteristics as financial institutions. The aim of this agreement was to cover the various risks with a minimum amount of equity (which remained unchanged at 8%, just as it had been in the case of Basel I), the difference being in the weighting of high-risk assets. In order to attain these objectives, Basel II was based on three pillars: minimum capital requirements, supervision and market discipline [6] . In order to facilitate the comparison between Basel I and Basel II, we have

[5] This assumption of the Basel Agreement created an incentive for countries to join the OECD, as was the case with Mexico and South Korea (Eichengreen, 2012: 35-36).

[6] On the three pillars of Basel II, see the internet links http://www.bis.org/bcbs/events/b2earoc.pdf and http://www.bis.org/bcbs/basel3/b3summarytable.pdf.

prepared the following table showing the main differences between the two Capital Agreements:

Table 1. The main differences between Basel I and Basel II

Basel I	Basel II
Calculation of the Minimum Capital Requirements in Basel I: $\frac{\text{Equity}}{\text{Credit Risk} + \text{Market Risk}} \geq 8\%$	Calculation of the Minimum Capital Requirements in Basel II: $\frac{\text{Equity}}{\text{Credit Risk} + \text{Market Risk} + \text{Operational Risk}} \geq 8\%$ Supervisory bodies can require this ratio to be above 8%.
In 1988, the agreement contemplated only one risk inherent in banking activities, namely credit risk. Revised in January 1997 to include market risk as well as credit risk. Low sensitivity in risk measurement.	Besides the risks contemplated in the previous agreement, also includes operational risk. Greater sensitivity in risk measurement.
Has only one way of calculating minimum capital requirements.	Includes various methods for calculating minimum capital requirements. Structure based on three pillars.
The methods used are the same for all financial institutions.	Financial institutions can choose the model best suited to their characteristics.
Fewer methods for measuring each of the risks (credit and market).	More methods for measuring each of the risks (credit, market and operational).
As these are the main differences between the two agreements, it can be stated that, whereas Basel I had only one method for calculating minimum capital requirements, Basel II is more comprehensive, being based on three pillars and emphasising such criteria as supervision, discipline and market transparency, which were not taken into account in the 1988 Agreement.	

Source: Filipe, 2012: 18.

3. The Portuguese Banking System and its Supervision

The period running from the end of the Second World War to the beginning of the 1960s was marked by a significant increase in the importance of the banking sector in the Portuguese economy, as shown by the growth of both deposits and loans granted. Using gross deposits as an indicator, the leading bank was Caixa Geral de Depósitos, followed by Banco Espírito Santo & Comercial de Lisboa, with Banco Nacional Ultramarino in third place, and then Banco Português do Atlântico and Banco Borges & Irmão (Valério *et al.*, II, 2010: 129-130).

Over the following decades, in particular between 1961 and 1975, the main industrial-based groups expanded into the banking sector. On the one hand, there was CUF, which already owned Banco José Henriques Totta and took over two medium-sized institutions, Banco Aliança and Banco Lisboa & Açores, the merger giving rise to Banco Totta & Açores, which, at the time, was one of the largest Portuguese banks. On the other hand, there was the Champalimaud group, which took over Banco Pinto & Sotto Mayor, and, in 1968, already controlled Companhia de Seguros Mundial and Companhia de Seguros Confiança, later taking control of Companhia Continental de Resseguros in 1971. The Espírito Santo group and the Português do Atlântico group were financial-based groups and formed three smaller-sized groups, Fonsecas & Burnay (resulting from the merger between Banco Fonsecas e Santos & Viana and Banco Burnay), Borges (Banco Borges & Irmão) and Nacional Ultramarino (the freshly renewed Banco Nacional Ultramarino) (Valério *et al.,* II, 2010).

In 1974, the change in the Portuguese political regime gave rise to a different way of viewing the financial system, with nationalisation of the sector being the political solution adopted at that time. In the 1980s, as a result of Portugal's joining the European Economic Community (1986), there was a major effort made towards modernisation, resulting in greater investment in Portugal by foreign financial institutions. As a result, various authorisations were given for the opening of foreign banks in the 1980s, such as, Citybank and Barclays Bank in 1985 and Deutsche Bank Investiment in 1990. The privatisation of previously nationalised banks also took place, such as: Banco Português Atlântico, Banco Totta & Açores, Banco Borges & Irmão and Banco Espírito Santo & Comercial de Lisboa, among others. The emergence of new private banks was another feature worth mentioning, with the creation of new banks such as Banco Privado de Investimento, Banco Comercial Português, Banco Português de Negócios and Finibanco during the 1980s and 1990s. The turn of the century brought an entirely new picture with the regular occurrence of mergers and acquisitions and with the supervisory bodies playing an ever more important role.

While the Bank of Portugal had collaborated with the Ministry of Finance in supervising, coordinating and inspecting the activity of credit institutions since 1957, it was not until 1990, with the approval of the Bank's new statutes that a new design was formally implemented for its supervisory role[7]. The Bank no longer merely implemented direct controls and required compliance with specific instructions, but instead a series of strict procedural rules was drawn up and the Bank was entrusted with the role of actual supervision (Valério *et al.*, II, 2010). Among these

[7] Decree-Law n. º 337/90 of 30 October.

procedures was the requirement that institutions should comply with rules guaranteeing liquidity and solvency, together with the establishment of guidelines for the organisation of accounts and for the disclosure of information to the Bank of Portugal and to the public, as well as the frequency with which this should be done[8].

This was the background against which the Bank of Portugal was given the authority to carry out the prudential supervision of the activity of the credit institutions covered by the 1997 Basel Principles, and once again with the new 2006 version, when Basel II came into force. These amounted to 25 core principles that needed to be respected in order to ensure effective supervision. The principles can be grouped together under seven categories: objectives, autonomy, powers and resources of the supervisory authority; authorisation procedures and institutional structure; regulation and prudential requirements; supervisory methods; disclosure requirements; power of the authorities to impose corrective measures; cross-border supervision. The most important roles played by the Bank of Portugal in ensuring respect for these principles were as follows: establishment of accounting standards, which have to be followed by the institutions subject to its supervision, as well as the solvency ratio weighted by the risks to which banking activity is subjected; supervision of the regulatory information disclosed by banks, with the Bank of Portugal being able to take into account not only the information provided by the banking institutions, but also conducting audits and general or specific supervisory activities, in order to test whether the information disclosed was true or not; and the application of sanctions for infringements of the rules by the institutions supervised, which could range from simple fines to the winding up and liquidation of the bank.

The assessment made by the IMF in 2006 resulted in two of these principles not obtaining a classification of full compliance[9]. The assessment team considered that at the level of the regulation and supervision of the financial system "(1) the resources existing at the Bank of Portugal for analysing and assessing market risks and for validating the internal models of institutions needed to be developed even further; and (2) a methodology had not yet been implemented for the systematised assessment of the risk profile of institutions." (Freitas, 2008: 48)[10]. In comparative international terms, of the six EU Member States that published the results relating to the extent of their compliance with the Basel Core Principles, only France obtained a more positive classification than Portugal[11]. Like most of the countries, Spain displayed weaknesses at the level of the prevention and suppression of money laundering. If we compare the results published by the IMF for 31 industrialised countries, the principle of monitoring market risks is generally the one that is least implemented (Freitas, 2008: 61-64).

In short, there was a modernization of the financial system as well as an evolution in terms of supervision of banking institutions and the Bank of Portugal became one of its key elements since the 1990s.

4. Did the Portuguese Banking System implement the guidelines of Basel I and Basel II?

4.1. Data and Methodology

Our analysis of the way in which the Portuguese Banking System implemented the Capital Agreements was based on a representative sample of the national banking network, which included the group of Portuguese banks[12]. As a whole, the ten banks selected account for 79.71% of assets, 86.06% of deposits and 80.58% of loans granted of the respective totals of the Portuguese banking network. As far as banking product is concerned, the banks in question account for 81.69% of the total weight of banking product, and 32.91% of the total weight of banking product in relation to the assets of each bank. The banking institutions with the highest scores in terms of the indicators mentioned are Caixa Geral de Depósitos (CGD), Banco Comercial Português Millennium (BCP), Banco Espírito Santo (BES) and Banco Português de Investimento (BPI) (cf. Filipe, 2012: 58-59).

The data was collected from *Consolidated Annual Reports* of between 2005 and 2011, of the various banks of the sample. In the case of the solvency ratio, this calculation should technically have been based on the banks' individual accounts. However, the banks did not present enough data in their reports to make this analysis possible.

[8] Cf. Chapter IV, section III of Decree-Law n. º 337/90 of 30 October.

[9] The rating scale for assessing the principles includes the following classifications: "Observed", "Broadly observed", "Partly observed", "Not observed" and "Not applicable".

[10] Market risk is included in the principle of Regulation and Prudential Requirements. In turn, it should be noted that some financial hedging products, such as swaps, are included here.

[11] The six EU Member States that published their results are: Denmark, Spain, France, Italy, Netherlands, and the United Kingdom.

[12] To gauge the representativeness of the sample, the following indicators were taken into account: the total weight of assets, the total weight of deposits, the total weight of loans granted, and, lastly, the total weight of the banking product.

From these *Reports* we selected the relevant *items* to calculate the ratios which allowed us to study the different dimensions included in Capital Agreements. Thus we calculated the ratios of liquidity, return and solvency, according to the variables include in Table 2.

Table 2. Ratios of liquidity, return and solvency

Methodology		
Liquidity	**Return**	**Solvency**
$\frac{\text{Cash Bank Assets}}{\text{Total Assets}}$ $\frac{\text{Loans}}{\text{Total Assets}}$ $\frac{\text{Loans}}{\text{Cash Bank Assets}}$	$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}$ $\text{ROE} = \frac{\text{Net Income}}{\text{Equity}}$	Tier I Ratio Core Tier I Ratio $\text{Solvency Ratio} = \frac{\text{Equity}}{\text{Risk-weighted Assets}} \geq 8\%$
$\frac{\text{Available-for-sale financial assets} + \text{Loans and advances to credit institutions} + \text{Financial assets with repurchase agreements}}{\text{Total Assets}}$ $\frac{\text{Resources of central banks} + \text{Resources of other credit institutions}}{\text{Total Assets}}$		

4.2. The application of the Capital Agreements

The crisis originating in the USA in 2007 spread to other economies[13], including the Portuguese one, with repercussions on the implementation of the risk measurement methods linked to Basel I and Basel II. In order to identify the changes that occurred between 2005 and 2011 at the banks of our chosen sample, we collected available information about capital agreements for each bank , detailing the criteria and methods used for risk measurement. Based on this information, the various institutions were grouped on a descending scale, assuming that more available information reduced costs and that the lack of symmetry of information leads to a more healthy and sustainable financial system. On this basis, the banks were grouped into three groups, the first being based on information from all the years contemplated by the study.. The third group showed restricted and non-continuous information, whereas the middle group only published information from the relevant four years of the study. . It is important to stress that, for this middle group, not all the banks published using the Basel method, during the same years.

A table has been prepared showing the evolution of each bank in its introduction of advanced risk measurement techniques and criteria[14].

Table 3. Application of the Capital Agreements at Portuguese Banks

2005-2011	
	Banco Comercial Português Millennium **2005** Credit Risk – IRB Advanced Approach (used in Portugal, Poland and Greece). Other banks use the Standardised Approach. Operational Risk – Standardised Approach. **2006** Request made to the Bank of Portugal to use advanced methods from 2008 onwards. **2007** Request made to the Bank of Portugal to use the Internal Models Approach for Market Risk. **2008** Implementation of Basel II for all banks regardless of the techniques used. **2009** Authorisation given by the Bank of Portugal for the use of advanced models. Credit Risk – Internal Ratings-Based Approach. Market Risk – Internal Models Approach. Operational Risk – Standardised Approach. **2010** Credit Risk for the portfolio – IRB Advanced Approach. Credit Risk for the company – IRB Foundation Approach. **2011** Preparations for the adoption of Basel III, due to come into force on 1 January 2014.
	Caixa Geral de Depósitos **2005** Continuation of preparations for the implementation of Basel II (already in progress since 2002). **2006** Request made to the Bank of Portugal

[13] About 2007 crisis see for all, Reinhart and Rogoff (2009).

[14] It should be explained that Basel I is also considered here, since this Capital Agreement was in force until the implementation of Basel II, which only took place in 2006.

1st Group: Millennium BCP, CGD and BES	to use the Internal Ratings-Based Approach for Credit Risk. **2007** Definition of targets to be adopted: Standardised Approach for Operational Risk, later using the Advanced Measurement Approach. **2008** Credit Risk – Standardised Approach. Operational Risk – Basic Indication Approach. Request made to the Bank of Portugal to use the Standardised Approach for Operational Risk. **2009** Authorisation given by the Bank of Portugal to use the Standardised Approach for Operational Risk. **2010** Authorisation given by the Bank of Portugal to use the Standardised Approach for Operational Risk on an individual basis. **2011** Preparations for the adoption of Basel III, due to come into force on 1 January 2014. **Banco Espírito Santo** **2005** Implementation of some of the measures of Basel II. Aims: IRB Foundation Approach for Credit Risk. Standardised Approach for Operational Risk. **2006** Request made to the Bank of Portugal to use the risk measurement models that were the aims in 2005. **2007** Negotiations with the Bank of Portugal about requests made in 2006. **2008** Authorisation given by the Bank of Portugal to use advanced risk measurement methodologies. **2009** Authorisation given by the Bank of Portugal to use the IRB Foundation Approach for Credit Risk (the first bank to do this). Standardised Approach for Operational Risk. **2010** Preparations began for the adoption of Basel III **2011** Announcement of the period of transition to Basel III from 1 January 2014 to 1 January 2019.
2nd Group: BPI, BANIF and MG	**Banco Português de Investimento** **2005** Credit Risk – Standardised Approach **2007** Credit Risk – Standardised Approach **2008** Credit Risk – Standardised Approach. Operational Risk – Basic Indication Approach. **2009** Credit Risk – Standardised Approach. **Banco Internacional do Funchal**
	2005 Preparations for the implementation of Basel II **2006** Continuation of preparations for the implementation of the Basel II criteria, to be adopted in 2007. **2007** Models developed for the recording of Credit Risk at the time of its recognition and subsequent monitoring. **2008** Compulsory adoption of Basel II by banks regardless of the techniques chosen. **Montepio Geral** **2007** Request made to the Bank of Portugal to use the Standardised Approach for Operational Risk. **2008** Implementation of Basel II techniques. Continuation of negotiations with the Bank of Portugal about the techniques to be used. **2009** Operational Risk – Basic Indication Approach. **2010** Authorisation given by the Bank of Portugal to use the Standardised Approach for Operational Risk. Presentation of Basel III.
3º Group: BPN, BiG, CA and Finantia	**Banco Português de Negócios** **2007** Market Risk – Value at Risk Approach **2008** Preparations for the use of Basel II. Attempt made to use the Internal Ratings-Based Approach for Credit Risk instead of the Basic Indication Approach. **Banco de Investimento Global** **2008** Began to create conditions for the implementation of advanced risk measurement techniques. **2009** Sought to change from the Basic Indication Approach to the Advanced Measurement Approach for the measurement of Operational Risk. **2010** Continued to create conditions for implementing advanced risk measurement techniques. **Crédito Agrícola** **2007** Began study for the implementation of the Standardised Approach for risk measurement. **2008** Continuation of the study of the criteria needed for the implementation of advanced techniques for risk measurement. **2010** Expressed knowledge of the existence of a new Basel III Capital Agreement. **Finantia** **2007** Market Risk – Value at Risk Approach

	through historical simulation

Source: Filipe, 2012: 52-55. For a more detailed explanation of the risk measurement methods used, see Filipe, 2012: 40-43.

In short, the banks that made the greatest efforts to implement the measures of the Capital Agreements, evolving gradually through the requests for authorisation presented to the Bank of Portugal, were Millennium BCP, BES and CGD, followed by BPI and Montepio Geral (MG). As far as the other remaining banking institutions are concerned, a greater effort must be made regarding the disclosure of information and the implementation of risk measurement criteria, in order to draw closer to the institutions displaying greatest development in terms of regulation.

5. Portugal and Spain: a comparative approach

In order to undertake a comparative analysis with other banking institutions subject to the Basel criteria, we chose the neighbouring country Spain, considered by the IMF in 2006 to reveal some weaknesses in regard to regulation (see section 3). The aim of this comparison between Portugal and Spain was to ascertain whether or not there was any indicators that reveal convergence between banking institutions. Bearing in mind that there is a correlation between the stability of the banking system and economic performance and that the implementation of the Basel agreement criteria contributed to this stability, , this comparison confirmed how the banking sector performed during the implementation of Basel II and the onset of the banking crisis in 2007. In other words, the use of certain financial indicators is an indirect way of observing the effect of the implementation of Basel II. In order to do this, we considered the years 2001 and 2010, for which there existed effectively comparative data, since the same methodology was used for their calculation[15].

In this comparison, the banks that were analysed were the ones that were common to the two studies used. However, since, for the analysis of supervision in Portugal, more Portuguese institutions were used in 2001 (see section 4) than originally contemplated, these institutions were taken into account for 2010.

In 2001, for the indicators ROE and ROA, cost to income ratio[16], non-performing loans ratio[17] and solvency ratio (according to the BIS criteria), the Spanish banks recorded more positive scores than the Portuguese banks, except in the case of the solvency ratio. Although all the banks are above the 8% limit, the highest scores are those presented by Totta (still with its Portuguese origin) and BPI (see Table 4).

Table 4. Indicators of Portuguese and Spanish Banks (2001) (in percentage).

Banks	ROE	ROA	Cost to income ratio	Non-performing loans ratio	Solvency ratio
BBVA	18	0.99	50.4	1.71	12.60
Banco Popular	27.7	1.78	37.2	0.80	11.33
Totta	19.1	0.70	49.2	2	13.30
CGD	20.7	1.03	50.1	2.45	10.50
BCP	26.2	0.91	56.6	1.70	9.40
BES	15.6	0.55	58.2	1.80	10.75
BPI	14.7	0.54	68.3	1.10	9.20

Source: Alexandre, 2004:61

In 2010, if we examine the same indicators, we can see that the situation does not coincide with that of 2001. As far as the rates of return (ROE and ROA) are concerned, the lowest scores are those recorded by Banco Bilbao Viscaya Argentaria (BBVA), whereas the highest scores are those of BPI and Santander Totta. In the case of the cost to income ratio, it is the Spanish banks that have the highest and the lowest scores, Santander Totta and BBVA, respectively. Analysing the non-performing loans ratio, we can see that it is the Portuguese banks that display the best and the worst values, BES and BPI and BCP, respectively. As was the case in 2001, it was the Portuguese banks that recorded the best solvency ratios in 2010 (using the criteria of the Bank of Portugal and Basel), with CGD recording the highest ratio. However, although the Spanish banks have lower scores for this ratio, they are nonetheless above the 8% limit. The lowest score is presented by BBVA (8.77%) (see Table 5).

[15] For 2001, the study by Alexandre, 2004, was used, and, for 2010, the study by Filipe, 2012, was used. For a more detailed explanation of the methodology adopted in Filipe, 2012, see section 4.

[16] *Cost to Income* represents the weight of operating costs in relation to the results obtained, i.e. it measures the weight of fixed costs within the profitability generated by the Bank.

[17] The *non-performing loans ratio* corresponds to the degree of development presented by the banking institutions in their use of methods for analysing credit and for measuring risk.

Table 5. Indicators of Portuguese and Spanish Banks (2010) (in percentage).

Banks	ROE	ROA	Cost to income ratio	Non-performing loans ratio	Solvency ratio
Banco Popular	2.33	0.16	58.03	2.54	9.2
BBVA	-4.86	-0.12	80.5	1.22	8.77
Santander Totta	15.3	0.9	45.7	1.3	11.1
BPI	8.8	0.6	73	1.1	11.1
Millennium BCP	6.1	0.4	56.3	3	10.3
BiG	17.28	2.55	39	0.27	36.3
BANIF	5.19	0.30	60.86	n.a	14.5
BPN	n.a	n.a	n.a	n.a	n.a
BES	8.55	0.61	52.3 or 61.9	1.11	11.3
CGD	4.1	0.24	63.3	2.93	12.3
CA	3.59	0.29	n.a	n.a	13.4
MG	5.18	0.29	58.68	3.24	12.74
Finantia	n.a	n.a	38	8.4	13.8

Source: Filipe, 2012: 56-57.
Note: n.a = no available.

Comparing 2001 and 2010, we can therefore state that there is now a greater convergence between banking institutions, since Portuguese banks have generally evolved in terms of the indicators contemplated in this study.

6. Conclusions

Returning to the question that lay at the origin of this research, the really succinct answer is that the Portuguese banks belonging to the national banking network have gradually implemented the criteria of the Capital Agreements. However, this general picture is not a homogeneous one, which is why we identified three distinct groups of banks in terms of their disclosure of information and their application of risk measurement methods. These conclusions are, however, confined to the criteria of Basel I and pillar 1 of Basel II, since, in the selected sample, the pillars of supervision and market discipline are less explicitly detailed in the Annual Reports and Accounts that we examined. Hence the greater difficulty that we found in deciphering these pillars.

As far as the international comparison is concerned, it can be concluded that there was a convergence between the Portuguese and Spanish banking institutions that comprised the chosen sample, in terms of some economic and financial indicators. However, as far as supervision is concerned, Portugal is to be numbered among those countries that have recorded more positive results, whereas Spain displays some weaknesses.

Basel II may have led to a more sustainable development of the financial system, by focusing not only on pillar 1 of Basel II, but also on pillars 2 and 3, as well as on other areas which previously hadn't been taken into account in the Capital Agreements. Therefore, it is expected that Basel III will fill the gaps arising from the application of the previous agreements, thereby strengthening supervision and market discipline, and monitoring liquidity in a more continuous manner.

Acknowledgments

The authors would like to thank Fernando Félix Cardoso and an anonymous referee for their valuable comments. Any remaining shortcomings are the responsibility of the authors.

References

[1] Alexandre, P. M. M. (2004), *Contribuição para o Estudo das Motivações e Estratégias de Actuação da banca Espanhola de Média Dimensão em Portugal*, Master Thesis in Gestão e Estratégia Industrial, School of Economics and Management, University of Lisbon or http://hdl.handle.net/10400.5/633.Chung, P.J. and D.J. Liu (1994), Common stochastic trends in Pacific Rim stock markets, Qua*rterly Review of Economics and Finance* 34(3), 241-259.

[2] Bordo, M. (2003), "Exchange Rate Regime Choice in Historical Perspective", *International Monetary Fund Working Paper*, WP/03/160.

[3] Bordo, M. and Eichengreen, B. (eds.) (1993), *A Retrospective on the Bretton Woods System – Lessons for International Monetary Reform*, The University of Chicago Press.

[4] Crockett, A. (2003), "Exchange rate regimes in theory and practice" in *Monetary History, Exchange Rates and Financial Markets*, Vol II, Paul Mizen (ed.), Edward Elgar Granger, C.W.J. (1969), Investigating causal relations by econometric models and cross-spectral methods, *Econometrica* 37, 424-438.

[5] DeLong, J. B. *et al.* (1996) "The Case for Mexico's Rescue: The Peso Package Looks Even Better Now." *Foreign Affairs,* Vol 75, No. 3, pp. 8–14.

[6] Eichengreen, B. (1996), *Globalizing Capital*, Princeton University Press.

[7] Eichengreen, B. (2012), *Financial Crises – and what to do about them*, Oxford University Press.

[8] Filipe, M. (2012), *Executou o Sistema Bancário Português as Normas Orientadoras dos Acordos de Basileia I e Basileia II?*, Master Thesis in Finanças – Instituições Financeiras, School of Economics and Management, University of Lisbon or https://aquila4.iseg.utl.pt/aquila/getFile.do?fileId=314067&method=getFile.

[9] Freitas, J. F. (2008), *Financial Sector Assessment Program: Portugal*, Banco de Portugal.

[10] Goodhart, C. (2012), *The Basel Committee on Banking Supervision: A History of the Early Years 1974 – 1997*, Cambridge University Press.

[11] Levine, R. (1997), "Financial Development and Economic Growth", *Journal of Economic Literature*, Vol 35, No. 2, pp. 688-726

[12] Reinhart, C. and Rogoff, K. S. (2009), *This Time is Different – Eight Centuries of Financial Folly*, Princeton University Press

[13] Valério, N. *et al.* (2010), *History of the Portuguese Banking System*, Vol II, Banco de Portugal.

[14] The Three Pillars of Basel II: Optimizing the Mix in a Continuous-time Model, http://www.bis.org/bcbs/events/b2earoc.pdf, Last access/19-08-2013.

[15] Basel Committee on Banking Supervision reforms - Basel III, http://www.bis.org/bcbs/basel3/b3summarytable.pdf, Last access/19-08-2013.