Department of Economics

The role of Caixa Geral de Depósitos in the recent economic crisis (2007-2011): Does Public ownership make a difference?

A dissertation presented in partial fulfillment of the requirement for the degree of

Master in Economics

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September, 2011

Abstract

The public ownership of Caixa Geral de Depósitos (CGD), the biggest Portuguese commercial bank, has been a topic of controversy in the last 20 years. While public ownership is sometimes presented as both a source of competitive distortions in the banking industry and an instrument for the promotion of specific interest groups, its stabilizing role during the recent period of financial distress is hardly debatable. This dissertation intends to discuss the role of CGD as a State-owned bank in the context of the recent financial and economic crisis (2007-2011) by comparing its lending practices with the ones followed by private banks in Portugal.

Evidence suggests that CGD played a counter cyclical role in the Portuguese economy by increasing its lending activity between 2007 and 2011, whereas all other private banks decreased their credit supply. Although Caixa might have benefited from special financing conditions from 2007 to 2009, after that moment the increase in Caixa's activity was mainly due to state capital injections. Therefore, the increase in CGD credit amounts during the period of crisis may reflect Caixa's political orientation towards other goals rather than profitability, such as the aggregate economic activity.

Key-words: State-owned banks, Government Ownership, State intervention, Caixa Geral de Depósitos

JEL: G21, H81,

Resumo

O debate, académico e político, em torno da existência de bancos públicos tem sido, ao longo dos anos, envolto em considerável controvérsia. Tal debate insere-se no âmbito de uma outra discussão, mais geral, sobre a intervenção do Estado na economia e, em particular, nos sistema financeiros.

Apesar da controvérsia, o consenso estabelecido a partir dos anos 70 parece ter privilegiado a perspectiva mais "liberal", que encara a actuação dos bancos públicos (e da intervenção do Estado) enquanto fonte de ineficiência e de distorção das regras concorrenciais do mercado livre.

A recente crise financeira, que teve início em 2007 e que perdura até hoje, contribuiu, de certa forma, para uma alteração deste consenso, criando as condições para uma nova discussão acerca da pertinência da existência de bancos públicos.

O principal argumento, apresentando por aqueles que defendem a criação e manutenção da propriedade pública de determinados bancos, prende-se, sobretudo, com o papel contra-cíclico que os bancos públicos podem desempenhar em períodos de crises financeiras e económicas.

Perante uma crise de confiança generalizada nos mercados financeiros internacionais, as instituições financeiras tenderão a restringir a oferta de crédito (e outros activos líquidos) nos mercados, contribuindo para uma diminuição drástica da liquidez disponível. A sua própria preferência pela liquidez poderá assim conduzir a uma crise de liquidez nos mercados financeiros, limitando os recursos disponíveis que permitem o financiamento da actividade bancária. A preferência pela liquidez por parte de cada banco individual, em conjunto com a dificuldade em obter recursos nos mercados financeiros (devido à preferência pela liquidez das restantes instituições) conduzirá assim a uma diminuição do crédito disponível na economia, com graves consequências para o investimento, a actividade económica e o emprego.

Desta forma, a existência de um Banco Público que, por decisão política, contrarie a sua própria preferência pela liquidez e aumente a oferta de crédito, quer a outras instituições financeiras, quer a empresas e famílias, poderá contribuir para amortecer os efeitos da crise financeira e económica. Esta actuação só é possível porque, ao contrário dos bancos privados, a natureza dos bancos públicos permite a internalização, não só de objectivos individuais – como o lucro –, mas também dos resultados agregados da actividade bancária – os níveis de emprego ou de crescimento económico.

Por outro lado, os argumentos contra a existência e actuação dos bancos públicos centram-se em dois pontos principais. O primeiro diz respeito à ineficiente alocação de recursos que resultará, necessariamente, de uma intervenção do Estado no sistema financeiro (por via da alteração dos preços de equilíbrio). O segundo prende-se com a inevitável "partidarização" que resulta do controlo governamental sobre instituições de mercado. No caso de um banco público, seria de esperar então que o crédito concedido obedecesse a lógicas, outras, que não a rentabilidade e eficiência dos investimentos, como a corrupção ou a protecção política de determinados interesses económicos.

A presente dissertação propõem-se a revisitar os argumentos a favor e contra a existência de bancos públicos, a partir do papel desempenhado pela Caixa Geral de Depósitos (CGD), o banco totalmente detido pelo Estado Português, na recente crise.

A questão à qual se pretende dar resposta é, desta forma, a seguinte: "Teve, a CGD, através da sua politica de crédito, um papel contra-cíclico na economia portuguesa durante a recente crise financeira e económica?" Para avaliar o papel desempenhado pela Caixa, analisar-se-ão os dados disponíveis respeitantes à oferta de crédito dos cinco principais bancos a operar em Portugal – CGD, Millenium BCP, Banco Espírito Santo, Banco Português de Investimento e Banco Santander Totta – no sentido de confirmar ou infirmar a principal hipótese de partida: a de que a Caixa Geral de Depósitos, ao contrário dos bancos privados, manteve (ou aumentou) o nível financiamento à economia (famílias e empresas) durante a crise.

A análise dos dados disponíveis permite confirmar esta hipótese. De facto, a CGD foi o único banco, entre as cinco instituições em análise, a aumentar o montante total de crédito concedido no período entre 2007 e 2011.

A presente dissertação está dividida em três partes principais.

A primeira parte aborda os principais debates teóricos em torno da intervenção do Estado na economia, a partir de três perspectivas: (i) a perspectiva neoclássica, centrada nos modelos de repressão financeira de Shaw (1973) e Mckinnon (1973) e na Hipótese dos Mercados Eficientes desenvolvida por Fama (1965); (ii) a perspectiva neo-keynesiana das "falhas de mercado", baseada no trabalho desenvolvido por Stiglitz (1994); (iii) a perspectiva pós-keynesiana, centrada nos trabalhos de Keynes (2008), Minsky (1982, 1992) e Hermann (2000).

A parte I inclui ainda a discussão das principais referências bibliográficas em torno da questão da existência de bancos públicos, bem como os principais estudos empíricos sobre o tema.

A segunda parte respeita à análise empírica do papel da Caixa Geral de Depósitos na recente crise e está dividida em seis secções. A primeira secção introduz; a segunda procura abordar

os principais aspectos metodológicos e caracterizar brevemente o sistema bancário português; a terceira analisa os efeitos da crise financeira no mercado de crédito em Portugal, de forma a determinar se 1) se verificou de facto uma diminuição do crédito à economia, e 2) se essa diminuição no crédito se deve a factores do lado da procura ou da oferta de crédito; a quarta secção analisa as políticas de crédito dos cinco principais bancos a operar em Portugal, com o objectivo de identificar diferenças nos padrões de crédito da Caixa Geral de Depósitos em relação aos restantes bancos privados; a quinta secção analisa as principais variáveis do balanço dos bancos em estudo no sentido de concluir sobre as razões, de ordem financeira ou outra, que justificam o comportamento diferenciado da CGD no que diz respeito à política de crédito; a sexta e última secção da segunda parte resume as principais evidências empíricas.
A terceira parte apresenta as principais considerações relativamente à questão de partida, que resultam da confrontação entre, por um lado, as principais conclusões do debate teórico em torno da existência e intervenção de bancos públicos e, por outro, da realidade acerca do caso Português.

Palavras-Chave: Bancos Públicos, Propriedade Pública, Intervenção do Estado, Caixa Geral de Depósitos

Classificação JEL: G21, H82

Acknowledgements

First and foremost, I would like to express my sincerest gratitude and appreciation to my supervisor, Ricardo Paes Mamede. It would have been difficult to conclude (or to even start) this dissertation if it was not for his patience and excellent and careful guiding and supervision. The idea of this research came from a conversation we had some months ago.

I would also like to acknowledge Professor Isabel Salavisa for being there to discuss my ideas and to give her useful suggestions, especially in the beginning of this process.

Many thanks to Susana Figueiredo and João Neves who were always willing to help me with the "technical" parts of this research and gave their valuable suggestions.

Ana Bárbara helped patiently with some of the translations and text revision. Thank You.

My deepest gratitude to Francisco for all his comments and suggestions. His encouragement certainly helped me to finish everything on time, and I'm now ready to move on (and who knows, I might find some beauty in the study of kurtosis).

Last but not the least, all my thanks to Mariana, who was there from the beginning, and with whom I spent most of my writing time. Although we did not switch our dissertations, I cannot wait to read her work which will soon be ready.

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PART I

1. Recent Financial crisis and State-owned Banks: new insights on old debates

In January 2011, Asli Demirguç-Kunt, Director of Development Policy in the World Bank's Development Economics Vice Presidency (DEC) and the Chief Economist of the Financial and Private Sector Development Network (FPD), launched a debate on the World Bank blog AAF, based on the question: "Can State-owned banks play an important role in promoting financial stability and access[1]?"

At a first sight, it may seem like an old debate, with little to add, both in political and theoretical terms. Indeed, she writes:

> *"Before the crisis, there was a growing consensus that the track record of State-owned banks was quite poor. Despite a few success stories, government provision of financial services was generally considered to be problematic. The overwhelming majority of empirical evidence—from cross-country studies to detailed analysis of statistics on bank credit in individual countries—all pointed to a stark set of conclusions: lending by State banks is associated with inefficiencies, increased risk of crises, and less inclusion and greater concentration of credit. Further, the evidence suggested that State-owned banks tend to lend to cronies, especially around the time of elections, confirming numerous anecdotes most of us have heard about. When it comes to savings and payments services, the record was a bit better but still pretty mixed, with poor service quality."*

However, something must have happened to justify such rebirth. The crisis came and

> *"things started to change. Policymakers everywhere struggled to offset the reluctance of private institutions to lend more during the crisis, some relying on their Central Banks, others through their State-owned banks to expand credit. While memories of the large sums spent in cleaning up State bank portfolios have not quite faded, there certainly is a new-found appreciation for the potential countercyclical role State banks can play in crisis recovery. State interventions of all sorts—including State-ownership of banking—are now being viewed in a much more positive light."*

[1] http://blogs.worldbank.org/allaboutfinance/the-aaf-virtual-debates-join-charles-calomiris-and-franklin-allen-in-a-debate-on-state-owned-banks

This crisis has then contributed to underline the advantages enjoyed by public banks over private banks. This implies that some of the old arguments pro and against State bank ownership may need to be revisited and revaluated.

At the height of the financial crisis in the fall of 2009, the three largest banks by market capitalization in the world were all State-owned: the Industrial and Commercial Bank of China, China Construction Bank and Bank of China. Also, public banks in outstanding emerging countries like India, Brazil and Russia saw their market share expanding during the financial downturn, while savers were shifting their cash out of private banks. In Chile, *Banco del Estado*, fully owned by the Government, is the country's third largest lender and operates in all major segments of banking sector. Its role in time of crisis and its record in promoting sector competition and access to financial services makes it a well known case study.

During the financial collapse most "free market" views were mostly silent in Europe and the US. Most large privately owned banks and financial institutions received government funds and guarantees or were nationalized to avoid bankruptcy. Furthermore, many central banks such as the Federal Reserve were forced to bypass the banking system and to lend directly to the non-banking sector by buying commercial paper, among other lending programs.

However, as stated by Paul de Grauwe in the Financial Times[2] or by Franklin Allen, in AAF's virtual debate, "making credit decisions is not central banks' expertise, and they are unlikely to perform this role well". Therefore, he says, the Fed, as any other Central Bank, cannot take over all bank lending operations and a State-owned bank could be much more efficient performing these roles.

Definitely, this crisis has helped to prompt a widespread change of the way State interventions (in the banking system) are viewed. Insomuch that even a Special Report on Banking in emerging markets by The Economist – a publication with indisputable liberal credentials – suggested that a mixed model might have its merits in bringing the economies back on track (The Economist, 2010).

In India, the Report sustained, the collapse of Lehman Brothers caused a widespread shift in privately owned bank deposits towards State-owned banks, which were perceived to be safer. Saving accounts, as well as loan books, also faced a notable shrink. In fact, after losing market share for a long period, State-owned banks saw their share of total deposits and loans rise from 73% to 77% between June 2007 and December 2009.

[2] http://www.econ.kuleuven.be/ew/academic/intecon/degrauwe/

As recognized by *The Economist*, "attitudes towards the State-controlled banks have changed for good" (The Economist, 2010), mostly due to their role as credit suppliers during the crisis, when all their private counterparts where constraining their loan portfolios. Indian banks were expanding their loan books at annual rate of 25% before the crisis. After the financial collapse such divergence grew, with nationalized banks keeping credit growing fairly steadily and private banks maintaining their "crisis levels". The foreign banks, as noted, went from expansion to a sharp decline, both in deposits and loans.

A similar reappraisal of whether State-owned banks should exist and have a role in the economy has occurred in Brazil. The total share of Brazilian public banks stands at 42%, which reflects an increase from its previous levels – one third owing to new acquisitions and two thirds to rise in lending activity compared with private banks (Economist, 2010).

The common view of a mixed financial system is synthesized by the chief financial officer of Bradesco, quoted in the Special Report: "Domingos Abreu, (…) says that the State banks 'had a very important role… in the government's anticyclical policies', adding that in a downturn 'it makes a difference' to have a mixture of State, private and foreign banks (…)" (The Economist, 2010).

Similar experiences could be traced in China or even in Russia, where different models of State banks might have made a difference in the growth process. However, what is stressed in this *Report* is not so much the impact of State banks on growth in emerging markets, but its countercyclical role during a crisis.

A few more authors shared similar arguments. In the *Financial Times*, Paul de Grauwe[3] writes in favour of temporary full State ownership as the only solution to the financial crisis.

His argument lies on the credit transformation model performed by banks. The essence of what banks do is to create credit or liquidity and they do this by transforming short-term assets (borrowing short) into long term ones (lending long). Therefore, banks become less liquid transferring liquidity through credit into non-banking sector. This coordination mechanism works only if there is confidence in and within the banks, so they lend each other. If banks don't trust each other anymore and confidence evaporates from the markets, the banking sector will find face difficulties in borrowing short from other banks, and will lend equally short. Banks' greater preference for liquidity will then cause a massive destruction of credit in the economy and non-banking sector will not be able to borrow enough funds to run their business normally.

[3] http://www.econ.kuleuven.be/ew/academic/intecon/degrauwe/

According to De Grauwe, this liquidity shortfall results from a co-ordination failure: "bank A does not want to lend to bank B, not necessarily because it fears insolvency of bank B but because it fears other banks will not lend to bank B, thereby creating insolvency of bank B out of the blue" (De Grauwe, 2008). The only way to overcome this bad equilibrium is if government takes over private banks and order nationalized ones to trust each other and, therefore, to lend each other. This temporary intervention (when coordination goal is achieved governments can privatize the banking system again) is then the only way to reactivate the normal flow of credit and avoid that a liquidity crisis evolves into a generalized solvency problem.

A different approach is undertaken by Franklin Allen in his contributions to the AAF virtual debate[4]. Instead of claiming for temporary State ownership, Allen writes in favour of a mixed system, with most banks being private except for one or two government-owned commercial banks. This model could bring several advantages during normal times but especially during financial crisis. In "normal" times these banks should compete with private banks to ensure their cost structure and efficiency are competitive and corruption avoided. According to Allen, State banks should also make it easier for the government to "avoid bailouts and allow private banks to fail, which is an issue that recurs with every financial crisis". (Allen, 2010).

This should not mean however that the recently reborn debate is already dead and that the new consensus that holds stands for a mixed financial system. In the same debate promoted by AAF, Charles Calomiris, Professor of Financial Institutions at Columbia University, gives a negative answer to the initial question: "*Can State-owned banks play an important role in promoting financial stability and access?"*

Calomiris clearly stands in this debate for the pre-crisis consensus that State-owned banks are a "poisonous" influence on financial systems. Moreover, he says: "It is remarkable to me that the recent economic crisis has spurred a renewed interest in State-controlled banks. From my perspective, the crisis has only reconfirmed the extreme damage that politically motivated lending can inflict".

Calorimis, as many other economists, attributes the causes of the financial crisis to a prevailing interference from political forces in the financial systems. After all, most institutions first involved in the subprime crisis where mainly government controlled. The U.S Fannie Mae and Freddie Mac accounted for more than half of the funding of subprime and State *Cajas* in Spain were partially responsible for the real-estate boom that ended in the

[4] http://blogs.worldbank.org/allaboutfinance/the-aaf-virtual-debates-franklin-allen-on-state-owned-banks

collapse. In both cases political motivations drove these banks to ignore all economic standards and risk evaluation in order to meet political interests in the allocation of funds.

Therefore, public control over banks "rather than promoting sustainable growth, it would slow growth over the medium or long run, as funds would be channelled to low-productivity users. A move to support State-controlled banks would not only lead to waste and slow growth, it would raise systemic risk (…), promote corruption of our government officials and institutions, and lead to fiscal losses that could threaten the solvency of government and lead to high inflation[5]."

In another recent article in Vox[6], Andrianova and colleagues, argue that there "should be no rush to privatize government owned banks". Pressures to privatize banks nationalized as a result of the economic global crisis, they write, are mounting due to the possibility of future State revenues, but mostly because of the widespread "distaste for government ownership of any business". In a rather different position from that defended by Calomiris, their research points to the negative consequences of privatizing these nationalized banks too soon. If financial regulation is still ineffective and confidence is not yet restored in the economy, depositors will still prefer State-owned banks. If these banks are to be privatized prematurely, funds will flow towards foreign currencies or real assets, compromising banks' deposits as well as their capacity to provide credit to the non-banking sector. And "this can not only undermine the ability of the banking system to finance economic growth, but it also trigger bank runs if depositor's confidence in regulation remains low".

It is not the main point of this section to engage in an otherwise extensive description of all the arguments behind the initial question posed by Demirguç-Kunt. That will be instead the role of the next two sections, where an attempt will be made to look at the main theories and literature supporting both old and new debates on State intervention and, particularly, on public banks.

These recent articles published in distinguished newspapers and blogs show that, if anything, this debate is far from eroded by the old consensus. More than ever, the hand of the State assumes its visible character in the financial markets worldwide and opinions diverge on its beneficial contribution to economic recovery.

In Portugal, just as in many other countries in Europe and in the U.S, the government was forced to a major intervention in the banking system after the financial turmoil. Public

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5 http://blogs.worldbank.org/allaboutfinance/the-aaf-virtual-debates-charles-calomiris-on-state-owned-banks

6 Svetlana Andrianova, Panicos Demtriades and Anja Shortland.
http://www.voxeu.org/index.php?q=node/4647

intervention materialized in the form of a bank nationalization, public loans to financial institutions, and public guarantees to private emissions of commercial paper. On the "real" side of the economy, government was forced to implement a set of programs aiming to offset the sudden reduction in the supply of private credit arising from the financial system.

Much debate has taken place on whether these were or not the right policies to implement, if they where or not enough, or on whether they were efficient in dealing with rising unemployment and collapsing output growth. I do not intend to enter these debates in the present context.

The purpose of this research is, instead, to answer a question similar to the one which launch the AAF blog' debate, i.e.: beginning: "Can State-owned banks play an important counter-cyclical role in periods of financial and economic crisis?"

In Portugal most public share of the financial sector disappeared during the privatization waves of the eighties and the nineties. Nevertheless, one major bank remained in government hands – Caixa Geral de Depósitos. Being one hundred percent controlled by the State, Caixa basically acts as any other private bank in Portugal, competing in all the same major segments of banking market. However, faced with the economic crisis, one could expect that private banks would constrain their credit supply to the non-banking sector leaving an open space for public bank intervention. Despite the fact that this is a rather straightforward hypothesis it has not been proven that Caixa played (is playing) such a role during the crisis in Portugal.

Therefore, and once we consider the Portuguese situation, the same question can be reformulated as follows: "Did *Caixa Geral de Depósitos* play an important counter-cyclical role during the last financial crisis, started in 2007?" This constitutes the central topic of this dissertation.

The text is divided in three major parts. The first part discusses the role of State intervention in financial markets according to three perspectives and summarizes most empirical work and related literature on the subject; the second part tries to look at the role performed by the state bank in the Portuguese economic and financial situation. Third part concludes.

2. Theoretical Discussion

2.1. Introduction

It is clear by now how controversial the debate on whether public banks should exist. Most of the literature has historically been focused on the connection between State-owned banks, economic growth, and financial development of the so called "less-developed countries". However, the current financial crisis shed some light into the role of State-owned banks both as a financial stabilizer in periods of financial distress and as an important instrument to smooth cyclical behaviour in times of economic recession.

Quoting Jennifer Hermann (2009), all State-owned Banks are "pragmatic and idiosyncratic institutions, which role can be defined by the necessities and limitations of this process [economic development and growth], indentified, in every historical period, by the governments" (Hermann 2009, p. 9). One can then sustain that the specific intervention of any Public Bank, heterogeneous by nature, will always depend on the political, economic and institutional context of its country and may serve different goals. There is, however, according to Hermann, a similar feature among these institutions, since the common initial explanation for their existence relies on the existence of incomplete and underdeveloped financial markets.

The connection between weak or incomplete financial markets and the existence of public banks has been subject of two main interpretations. These differ essentially on the direction of the causality between the activity of State-owned banks and financial development.

The first approach, prevailing after the collapse of the Bretton Woods system, is based on the Shaw-McKinnon[7] model of "financial repression", which will be discussed in greater detail below. In essence, this approach sees State intervention in financial markets as the cause of their failures and underdevelopment (especially in developing countries). Its main argument is that the control by the State of both market interest rates and the allocation of credit to the economy will lead to an inefficient allocation of resources and a suboptimal level of private savings, leading to poor financial development and weak economic growth.

The second view, of Keynesian inspiration, sees a different causality between State intervention and economic development. Because markets are incomplete and financial systems inefficient, the State should intervene in order to guarantee the desired allocation of resources and level of financial development.

[7] See Shaw (1973) and R Mckinnon (1973).

Even though completely different in their theoretical implications about the role and scope of State intervention within the financial systems, one can find the same implicit idea in both visions: the rationale for the existence of a public bank vanishes as both financial and capital markets develop and become able to overcome their "failures". This idea came into reality in many developing and developed countries with the privatization and liberalization processes in practise during the 90's. However, neither of those approaches is able to explain the existence of State-owned banks in many developing countries, which are nowadays considered "financial developed" economies, such as Brazil or India; not even, and mainly, in "highly" developed countries, like Germany, Japan or Canada.

Although this can still be considered a controversial position, it seems that the way both economists and institutional actors (such as the IMF or the World Bank) see the need for State intervention and even the presence of public banks in the financial systems may have evolved since the 90's. Hence, it is often possible to find literature supporting and/or recognizing the relevant role of State intervention in the successful development of the emerging markets such as China or Brazil. Moreover, the need for government intervention during the recent financial crisis has not raised many doubts. Also, even if the type of intervention is undoubtedly a matter of major controversy, it opened the academic and public space for a new debate on public banks.

2.2. Different approaches to the role of State in financial markets: three perspectives

Discussions around the existence of State-owned banks cannot be, and rarely are, independent from a broader question concerning the State intervention in the financial system in general, or specifically in the banking sector.

Here, once again, Hermann (2009) identifies two major consensuses in the debate. The first addresses a certain degree of general acknowledgment that well functioning financial systems are crucial to foster economic growth and development[8]. The second relies on the recognition that banks are peculiar institutions, mainly due to their maturity transformation role (funding illiquid loans through short term liabilities), that open the possibility of massive bank runs and widespread bank failures. However, as in other private types of business, the possibility of failure (bankruptcy) does not, by itself, justify (according to the "common" agreement) State

[8] This is, of course, different from admitting that State-owned banks can contribute to this process. More on this specific issue can be found above, in the empirical review section.

intervention unless bank failures are associated with large externalities, which are able to affect the overall economic system. Indeed, because banks are the main source of liquidity to the economy and the transmission belt for monetary policy, there is a public-good nature in their usual activity (Yeyati, Micco and Panizza, 2007).

However, even if the acceptance of the characteristics presented above, inherent to the banking activity, allows for a minimum consensus about a certain degree of State intervention in the financial markets, "the specific nature of this intervention and, in particular, the dilemma between regulation and contracting of private agents, and direct State ownership, is less likely to generate consensus" (Yeyati, Micco and Paniza, 2007, pp.10). Whether this intervention should simply merely a minimum level of market regulation and supervision or, in contrast, it should include a more direct control through public ownership of financial institutions, is a rather controversial issue in economic literature.

One can find at least three main points of view in the economic theory concerning State intervention in the financial systems: the first, which became the conventional way to look at this, relates to the financial liberalization theory, grounded in the efficient-market hypothesis developed by Fama's [9] (1965) and the Gurley and Shaw's (1955) models of financial intermediaries, together with Shaw's (1973) and McKinnon's (1973) hypotheses of financial repression. The second approach, also named the "new Keynesian perspective", results from the fact that empirical evidence does not support strong forms of the efficiency hypothesis (among other theoretical arguments which will be discussed later), and focuses on the existence of market failures that prevent markets from achieving their own equilibrium position and justify a certain level of market intervention. The third approach, known as the post-Keynesian view, focuses on the concept of *uncertainty* as well as on the concept of *liquidity-preference*, as main factors determining why financial markets cannot be efficient unless there is a systematic and strategic governmental action.

It is by now rather obvious that each of these three different approaches, that we will now analyse carefully, addresses in a completely different way the possibility and pertinence of a public bank intervention. The main purpose of this section is to discuss the role of public banks during a period of financial (and economic) crises in a so called "developed country", in light of those three main perspectives: the neoclassical model of Shaw-Mckinnon and the Keynesian perspective through the new and the post Keynesian theories.

[9] See Fama (1965,1970).

2.2.1. The *Financial Repression* and the *Efficient Market Hypothesis*

According to Gurley and Shaw's model (1955), financial markets are the intermediaries between the different sources of funds and their respective demand. They behave in such a way that funds will always flow from units with a surplus, or savers, towards those units with deficits or, putting it differently, units for which the levels of investment and consumption exceed saving. The interest rate should then result from the interception between demand and supply for financial funds within the financial markets, and guarantee that resources are always allocated in the most efficient way.

This model is strongly related to the Shaw-Mckinnon model, which states that interest rates artificially maintained (by government intervention) below their market clearing levels will not suffice as an incentive for individuals to save, draining the funds from the markets and, therefore, from investment and consumption. A raise in market interest rates will lead to an inflow of deposits into commercial banks, increasing their lending capacity.

In general, the financial repression hypothesis states that any public intervention leading to a deviation from market clearing interest rates level will lead to a number of distortions in the financial markets.

The Shaw-Mckinnon model is, therefore, based on three basic theoretical prepositions (Hermann, 2009) that are common to many other neoclassic models. Firstly, it assumes that economic growth is based upon the capacity to finance investment, and it also assumes that the total amount of available funds that can be channelled to investment match the aggregate level of savings; secondly, it argues that saving rates depend positively on real interest rates; finally, it assumes that free financial markets will always lead interest rates, aggregate savings and growth rates to their optimal levels.

Both the first and the second assumptions arise directly from the neoclassical theory of interest rates and will be further developed in order to clarify how neoclassical models see the role of banking institutions within the economic system. The third proposition largely reflects the *Efficient Market Hypothesis* and, hence, can be used to illustrate how this approach describes basic features of the financial markets functioning.

Most neoclassical models are based on the central argument that savings are a necessary pre-condition to investment spending. This identity between savings and investment is reflected through the equilibrium in funds market (between supply and demand for credit funds), determined by the level of interest rate (which varies according to the general desire to invest or save). Moreover, in order to assure that savings always meet investment levels, at any

given moment, neoclassical approach assumes neutrality of money, which means that long-term equilibrium positions in the economy always depend only on real variables.

This idea of money as a neutral variable is central in economic theory, and represents one of the main "disagreements" between neoclassical and Keynesian approaches. It is, therefore worth to focus on this concept of "money neutrality".

The neutrality of money is one the main axioms of classic economic theory. In fact, in the words of Blanchard, all relevant models in the study of macroeconomics "impose the long-run neutrality of money as a maintained assumption. This is very much a matter of faith, based on theoretical considerations rather than on empirical evidence" (in Davidson, 1996, p.15).

Assuming money as a neutral variable in the economy is to say that money is merely an instrument used as an intermediary in the exchange of goods. This is true once we assume that another classic axiom – Say's Law[10] – holds in every economic system. This economic law establishes that every "supply creates its own demand".

In short, the argument behind Say's Law is the following: if all individuals are rational utility maximizers, they will spend all their income from work in consuming new goods and services, creating the demand for these goods, generated by other workers who also spend their income in buying goods in services in the market. Therefore, the act of production generates the income to sustain demand for all the supply in the economy. A direct consequence of such law is that free markets inevitably generate full employment. Thus, "no inherent obstacle in the economic system exists to prevent output and employment from being at the maximum flow possible given the size of population and the technology available to producers". (Davidson, 1996, p.14).

Therefore, if Say's Law prevails, changes in the quantity of money available in the economy cannot lead to an increase in production, only in the demand for the existing goods, increasing the market prices – money is a neutral variable in the economy and does not affect output or employment.

Once one assumes interest rates as the "natural" rate that clears the funds market and equals the amount of saving and investment, and money as a neutral variable in the economy, banks have no influence either on interest rates or on the level of savings in the economy. Banking institutions are seen as neutral or "passive" intermediaries, whose function is the transference of real resources from agents with a surplus to agents with deficits.

[10] Originally, this classic law refers to Jean Baptiste Say who, in 1803, claimed that "products always exchange for products". In 1808, the economist James Mill translated Say's idea in to "supply creates its own demand".

Therefore, because banks lack the capacity to generate money and purchase power, they play a very insignificant role in determining aggregate output and employment levels in the economy. The optimum levels in both these variables, as well as the "natural" interest rate, will be achieved through the correct (efficient) free financial markets way of functioning.

Essentially the efficient financial markets theoretical framework results from the application to financial markets of the main concepts and behavioural hypotheses used in neoclassical approach to regular goods markets. Any system will be in an efficient equilibrium position, or in a *Pareto optimum*, when there is no alternative allocation of resources that will increase some agent's well being without decreasing others'. Put differently, we have *a Pareto optimum* situation when a certain combination of prices and quantities is able to guarantee a relative maximum in the market utility function. The advocates of such theory argue that, under certain conditions, it can be showed that a system of free markets will lead to Pareto efficient outcomes.

These conditions require the existence of perfect information within the market, absent from any kind of transaction costs[11] and equally available to all individuals. It also requires that all individuals have absolute consciousness of all the market opportunities and behave in a rational way, which means that all agents are able to rationally take the optimal decision under perfect information. Finally, Pareto efficient outcomes depend on the complete flexibility of price and quantities within the market. As stated by Stiglitz (1993, p.23):

> *"The standard theories of the efficiency of competitive markets are based on the premise that there is perfect information or, more precisely, that the information held by individuals or firms is not affected by what they observe in the market and cannot be altered by any action they can undertake, including acquiring more information."*

In this view, in the financial markets, the scarce resource limiting a "permanent" state of equilibrium in the system is *information*, instead of any other factor of production. Thus, the optimal allocation of available information is the equivalent of the perfect resource allocation in goods market.

The assumption that all individual investors make the best possible use of the available information in order to take positions in financial assets leads necessarily to the conclusion that market prices, resulting from the combination of all investor's decisions, automatically

[11] Transaction costs are costs incurred in making an economic exchange or the cost of participating in a market. These costs might include: search and information costs, bargaining costs or policing and enforcement costs.

reflect all the relevant information in the market. Thus, "the accepted view was that when information arises, the news spread very quickly and is incorporated into the prices of securities without delay" (Makiel, 2003, p.3).

Although the original efficient financial markets hypothesis has been criticized, even by some of its own supporters, its most important features and assumptions had a crucial influence, not only in the design of financial systems' regulatory framework, but also in the way they shaped the relationship between the State and the financial markets.

Hermann (2003) identifies three major implications derived from the efficient market hypothesis in order to justify financial policy arising from the Shaw-McKinnon model. Firstly, in a free market, with absolute freedom of choice and price flexibility, one should expect market interest rate to be naturally equal to the market clearing interest rate. Therefore, any kind of public intervention in financial markets would deviate rates from its optimum level.

Secondly, because the price system is able to perfectly incorporate all the macro and micro economic fundamentals of financial assets, any sort of public intervention to increase or lower rates should not be directed to credit policy or to the definition of interest ceilings. It should instead contribute to the decrease of information risks or frictions affecting the macroeconomic fundamentals.

Finally, Hermann notices that in the Shaw-McKinnon model, rates of return are formed according to the same mechanism, independently of their maturity [12]. As a logical consequence the best way to assure long-term finance is to let the market free to assimilate assets' risk.

The overall implication of the efficient financial markets hypothesis is that, in general, State intervention in financial markets or, in other words, any policy of "financial repression", will operate as a source of distortions and, therefore, will have a deleterious effect on financial market outcomes. In free and well functioning markets, prices will always reflect all the available information. This means that prices in such markets are always at market clearing levels, or equilibrium levels. If interest rates or exchange rates remain at market clearing levels, this means that savings and investment will necessarily be allocated in the most efficient way – wherever they can maximize the expected returns. Any kind of market intervention that imposes limits on the information flow or price flexibility will therefore disrupt this capacity of flexible prices to guarantee an efficient allocation of resources.

[12] Because it assumes that the prices already take in consideration the maturity risk.

As noted before, many financial economists have began to emphasize the role of psychological and behavioural elements in the determination of asset prices and, therefore, questioning its purely "rational" determination. In a similar way, the idea that financial markets are permeable, to some extent, to certain anomalies gained some importance (although these are usually seen as a result of State intervention and regulation of financial activity).

These new considerations led to some further developments in the theories of financial markets but often in the direction that all sources of frictions within the markets can be solved by fostering financial innovation in a way that allows agents to distribute all the risk associated to financial activity[13].

When faced with the overwhelming evidence of asset mispricing in recent market history episodes, such as the internet bubble of the late 1990s or the real estate bubble that originated the subprime crisis in 2007, it may seem obvious that market prices could not have been set by rational investors and that other considerations, such as psychological factors, must have played some role. However, supporters of efficient markets hypothesis do not find in the recent financial crisis, which started with the subprime bubble, or in the Internet bubble of the late 1990s, a reason to question the fundamental features of *Efficient Market Hypothesis*. In this context, two main perspectives arise. On one hand, there are economists and financial market professionals that attribute these "market failures" to the still visible hand of the State in the markets, namely to persistent and pervasive regulations and restrictions to financial activity. On the other hand, one can find a rather "relaxed" approach that admits failures as the normal price to pay for otherwise free well-functioning markets. In fact, "as long as stock markets exist, the collective judgment of investors will sometimes make mistakes. Undoubtedly, pricing irregularities are predictable patterns in stock returns can appear over time and even persist for short periods". But "fortunately, "bubble" periods are the exception rather than the rule and acceptance of such occasional mistakes is the necessary price of a flexible market system that usually does a very effective job of allocating capital to its most productive uses" (Malkiel, 2003, p.p. 29, 33).

These theoretical perspectives on how economic policy should respond in a period of financial crisis leave aside any possibility of State intervention in the normal functioning of the financial markets.

[13] And this is, indeed, the main argument behind securitization and the claim for less strict regulation in financial markets.

In the context of underdeveloped capital markets, with low levels of investor protection and inexistent organized markets, some interventions can be admitted in order to overcome these institutional flaws. However, such intervention should aim at the construction of a "free market", where information circulates perfectly without restrictions and prices are completely flexible. In the case of "developed" financial systems, where these conditions are already met, State should only guarantee the supervision of the well-functioning market supporting institutions. A State-owned bank would not only reinforce supervision but mostly "interfere" with the free market functioning. Therefore, even if some kind of intervention is admitted in an extreme situation, that could include supervision but not state State-owned financial institutions.

2.2.2. The new-Keynesian perspective: *"Market Failures" hypothesis*

The market failure approach rejects the idea of efficient and complete financial markets, arguing that financial markets are different from other markets mostly because the main commodity traded is information. The main claim is that financial markets can be (and are indeed) inefficient, owing to persistent and endogenous market failures. This means that there is space for several forms of government intervention that will improve the situation.

Stiglitz argues that "the fundamental theorems of welfare economics, which assert that every competitive equilibrium is Pareto efficient, provide no guidance with respect to the question of whether financial markets which are essentially concerned with production, processing, dissemination, and utilization of information, are efficient. On the contrary, economies with imperfect information or incomplete markets are, in general, not constrained Pareto efficient (Stiglitz, 1994, p.23).

Therefore, one can say that the very nature of information occupies a central role when discussing the way market failures affect financial systems. Information, due to its public good nature, is different from other commodities used in other markets. Moreover, the supply of information in financial markets tends to be inferior to its desired level, just as it happens with any other public good.

Information possesses both attributes of public goods: non-excludability and non-rivalry. The first one exists because it is difficult to prevent someone from extracting benefits from information acquired by others. Therefore, returns of information are difficult to be appropriate only by the "buyer". This means that acquiring information involves necessarily the existence of externalities, both positive and negative, as we will see further. Non-rivalry

exists when the consumption of a certain good by a consumer does not prevent simultaneous consumption by other consumers. Therefore, the marginal cost of "using" information is equal to zero and expenditures to acquire information are often seen as "fixed costs" (costs are not a positive function of the amount of lending), which function as barriers to entry. This characteristic will imply that markets that are information intensive will most likely be imperfect competitive markets: "there may, in fact, be many firms engaged in similar activities, but it will not pay firms to obtain exactly the same information – say, concerning a particular borrower." (Stiglitz, 1994, p.24).

In the presence of these particularly endemic market failures – transaction costs, arising from expensive information trading, externalities, and imperfect competition – the necessary conditions for market efficiency do not hold and, therefore, prices do not reflect micro and macroeconomic fundamentals. This means that resources are not allocated in the best possible way, allowing, for example, for speculative bubbles to propagate, and financial crisis might arise. In this case, "there are government interventions that can take into account the costs of information and of establishing markets that can make all individuals better off" (ibid, p.29).

One of the main implications of the market failures hypothesis relates to the standard neoclassical assumption of market-clearing prices. As stated before, in credit markets, with imperfect information, it is not likely that the price will always reflect the risk associated with each financial operation.

In fact, higher interest rates do not always correspond to higher levels of expected return. Indeed, the opposite might happen, since interest rates usually increase with the borrower's risk of default. Hence, the capacity of prices to incorporate risk in credit markets has a rather limited use as an efficient mechanism to protect lenders: as interest rates rise, in response to higher expected risks, the "quality" of the borrowers attracted by the price of credit will decrease, leading to a higher aggregate risk supported by the banking institution.

A straightforward consequence of this process is that the quantity and the price of credit in financial markets are not the result of matching demand marginal benefits and supply marginal cost of financial funds. Instead, interest rates and the total amount of credit in financial markets are determined solely by lenders, following a "maximum acceptable risk" criterion that will maximize expected return. In Stiglitz words, "With imperfect information, markets may not clear. In credit markets those who are willing to pay the most may not be those for whom the expected return to the lender is the highest; the expected return may actually decrease as the interest rate increases because the probability of default may rise. As

a result, there may be credit rationing: even though there is an excess demand for credit, lenders may not increase the interest rate" [14] (Stiglitz 1994, p.30).

Actually, what Stiglitz is making clear is that excess demand in credit markets results from the normal functioning of markets and agent's rational behaviour. I.e., there are inefficiencies and failures that are intrinsic to financial activity and one cannot expect that free markets will be effective when dealing with the problem (Hermann, 2003). Therefore, because of the strong connection between credit and real activity, inefficiencies in credit markets in terms of determining prices and quantities will have a major impact in the way resources are allocated in the economic system.

Moreover, the fact that banks are willing to increase their credit supply at lower interest rates in periods of general optimism and low risk perception, moving in the opposite direction in periods of generalized risk aversion and economic distress confers to banking activity a systemic pro cyclical role in financial markets with severe consequences as far as the financial and economic stability is concerned.

Macroeconomic consequences of financial institutions regular activity, such as their capacity to aggravate business cycles, are a major example of an externality arising from persistent market failures in the banking system.

There are both positive and negative externalities associated to financial markets. On one hand, it is consensual that financial systems' sound activity fosters economic development by increasing investment levels and financing strategic sectors such as innovation or infra structures – a positive externality arising from banks' activity. On the other hand, banks do not always internalise positive externalities that result from their activity. In fact, they often fail to finance the most beneficial projects, both in economic and social terms, because of their mispricing problem, that leads to an inefficient allocation of resources, but also because they are not able to internalize social benefits arising from a specific activity. Hence, once we include social returns or aggregate benefits to the society, projects with the highest expected return to the lender might not be the ones with the highest expected total return. I.e., banks do not always internalize the positive externalities arising from their activity.

But financial markets in general, and banking institutions in particular, are responsible for several negative externalities as well. The way financial activity generates price bubbles, arising from the excessive supply of funds in moments of optimism, or sudden credit crises,

[14] For more on Credit Rationing model see: Stiglitz and Wiess (1981) and Greenwald and Stiglitz (1993). For a critical analysis of this model, from a post-Keynesian perspective, see Hermann (2001).

reducing credit supply under demand in moments of general distress, may have severe macroeconomic consequences.

Actually, according to Stiglitz, "the macroeconomic consequences of disruptions of the financial system provide one of the more important rationales for government intervention" (Stiglitz, 1994, p.p.26). Bank bankruptcy or even insolvency can have serious repercussions on particular borrowers that, when faced with disruptions in credit flows, may have to restrain their economic activities, affecting both their customers and suppliers. This "chain effect" may trigger a severe economic crisis, such as the current financial crisis, started in 2007.

Even when the level of financial distress is not considered to be "systemic" financial panic, it may contribute to increase the general perception of risk, leading depositors to withdraw their funds from financial institutions and worsening banks real situation. Recently, we have witnessed how a financial imbalance in a specific market (subprime markets, specifically, arising from a mispricing problem in real estate assets) can have a strong contagious effect, contaminating the rest of the financial system and undermining the confidence levels within financial institutions. Without confidence, loans in secondary markets froze, causing a liquidity crisis and a decrease in lending activity in general. "Normal" practises in the financial markets, such as securitization and leverage, contributed to foster this "panic" situation.

These externalities are not usually taken into account by private banks when taking decisions. "Thus, the public interest in the solvency of financial institutions may exceed the private interests of the owners and managers" of private banks (Stiglitz, 1994, p.27).

Generally, the advocates of the "new Keynesian" perspective see a role for the State in financial markets, motivated by pervasive market failures, in economies with imperfect information and incomplete markets. The extent to which governments should intervene in financial markets and the specific way to design such intervention is not straightforward and will vary according to the political and institutional context.

Therefore, State intervention is commonly discussed along two different taxonomies: one focuses on actions, and the other focuses on aims. Government actions towards financial markets may include several levels of financial regulation or a direct intervention in capital markets, for example, by providing direct loans,.

Nevertheless, government activities concerning financial markets can be categorized by their aims as well. Six broad categories of social objectives that the State should promote are: *consumer protection, ensuring bank solvency, improving macroeconomic stability, ensuring competition, stimulating growth* and *improving resource allocation.*

State intervention through direct ownership of financial institutions has been defended mostly in developing countries, as a way to fill several gaps in financial markets, especially in private credit provision. Typically, the general idea behind this type of intervention, in the New-Keynesian view, is to reduce the level of direct State propriety as financial markets become more "developed".

However, market failure theory does not exclude the possibility or even desirability of having a direct State intervention in periods of great financial crisis, even in "developed countries", like Portugal.

2.2.3. The Post-Keynesian perspective: *liquidity-preference* and *financial instability hypothesis*

The Post Keynesian perspective has several elements that are similar to the New Keynesian approach. The main one is the fact that both see markets as having intrinsic characteristics that sometimes make inefficiencies and failures a natural outcome in absence of any type of State intervention. Notwithstanding, it is possible to draw a reasonable division line between both approaches based on two main aspects.

Firstly, Post-Keynesian literature is generally more critical of the efficient market hypothesis, which is crucial to the neoclassical approach to financial markets. Economic phenomena, such as financial instability, economic activity and unemployment are not exceptions to the *Efficient Market Hypothesis*, as the New Keynesians tend to see it. On the contrary, according to Minsky, one of the most influential authors in that stream of thought, "both financial crisis and serious fluctuations of output and employment are anomalies: the [neoclassical] theory offers no explanation of this phenomena" (Minsky, 1982, p. 60)

Secondly, the market failures (or New Keynesian) approach is usually much more "optimistic" about the possibility of having a functional market behaviour in absence of government intervention. In contradiction, generally, the Post Keynesians find it rather difficult that markets can contribute to foster growth and guarantee macroeconomic stability without any "external" intervention. In fact, as defended by several post Keynesian authors, because instability is determined by mechanisms within the system, and not by outside shocks, "there are policy measures of regulation etc which may reduce the frequency of financial crisis and other policy measures (such as fiscal policy with built-in automatic stabilizers and with and ability for discretionary fiscal policy to respond effectively) which may mitigate the macroeconomic effects of a financial crisis. But the forces which make for

financial instability and crisis will largely remain, albeit that they appear in different guises" (Sawyer, 2010, p.4).

The main concept behind the idea that financial crisis are inevitable in capitalist economies, mainly developed by Minsky's (2008, 1996), is Keynes's notion of "*uncertainty*". This is a central concept in Keynesian theory and, therefore, it is worth to explore a little further.

Keynes's notion of *uncertainty* implies that people may be ignorant about the later consequences of their current decisions. The decision makers know that during the lapse of time between the moment of choice and the date of payoff, unpredictable events might occur. And these are not possible to predict or compute, regardless of the agents' capacity to perform complex conditional probabilities given the available information. In Keynes' words, there "was no scientific basis on which to perform any capable probability whatever. We simply do not know" (in Davidson, 1996, p. 88) And this concept should not be confused with "*risk*" .

However, "the concept of quantifiable, statistical risk has been substituted for Keynes's uncertainty notion. (…) Risk can, by probability statements, be reduced to an actuarial certainty, uncertainty cannot. Classical theorists fail to detect this crucial difference" (Davidson, 1996, p.87).

Notions of risk and uncertainty are closely related to another debate, already mentioned above, concerning *expectations*. Different positions on "uncertainty" and "risk", as defined above, will determine the way economists look at the formation of different expectations in an economic environment. Once we admit an *objective probability environment,* one can expect that agents are able to look at past relative frequencies of outcomes to calculate a statistical probability analysis of future outcomes. This is only possible because the decision makers believe in a real objective probability distribution that will determine past, current and future market outcomes. This conviction is the source of the Neoclassical Rational Expectations Hypothesis (REH), mentioned above. According to the REH, rational and full-informed decision makers are capable to calculate the exact probability of future outcomes based on past information. An approach related to the REH assumes that individuals follow an adaptive process when forming their expectations. Assuming this *subjective probability environment,* rational agents are not required to compute all the possible outcomes of a certain decision as long as they are capable to array all possible future outcomes in terms of subjective probabilities. In both situations, agents' decisions are based on the different levels of *risk* associated to each different future event[15]. On the other hand, if one assumes an *uncertainty*

[15] Thomas Sargent on Rational Expectations: "The influences between expectations and outcomes flow both ways. In forming their expectations, people try to forecast what will actually occur. They have

environment à la Keynes, the decision maker *knows* that future outcomes cannot be predicted. There will always remain a certain degree of irreducible uncertainty.

In short, *uncertainty* implies that past data cannot be used as a guide for the future. In statistical terms, this means that "economic data are not necessarily generated by a stochastic ergodic process" (Davidson, 1996, p.17). *Uncertainty* was, in Keynesian theory, the reason why economic agents wish to hold money or liquidity in their hands.

Because financial markets have to deal not only with risk but also with *uncertainty*, instability will come out as a natural consequence of its apparently stable functioning, and an external intervention by the government is the only possible way to create institutional "boundaries" (or ceilings and floors, using Minsky's words) to uncertainty and, therefore, to mitigate instability.

As a consequence, the Post Keynesian approach to financial markets is grounded in two main aspects, highly relevant to this discussion on public banks activity. The first refers precisely to the crucial function, performed by banks, in determining financing conditions within the economic system and, as a consequence, the level of economic activity.

The other relevant element in Post Keynesian approach is, as previously mentioned, the idea of *uncertainty*. There is a level of irreducible uncertainty in financial markets which influences the agent's decision process in a determinant way, and this is the reason behind Keynes' theory of *liquidity-preference*. According to this perspective, in moments of generalized "pessimism" and uncertainty in business activity, agents tend to prefer the safety and flexibility offered by liquid assets, as opposed to riskier, and more illiquid holdings. Banking institutions, as any other enterprise dealing with uncertain future conditions, act considering its own liquidity-preference.

Therefore, because they play such a crucial role in determining the dynamics of economic activity, and its own behaviour is a function of uncertainty perception in financial markets, banks are the basic/fundamental driving force among these markets and the "real economy". We will now develop both arguments.

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strong incentives to use forecasting rules that work well because higher "profits" accrue to someone who acts on the basis of better forecasts, whether that someone is a trader in the stock market or someone considering the purchase of a new car. And when people have to forecast a particular price over and over again, they tend to adjust their forecasting rules to eliminate avoidable errors. Thus, there is continual feedback from past outcomes to current expectations. Translation: in recurrent situations the way the future unfolds from the past tends to be stable, and people adjust their forecasts to conform to this stable pattern." In Library of Economics and Liberty. (http://www.econlib.org/library/Enc/RationalExpectations.html)

In the Keynes/Minsky and, in general, Post-Keynesians perspective, banks are not mere intermediaries or facilitators between agents willing to lend a "surplus" and agents in need to finance deficits. Contrary to the neoclassical approach, in the Post Keynesian view, money is not a "neutral" link between transactions.

> *"An economy which uses money but uses it merely as a neutral link between transactions in real things and real assets and does not allow it to enter into motives or decisions, might be called – for want of a better name – a real exchange economy. The Theory which I desiderate would deal, in contradistinction to this, with an economy in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last. And it is this which we ought to mean when we speak of a monetary economy."* (Keynes, 1935, p.409)

Banks are capable of creating credit, despite the pre-existent amount of deposits, and, hence, they can generate "credit money". Banking institutions have then the power to establish the total volume of credit in the economy as well as the criteria assuring the access to it[16]. If we take into account that banking lending is responsible for a major part of total spending within the economies, then its availability will certainly affect real variables such as aggregate employment or output[17].

Therefore, from a macroeconomic perspective, aggregate supply of financing funds is determined not by the preferences of individual savers but mainly by banks willingness to create credit deposits.

Therefore, "banks hold the key position in the transition from a lower to a higher scale of activity. If they refuse to relax, the growing congestion of the short-term loan market or of the new issue market, as the case may be, will inhibit the improvement, no matter how thrifty the public purpose to be out of their future incomes." (Keynes, 1973, p. 222)

[16] The general idea is that banks' ability to generate money supply is not directly limited by the level of customers' deposits: money supply is generated through credit, or loans, which do not depend solely on banks' deposits. Banks' individual capacity to concede loans relies on other sources of financial resources (liabilities), such as funds from the international monetary markets or from the Central Banks. Their capacity to make use of such resources in order to concede credit (leveraging capacity) will depend on the amount of total reserves and own capital they hold.

[17] Credit will also determine the demand for capital goods, and this is the main idea behind the argument that capital accumulation (investment) does not have to always equal (depend on) total savings in the economy.

In general, in order to have economic growth, banks need to share general businessmen "optimism" and supply enough credit funds. Otherwise there will be an excess demand for credit in the economy. The fact that banks create credit money and provide short-term financing is, as pointed by Davidson (1986), a pre-condition to real investment flows.

Therefore, if banks refuse to supply credit to finance investment plans due to, for example, a stronger liquidity-preference, the business sector will have to face a liquidity shortfall, constraining any desired increase in investment levels.

Banks individual capacity to generate loans to the "real sector" exists as a function of the total amount of reserves and other liquid assets in their portfolio, as well as their access to Central Banks' discount windows and, mostly, to secondary markets. In a moment of generalized pessimism in financial markets, capable of generating a "wave" of institutions' preference towards liquidity, not only banks will reduce their credit levels to the "real sector", but also loans within financial sector will suffer, exacerbating the initial effect.

In fact, "banks, such as all the agents whose activities are speculative and demand protection and care, prefer liquidity and adapt their portfolio by trying to conciliate profitability with their scale of preference for liquidity, which expresses the precaution of a firm with uncertain results. When the future evaluation of the bank about the loans return, the maintenance of the demanded collaterals value and the behavior of the market interest taxes is unfavorable, the bank might prefer assets which are more liquid instead of long term loans. Thereby its preference for liquidity is defined by their expectations about their [intrinsically] uncertain future[18]" (de Paula, 1999, p. 289)

It is by now clear that *uncertainty* is a central concept in Keynes theory and, as a consequence, in the framework used by post-Keynesians to analyse financial markets behaviour. Until now, a lot of attention has been paid to the specific role of banking credit in the economy and its linkages to financial market conditions. At this point, it may be useful to focus again on how *uncertainty* determines these financial markets' conditions.

Uncertainty "is a deep property of decentralized systems in which a myriad of independent agents make decisions whose impacts are aggregated into outcomes that emerge over a range of tomorrows" (Minsky, 1996, p. 7) and, therefore, the main hindrance to efficient financial markets.

[18] My translation.

Financial markets main function is to negotiate rights to future incomes. Such activity encloses risks (due to imperfect information), but also a high level of uncertainty (due to the inexistence of information).

Because part of the relevant information on long-term assets performance is simply inexistent, the even "rational" utilization of all available information does not guarantee an efficient allocation of financial resources. By the same token, uncertainty cannot be included in price determination. However, because the tolerance for uncertainty is limited, it will induce several "defence mechanisms" (Hermann, 2009), included in the market normal functioning.

The most natural "mechanisms" are: i) the celebration of contracts to fix prices and "control" for changes in market conditions[19]; ii) development of secondary markets as a way to allow a permanent possibility to revise investment decisions and, hence, increase market liquidity[20]; iii) Inventors' inclination to follow market valuation instead of following the prospective yield of an investment over a long term of years[21]; iv) liquidity-preference as a way to reduce portfolio potential losses; v) in a limit situation, the best way investors have to protect their financial position is to reject any type of illiquid asset that might enclose a potential nominal cost (*Liquidity Trap* situation).

Inherent uncertainty is not, therefore, intractable, but mechanisms used to minimize its effects have limited efficiency, and individual defensive reactions to it can, by themselves, generate inefficiency and volatility and jeopardize aggregate market conditions.

In Keynes's view, the agents' tendency to follow her liquidity-preference as a natural reaction to uncertainty is the main source of inefficiencies, not only in financial markets but also in goods markets as well. In the first case, because it induces a short-termist behaviour that discourages productive investment and fosters market volatility. In the second case, it causes recessions and unemployment.

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[19] As noted by Hermann (2009), this mechanims may not be efficient if uncertanty is such that makes it impossible to define market prices.

[20] According to Keynes, Secondary Markets have an ambiguous nature: "(…). But a little consideration of this expedient brings us up against a dilemma, and shows us how the liquidity of investment markets often facilitates, though it sometimes impedes, the course of new investment. For the fact that each individual investor flatters himself that his commitment is 'liquid' (though this cannot be true for all investors collectively) calms his nerves and makes him much more willing to run a risk. If individual purchases of investments were rendered illiquid, this might seriously impede new investment, so long as *alternative ways* in which to hold his savings are available to the individual. This is the dilemma" (Keynes, 2008, Chap. 12).

[21] "For most of these persons are, in fact, largely concerned, not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conventional basis of valuation a short time ahead of the general public. They are concerned, not with what an investment is really worth to a man who buys it "for keeps", but with what the market will value it at, under the influence of mass psychology, three months or a year hence" (Keynes, 2008, Chap. 12).

In the Post Keynesian perspective, a systemic intervention by the State is essential in order to reduce the levels of uncertainty in the economy and, somehow, control for the *conventional behaviour*, resulting from agents' "defence mechanisms" that increase inefficiencies. Hence, governments should act has an "external rational" agent in order: to reduce macroeconomic instability and the resulting uncertainty which is affecting investment decisions; to control the levels of general instability in financial markets; and to counteract short-termism in financial markets in order to increase aggregate credit supply, mainly directed to those project identified as "less liquid". Using Keynes' words:

> *"(...) I expect to see the State, which is in a position to calculate the marginal efficiency of capital-goods on long views and on the basis of the general social advantage, taking an ever greater responsibility for directly organising investment" (Keynes, 2008, Chap. 12)*

The objectives mentioned above (that should guide governments intervention in financial systems) can be achieved, according post-Keynesian views, through a combination of several mechanisms. Macroeconomic and monetary policies can foster stability both in real and financial variables and, therefore, mitigate some uncertainty that surrounds certain investment decisions; financial policy (restrictions) and prudential regulation can be used in order to reduce volatility in financial markets, somehow weakening the propensity to hold liquid assets; however, in order to increase credit levels into the economy, and to guarantee that funding and investment decisions take into consideration the "general social advantage", the State must have a direct intervention in financial markets and investment decisions.

2.3. State-owned Banks in the light of these approaches

The conventional neoclassic view of financial markets and banking activity, reflected in the model of *financial repression* and in the *market efficiency hypothesis*, admits, to some extent, specific forms of indirect intervention in financial markets. Indeed, the State should mainly make use of its "visible hand" in order to guarantee that the minimum legal and institutional requirements that allow an efficient function of free markets hold. Investor's protection should be, then, the main goal of State intervention in financial markets.

Taking this as departing point, the main forms of public intervention in financial markets, according to *financial repression* view, include: i) market supervision; ii) maintenance of an efficient and sound legal system able to provide property rights protection, contracts

enforcement, and credit executions; iii) maintenance of a monetary regime in which interest and exchange rates are freely determined by market forces.

If we take in consideration that: 1) investment is seen as equal to aggregate savings; 2) aggregate saving is simply a function of interest rates, and interest rates are determined solely by agents' desire to borrow or lend money; 3) banks do not perform any active role in this process, having, therefore no influence in the levels of investment and output in the economy. Taking in consideration all the above, if the State aspires to promote growth in an efficient economic system, it should focus on protecting savers and guarantee their "fair" returns. This would, as a result, incite savings and avoid any distortions in interest rate levels. Assuring the free functioning of liberalized markets and lenders protection is, therefore, from the perspective of a government, the most efficient way to promote the development of credit markets and, as a consequence, to increase the amount of funds available in the economy.

In a neoclassic fashion, defenders of the EMH argue that there is no reason for the public ownership of banks, especially in developed countries with mature and complete financial systems. On the contrary, its existence, besides completely unnecessary (crisis are generated by external shocks), would have pernicious effects, preventing an efficient allocation of financial resources in the economy.

Such approach regarding State intervention in the economy, particularly in financial markets, generates the theoretical framework behind many critical views presented in literature on government bank ownership (namely, the *Political view*, which will be discussed in the next section).

As mentioned above, different approaches within the Keynesian tradition have in common the refusal to accept banks as passive agents, and money as a neutral and exogenous variable in the economy[22]. Both New and Post Keynesians see markets incompleteness and failures as inherent to its own functioning, and financial institutions behaviour as "embedded" in the macroeconomic dynamics.

Indeed, financial market's impact on the economy is not insignificant. Primarily because it tends to amplify economic cycles, expanding the amount of available funds in the system during expansion periods, contributing to instability, and constraining credit in moments of recession, when liquidity is most needed in the economy. Secondly, because it fails to take into consideration aggregate economic benefits in its evaluations and, therefore, tends to deny credit supply to strategic projects.

[22] See previous discussion about Money neutrality on page 12 and 16.

These reasons should be, in a Keynesian fashion, enough to justify a systematic public intervention in financial markets. This intervention can assume different forms: supervision, regulation, financial policies and direct State ownership. It is worth to mention, nevertheless, that Keynesian and Neoclassic perspectives strongly diverge when it comes to defining the ultimate goals of market regulation. The later sees regulation and supervision as the mean to guarantee compliance with legal requirements that establish the markets free functioning; according to the former, supervision and regulation exist to guarantee a minimum level of financial stability.

According to Hermann (2009), Keynesians (both New and Post) distinguish two main goals for State "interference" in financial markets: first, to reduce (as much as possible) generalized market failures and uncertainty, as well as their macroeconomic consequences and, second, to compensate for these failures, when their effects are unavoidable.

In the first group one can find several forms of government intervention in the economy, accepted by both perspectives. Mainly, they address measures of "financial repression", aiming to restrain, to some extent, freedom in financial markets: prudential supervision, regulation, but also policies designed to promote credit and increase available deposit funds, such as the introduction of interest rate ceilings, fiscal incentives or specific credit programs, publicly regulated, by performed by the private sector.

New Keynesians are, in general, more "optimistic" relatively to the effectiveness of this preventing measures and tend to reject the idea of a more "active" intervention by the State in capital markets.

> *"(…) major financial repression [that is deposit rate controls and limitations on competition in the financial sector] is very damaging to the economy. One of its common characteristics is that the government represses deposits rates in order to extract rents from the private sector to finance large budget deficits (…) The basic principle of mild financial restraint is that the government does not extract rents from, but creates rents within, the private sector. The purpose of these rents is to create incentives for the private sector to undertake socially beneficial actions (prudent lending). It is the opposite the government-directed approach where the government undertake these actions itself." (Stiglitz, 1998, p.9)*

On other hand, the Post Keynesian approach is rather "pessimist" concerning the possibility to deal with market failures and market uncertainty in the absence of more direct forms of

intervention, based on the main argument that instability is an inherent characteristic of financial markets and that natural agent's "defence mechanisms" exacerbate this problem.

Still, it is possible to find, in the New Keynesian theory, arguments that fall in the second group of measures. This second group includes direct credit programs, performed directly by the government, and State-owned banks intervention to, as mentioned above, compensate for market failures consequences on financial markets.

One of the main purposes of such intervention in the market may be the advantages arising from direct credit programs, in situations when private banks are not capable of allocating funds to projects with high social returns or when credit market activity is disrupted by a general confidence crisis.

Even though Stiglitz has written his most influential paper on State intervention in financial markets, "The Role of the State in Financial Markets", largely quoted along this explanation, in the early 90's, the main arguments used in favour of public provision of credit still apply to the current financial markets reality, including the recent financial crisis. As an example, one should notice that "the widespread problems many banks faced when real estate markets collapsed provide strong evidence that financial institutions failed to take social returns into account in making real estate loans. Direct credit – this time, restrictions on certain categories of loans – may be desirable" (Stiglitz, 1994, p. 42).

Direct credit programs have been advocated as a more efficient alternative to promote investment and growth, especially in developing countries, when compared to State subsidies or public control over private interest rates. Empirically, this claim is supported mainly by the successful experience of such mechanisms in several countries of East Asia, and even Brazil.

One of the main arguments that stands for this is the fact that public credit does not require the need of the government to raise revenues or increase its debt levels. This might become an extremely important feature when governments wish to inject money in the economy in periods of strong budgetary constraints. However, the common idea that governments are constrained by the same budget rules as any other ordinary business (cash inflows equal to cash outflows) is largely criticized by Stiglitz. Actually, he argues, the role of the government is to guarantee that the total expenditures in society meet the total amount of output. Having zero deficit budget account is one of the possible ways to achieve this, but it is neither a sufficient nor a necessary condition. Indeed, when providing direct credit or even other kinds of direct subsidy, governments should take into account not only their negative impact on public deficit but also the impact of such monetary stimulus in the economy.

As mentioned above, financial regulation, considering the definition of minimum legal reserves, grants commercial banks with the special capacity to create money in their normal lending activity. However, whenever a bank issues claims, or money, its criteria does not include social benefits or concerns about the general macroeconomic equilibrium. Its judgment is mainly based on client creditworthiness and general confidence levels in financial markets. Hence, and since interest rates set by private banks do not guarantee that the market is clear enough, macroeconomic equilibrium must be assured by the intervention of other institutions, outside private markets, such as central banks.

Furthermore, as economies enter in recessions, the effectiveness of price mechanisms tends to suffer strong disruptions, being more difficult to ensure that liquidity is canalized towards the right projects – those that yield high social returns, associated with positive spillovers towards other economic sectors – away from "unproductive areas", such as real estate speculation.

Certainly one could argue that these goals could also be achieved through other kinds of mechanisms, such as subsidies to investment, or even controlling interest rates set by private banks. Nevertheless, it is possible to argue that there is always a considerable degree of uncertainty in the relationship between the total amount of subsidies and its real impact on investment spending. Thus, if we take into account all the inefficiencies associated with the free functioning of the price mechanism, direct control over the quality and quantity of credit, through a public bank, seems to be the most effective way to achieve macroeconomic stability, particularly during recessions.

In a New Keynesian fashion, it is then possible to justify the necessity for a public bank based on credit rationing model. As mentioned earlier in this section, in this model, developed by Stiglitz and Wiess (1981), credit insufficient supply is the result of asymmetrical information in financial markets, and determined by banks propensity to assume risk. Because the reason for credit rationing is not a matter of expected returns but perceived risk, any kind of indirect State intervention to increase return rates will not be efficient as a mean to increase banks desire to lend.

However, notwithstanding the defence of some kind of credit policy, New Keynesian literature is not completely clear if this should be implemented solely by a State bank or by different instruments of State intervention.

In a Post Keynesian perspective, on the other hand, albeit this can be achieved making use of different government programs, the existence of a State-owned bank is not excluded at all, and can be even desirable.

In fact, State bank ownership may be the only way to: on one hand, contradict short-termism in financial markets, that deviates funds from long term and "productive" investment funds towards speculation; and, on the other hand, to minimize liquidity preference in moments of financial distress, avoiding a sudden downfall in aggregate credit amounts to the economy, and also the possibility of having a liquidity crisis in financial markets.

Once one admits that credit plays a crucial role in investment levels and, hence, in economic activity, this could be one of the instruments at government's disposal in order to offset a major fall in output and increasing unemployment during recessions.

Moreover, it can also be argued (in both perspectives), that government bank ownership carries one advantage when compared with indirect forms of intervention, arising from its "coercive nature". In order for a "non coercive" measure to be effective in a scenario of uncertainty "they [the State] should be able to generate a significant array of information capable of limiting, in a reasonably clear and safe way, return and risk probabilities associated with such operations" (Hermann, 2009).

However, if we consider that Governments are subject to similar limitations as private agents in terms of access to information and uncertainty about future conditions, efficiency in State intervention may be difficult to achieve. Public banks can be a powerful instrument to overcome this difficulty of public policy, because they have the capacity of entering the markets and take the risks that private agents are not willing to assume. In other words, direct State ownership may be the only way to compensate for markets incompleteness.

Hence, one of the main tasks performed by public banks is to deal with certain risks, associated with those sectors that provide positive externalities to economic growth and stability. Broadly, this intervention should cover structural areas in the productive system within an economy (new technologies, research and innovation, exporting sector), and sectors requiring stable long-term investments.

In periods of economic and financial downturn, when the risk perception and uncertainty levels increase in the markets a significant level, the public banks' function as credit providers may be crucial to finance economic activity in a context in which private banks curtail their lending activity, due to increased risk perception, or because they are not able to finance themselves in secondary markets.

One of the multiple ways for public banks to act, lending money towards areas otherwise neglected by private banks, is by providing, in a regular basis, long term financing programs, at lower interest than the private sector. This is only possible because, in the first place, public banks do not interpret and include risk in their price mechanism in the same way as

private banks; in the second place, public banks may be willing to conscientiously accept risks that private banks are not willing to accept.

On other hand, one should not ignore that, in a Keynesian perspective, State-owned banks are not constrained by the same type of liquidity restrictions, which are pro-cyclical in their nature. This is because the State can inject capital in its own banks by running a budget deficit, or through other type of monetary operations (quantitative easing). It can also be argued that public banks will run an advantage in terms of financing their activities in periods of wider instability, due to its capacity to attract internal deposits, based on their implicit "State guarantee".

It is, therefore, argued here that both new and post Keynesian perspectives are, in theory, compatible with the idea of the State intervening in the financial system by controlling, in a direct way, a banking institution. It is, however, rather clear that while Post Keynesians argue strongly in favour of it, market failures approach is not as straightforward concerning such direct interventions, and both perspectives surely diverge when it comes to the moments and arguments used to justify the need for a State-owned bank.

Probably, the strongest disagreement underlying both theories relies on the fact that, according to new Keynesians, the absolute need for public banks (and other type of "pervasive" State intervention) should slowly dissipate with financial system development and innovation. In a post Keynesian perspective, even the most developed financial system will not be able to eliminate inherent uncertainty in financial markets. Hence, "*animal spirits*" will continue playing an important role when it comes to financial markets behaviour, and a State systematic intervention will still be needed, in order to promote stability and long-term investment.

3. State-owned Banks – Literature Review

3.1. Theoretical aspects behind State-owned Banks empirical literature

It was widely accepted by a large number of prominent economists writing during the 50s and 60s that the State had a role to play not only in the banking sector but also in all the economic strategic sectors. This was particularly true for Arthur Lewis, Alexander Gerschenkron, Gunnar Myrdal and several other development economists. By the end of the interventionist period of the 30 golden years of capitalism, in 1970, the State-owned 40 per cent of assets of the largest banks in industrial countries and 65 percent of assets of the largest banks in developing countries[23] (Yeyati et al., 2007).

The collapse of the Bretton Woods agreements, in 1971, determined a major change in terms of economic policies. Along with the massive process of financial and economic liberalization, several banks were privatized, also in industrial but mainly in developing countries, and State intervention started to be seen as invasive and as a source of inefficiencies.

Critics of State ownership of banks suggest that banks are not different from any other business and that market failures can be addressed through regulation and supervision rather than direct property. One can divide these critics into two major points of view, the *political* and *agency views.*

Accordingly to the *political view*[24], politicians and public actors create and sustain banks (public owned) in order to fulfil their own interests, guaranteeing subsidies, credit and other benefits to supporters in exchange for votes, political contributions and bribes (see Shleifer and Vishny, 1994). Thus, political theories imply that public ownership would have a crowding out effect on the financing of private firms, generating corruption and misallocation. According to La Porta, this kind of political behaviour is more likely to occur in countries with underdeveloped financial systems and weak property rights due to the lack of competition between State-owned institutions and the private sector (La Porta et all, 2002).

Advocates of the *agency view* recognize the existence of social gains arising from State-owned banks and enterprises, but they question whether these gains are able to offset the agency costs within government bureaucracies or not. *Agency view,* on one hand, predicts that

23 For extensive time series describing the evolution of State-owned banks around the world see La Porta et al. (2001), Barth et al. (2001) and Micco et al. (2007).

24 See La Porta and Lopez-de-Silanes (1999), Frydman et al. (1999) and Lopez-de-Silanes, Shleifer and Vishny (1997) for more on the political view of government participation.

even though State-owned banks are capable of serving social objectives and channel resources to socially profitable activities, public managers might face lower incentives to behave in an efficient way than its private counterparts. In this way, "agency view concludes that decisions on government in-house provision of public goods should depend on the trade-off between internal and allocative efficiency" (Sapienza, 2004, p.4).

The *development view*[25], on other hand, shares with the *social view*[26] the defence of State intervention in the banking sector. However while the latter sees the intervention of social welfare maximizing governments as the way to overcome market failures, development theories stress the need of intervention in countries where economic and financial institutions are not sufficiently developed.

According to the *development view*, State intervention is need in economies where the scarcity of capital, week institutional context and property rights, along with fraudulent behaviours and underdeveloped financial system undermine private initiative and economic growth (Stiglitz, 2004).

Both *development* and *political* theories see public ownership of banks as an instrument to promote government's goals but, while in the first case this ownership enables State to finance strategic projects to foster growth and development, the second approach sees State-owned banks as a way that "enables the government to finance the inefficient but politically desirable projects "(La Porta et al, 2002).

Besides having development goals, State intervention in the banking sector can be justified by market failures. Advocates of the *Social view* argue that financial markets in general and the banking sector in particular are different from other markets, because of specific market failures in financial and credit markets. For example, they emphasize the role of the State in order to guarantee financing and support to socially desirable economic projects that otherwise would be left aside by the private sector (Stiglitz, 1994). Thus, "creating State-owned banks or programs of direct credit as often been justified on the ground that private banks fail to take social returns into account" (Sapienza, 2004, p.4).

The *Social view* shares with the *Agency view* the idea of social welfare maximizing governments, but according to the former public intervention will contribute to create the financial institutional context to cure market failures, while the latter sustains that the outcome of the intervention might be undermined by agency costs.

[25] See Gerscherkron (1962), especially for the role of government in financing industrialization in Russia; and Stiglitz (1994) for the need of public intervention in economies where scarcity of capital and weak economic context.

[26] See Sapienza (2004).

3.2. Empiric Literature

The present section summarizes a large number of empirical literature on State-owned banks.
The empirical literature concerning State-owned banks (SOB) can be grouped according to four main topics, despite the type of data and methodology in use: bank performance, especially in terms of profitability and costs; the impact of SOB on growth and financial development; public banks credit policy in relation to political or development view; and the role of public banks' as macroeconomic stabilizers[27]. In what follows, the main results found in the literature will be summarized along this topic, paying special attention to the macroeconomic stabilization role of SOB.

Most of cross-country studies on banking performance[28] focus on the claim that public banks may be less efficient, particularly in terms of profitability, than their private counterparts.

According to Hanson (2004), in general, public sector banks have performed poorly, particularly in terms of large non-performing loans (NPLs). Evidence suggests that public sector banks seem to have a correlation with higher spreads and overhead costs. These findings are consistent with the one showed by La Porta et al. (2002) and also Barth, Caprio and Levine et al. (2001).

Most studies connecting public ownership with poor bank performance argue for the *political view* which says that public sector banks, are instruments to transfer wealth to supporters through bribes, to politicians and bureaucrats (Scheifler, 1998 in Hanson, 2004, p.10). They point out that even the best intentioned governments face at least five severe problems inherent to public sector banks: i) multiple objectives problem arising from the diverse demands, such as social goals, to be met by public sector, which make it difficult to set up appropriate incentives; ii) difficulties in providing transparent information to outsiders due to the lack of good information systems and also deriving from governments political interests in limiting information on what the bank is doing and how well does it; iii) political difficulties in lending at market rates and in collecting loans and executing collaterals, especially if they are leading with underserved populations; iv) a culture of non payment arising from the borrowers belief that a loan is a transfer by the government, not requiring payment; v) corruption and capture that deviate credit from small borrowers to larger firms.

[27] A few other studies, focusing on very specific channels, such as the role of SOB in providing access to banking services, privatization of SOB (specially in transition countries), or development banks in rural areas and developing countries, can be found in empirical literature. However, because they fall outside of the scope of this work, these studies are not mentioned in the next section.

[28] For a complete survey on public bank performance and bank privatisation see Yeyati et al. 2007.

On other hand, Micco et al. (2007) compare the performance of public banks with that of private domestic and foreign banks, and find no significant difference in terms of performance between public and private banks in industrial countries[29]. In line with findings reported by Micco et al. (2007), Karas et al. (2008) conclude that domestic private banks in Russia are less efficient than government owned banks.

In a related work, Yeyati et al. (2007) study bank performance in Latin American countries relative to privately and government domestically owned banks. They conclude that, despite their lower performance in terms of NPL, overhead costs, lower returns, and greater exposure to sovereignty risk, public banks are still perceived as safer. According to the authors the lower borrowing rates faced by public banks allow them to extend credit at lower lending rates. On the other hand, it is also possible that public banks benefit from easier access to funding that allows them to charge lower interest.

As noted by Yeyati et al., the claim that public banks tend to be less efficient, specifically less profitable than their private counterparts, may be paradoxical, since it may indicate a failure of the incentive scheme faced by public banks. Although efficient, public banks that mimic private banks in credit allocation and follow the same incentive structure may become redundant.

Focusing on the relation between public banks and economic growth, La Porta et al. (2001), probably the most widely quoted and influential paper in the public banks literature, find that the share of government ownership of banks, at an earlier period, is negatively correlated with per capita income growth and slower financial development[30]. Thus, they find evidence that State ownership is larger in countries with low levels of per capita income, underdeveloped financial systems, weak property rights, interventionist and inefficient governments. The results are consistent with the political view under which government ownership leads to a politization and further misallocations of resources that are detrimental to financial efficiency, productivity growth and ultimately economic growth in itself.

Yeyati et al. (2007) revisit the findings by La Porta et al. making use of their own measures of public shares in banking sector and using more recent data that allow for a more complete set of controls. They find no significant correlation between State ownership of banks and credit to private sector, suggesting that public ownership in banking sector is not related to its

[29] However, in developing countries results are in line with Hanson (2004) suggest that public banks underperform in terms of profitability, non performing loans and overhead costs.

[30] This occurs in a large cross-country sample (which comprises public shares for about 90 countries), controlling for initial conditions and other determinants of growth.

underdevelopment. On the other hand, as noted, there is no indication that State ownership has any particularly positive effect on financial development.

Andrianova at al. (2009), in their recent work, make use of a variety of cross country and more recent data sets to conclude that, if anything, government ownership of banks has, on average, been associated with higher long run growth rates. They also show that the results in La Porta et al. (2002) are fragile when the set of conditioning variables is extended to include other determinants of economic growth, such as institutions.

Caution is required when deriving conclusions and policy implications from these findings obtained from cross-country regressions. It is often assumed that the causal relationship between finance and growth is homogenous across countries, however, even though most regressions confirm that finance development and growth are positively correlated, "as with the most regressions, these results are not conclusive evidence of causality[31]" (La Porta et al, 2001, p. 290).

Although most studies use bank level data to study the relative profitability and costs of public banks, comparing with privately owned institutions, a few studies focus on the credit policies of the banking sector. Mainly, these works aim at test public banks political channel.

Sapienza (2004) focus on the banks' lending relations and analyse individual loan contracts of private and public institutions, comparing the interest rates charged to firms. They find that, all else being equal, State-owned banks charge lower interest rates to "certain" companies, according to their political interests.

In line with the work of Sapienza, Micco et al. (2007) find that election years are associated with more aggressive lending and a decrease in prices, consistent with the political lending hypothesis.

In fact, most critics of government intervention claim that State ownership leads to a situation in which allocation is determined by political rather than economic motives. However, as stated by Yeyati and colleagues, "once we deviate from the assumption of a benevolent government, the impact of corruption, patronage, and, more in general, a 'weak' State on the balance between the costs and benefits of the State is not straightforward. While State ownership may increase the opportunities for corruption and patronage, a 'weak' State makes contracting and regulation more difficult and hence may increase the benefits of State ownership" (Yeyati et al., 2007, p.12).

[31] See Demetriades and Hussein (1996) and Arestis and Demetriades (1997).

In the same line of arguments, the amount of rents collected by corrupt politicians is likely to be much smaller if the banking system is State-owned, since the democratic pressure for public sector accountability, structures and procedures make it more difficult to engage in such behaviours.

A related group of studies analyse bank lending activities with respect to monetary policy in terms of effectiveness of the monetary transmission, through bank lending channel[32].

In a recent work, Andries and Billion (2010) provide a theoretical model that analyses the impact of government ownership and deposit insurance on monetary policy transmission. These results show that public banks tend to be less responsive to monetary policy than private banks with respect to credit supply. Government banks can collect additional deposits, due to the provision of better deposit guarantee, allowing them to extend their lending activities against a restrictive monetary policy. These results imply that a country where State ownership of banking system is more prevalent will face a less effective monetary policy.

As noted by Yeyati et al. (2007), one problem with the Caccheti and Krause results is that their specification does not control for the existence of other factors, such as lower levels of financial development, which may affect the effectiveness of monetary policy, and therefore, may be captured by State ownership of banks.

In a different work, Micco and Panizza (2006), use bank level data to test whether ownership of banks is related to lending behaviour over the business cycle and find that public banks are less responsive to macroeconomic shocks than their private counterparts, playing, therefore, a countercyclical role during recessions, by stabilizing credit levels.

According to Micco and Panizza, one can think of three possible reasons why State-owned banks may stabilize credit. First, because their principal (i.e., the State as main shareholder) internalizes the benefits deriving from a more stable macroeconomic environment, thus, the countercyclical role is part of a public bank objective function. Second, public banks can enjoy a more stable deposit base during a period of crisis, as depositors feel public banks as safer than private institutions due to the prevalence of bank failures. Third, lower ciclycity can also be justified with the behaviour of "lazy" public bank managers, who do not face the proper set of incentives.

Using a new dataset, based on Bankscope and containing data from 1995 to 2002, they show evidence supporting the idea that public owned banks may play a useful role in stabilizing credit. In fact, results reported by Micco and Panizza show that "lending of State-owned

[32] For more on monetary transmission and the credit channel see Bernanke and Gertler (1995) and Gambcorta and Marques-Ilbanez (2011).

banks is much less responsive to macroeconomic shocks (both domestically and foreign owned) and hence State-owned banks could play a useful role in the transmission mechanism of monetary policy" (Micco and Panniza, 2006, p.8). They also find evidence suggesting that this behaviour can be explained by the incorporation of an explicit objective to stabilize credit rather than the presence of "lazy" bank managers.

In a recent paper, Araujo and Cintra (2011) analyse the functions performed by the Brazilian Federal banks, emphasizing their role in promoting economic and regional development but also their anti-cyclical action after the financial crisis of 2008. They conclude that in periods of financial crisis public banks tend to offset part of the decline in private credit supply. This happens essentially because government banks face a different liquidity preference with regard to its private counterparts, and continue to give loans while other banks chose to hold liquid asset. However, the authors argue, in periods of economic growth public banks may not be able to respond to an increasing demand for funds. Therefore, "there will be always the need for a combined action between public and private institutions" (Araujo and Cintra, 2011, p.50).

3.3. Concluding remarks on the Literature Review

As mentioned before it is not in the scope of this study to look at the connections between public banks in Portugal and economic growth in general. By the same token, we are not looking at the political motives under State intervention, nor at its impacts in financial development.

The empirical research developed in the next section will focus on the stabilization role of the Portuguese public commercial bank – Caixa Geral de Depósitos – in the period following the onset of the global financial crisis, in 2007.

Starting from the findings reported by Micco and Panizza (2006), which show that lending by State-owned banks is less responsive to macroeconomic shocks, Part II of this dissertation will be focused on testing if the public bank in Portugal contributed to offset the decline in private credit supply during the financial crisis and, in case we find evidence supporting such hypothesis, what are the main reasons behind such behaviour.

As mentioned by Micco and Panizza, this can be due to public banks benefiting from a more stable deposit base or from better financing conditions in the international wholesale markets.

On the other hand, the rationale behind such behaviour may rely, as suggested by Araujo and Cintra (2011) in the fact that public banks face a different liquidity preference with regard to its private counterparts. The reason why they do so is that, as also noted by Micco and Panizza 2006), their principal might internalize the benefits deriving from a more stable macroeconomic environment.

Moreover, these arguments do not necessarily contradict those presented by Andries and Billion (2010) concerning public banks responsiveness to monetary policy. On one hand, government banks may benefit from favourable conditions that allow them to extend their lending activities against restrictive monetary policies, it might also be the case that State-owned banks make use of such conditions to increase their lending activity in periods of financial distress, when expansionary monetary policy is not as effective. This will lead, however, to a different conclusion about the effectiveness of monetary policy in countries where State ownership of banking is more prevalent.

On the other hand, in case the available evidence rejects the hypotheses stated above, two results may arise. First, there might be no difference in the lending activity between public and private banks in Portugal. This would suggest that the state bank played a countercyclical role through its lending activity. However, such results also exclude any type of conclusions on 1) the prejudicial macroeconomic impacts arising from the existence of a State-owned banks, as suggested by La Porta et al (2001); and 2) public banks' countercyclical role in general[33].

Second, it might happen that available information shows a negative pace in lending activity performed by the public banks, when compared with its private counterparts. These results are not, by themselves, enough to exclude other types of State bank countercyclical behaviour. However, such results would suggest that the Portuguese State bank played a pro cyclical role in the economy, through its lending behaviour. Taking in consideration that the amount of credit in the economy is positively related to economic dynamism and growth, these results would probably suggest that the share of government ownership in Portugal could be negatively correlated with economic activity. These issues will be addressed in Part II.

[33] Notwithstanding the fact that the credit policy is one of the main instruments available to public banks, there are other possible ways to perform such role in the economy – such as financing troubled financial institutions or even the State.

PART II

1. Introduction

The existence of a sound financial system assures that the impacts that may arise both from endogenous factors but also from exogenous events "are corrected with no pronounced swings in capital market prices or without abrupt changes in the investors' portfolio composition" (Banco de Portugal, 2006).

In Portugal, the banking system is responsible for financing a large share of the non-financial private sector (and by collecting an important part of financial savings in the economy). Therefore, the capacity of banking institutions to remain resilient in moments of deteriorating financial conditions is determinant in shaping saving and investment decisions that underlie long-term economic growth and wealth creation.

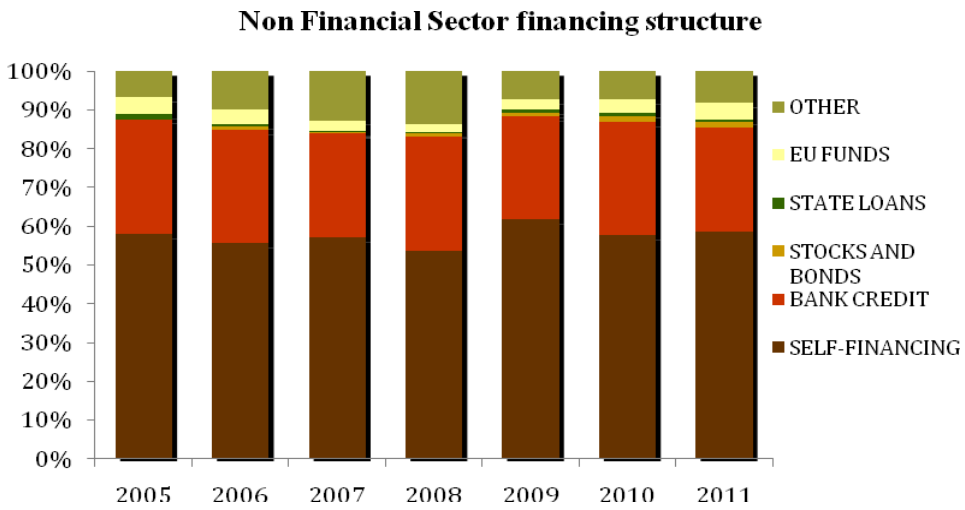
As mentioned by the Bank of Portugal in its 2006 Financial Stability Report (Banco de Portugal, 2006), this role of the financial system to ensure the efficient intermediations of funds in the economy, notwithstanding the less favourable financial conditions, is a public good "that is warranted as a particularly important economic policy objective". Hence, banks attitudes in terms of credit supply assume a crucial role in the economy, particularly in moments of economic slowdown.

As mentioned in Part I, there is a general consensus about the positive *externalities* arising from a well functioning banking system. Also, in order to promote economic growth, firms and families need access to financial funds. Only these funds can allow them to engage in long term investments projects and consumption. As noted earlier, endogenous money theories from a Keynesian fashion pay particular attention to this role of banks as credit suppliers, or "money creators" in the economy.

It may happen, however, that in a moment of economic downturn, banks decide to adopt a more restrictive behaviour in terms of credit supply. The effects of such decisions on the non-financial corporate sector, but also on households, will most probably contribute to aggravate the initial situation. Especially in the case of the former, restricted access to bank loans can lead to a situation of financial fragility making it more difficult for enterprises to meet their financial obligations. This propagation effect will also contribute to worsen the initial economic conditions and ultimately it may be the cause of rising unemployment and decreasing investment, which, ultimately will contribute to deteriorate banks' balance sheet situation due to a decrease in deposits and higher levels of NPLs.

The chain effects of banking decisions towards their credit policies are especially relevant in Portugal, where bank loans are the second main source of funds for non financial enterprises (see figure 1). Bank credit is also the main way used by households to finance the housing purchases.

Figure 1



Source: Based on Inquéritos de conjuntura ao investimento, INE

Portugal has a small but economically and financially integrated economy and, therefore, the international financial crisis initiated in 2007, which deepened in September 2008, had an important impact on banks operating in the country.

The present crisis had two very distinctive phases. The first was mostly characterized by a general distrust in international financial markets, which led to a liquidity crisis. Although the Portuguese banking system was not particularly involved in the subprime markets, it had to face serious financing restrictions, owing to widespread liquidity problems. It was clearly, in its nature, a typical financial crisis. After 2009 the crisis looses part of it purely financial nature, assuming the characteristics of a sovereign crisis: successive downgrades in Sovereign Ratings, followed by a sharp rise in government's bond yields. Generalized mistrust concerning the financial system was then transferred to States (which assumed part of the risks and the losses of the financial institutions), especially to those States from the peripheral European countries. Worldwide, most banks managed to somehow overcome some of the difficulties faced in the first phase and benefited from better financing conditions in the international financial markets. This was not the case however for banks in countries facing a sovereign crisis.

After its beginning, mostly characterized by problems in the money markets, the financial crisis spread to stock markets and to the real economy, as bank credit started to decline after 2008 and until the present day.

The main goal of the next sections is to determine whether this decline in bank credit that is affecting the real economy was generalized over all banking institutions. The alternative hypothesis is that Caixa Geral de Depósitos – a bank one hundred per cent owned by the State – had a different behaviour concerning credit supply with regard to its private counterparts during the crisis. In case we verify that 1) CGD increased its supply of loans to households and enterprises (although it may not be enough to completely offset the decline in credit supplied by private banks); or 2) CGD decreased its credit supply but not by as much as the remaining banks, this may would suggest that the State bank played an important counter cyclical role in the economy.

In order to do so, the first step is to characterize the behaviour of total credit in the economy since the beginning of the financial crisis and to assess whether the evolution of bank credit was determined mainly by demand side or supply side factors. The second step is to determine if the trend was similar for all the major banking institutions operating in Portugal. In case, as we suppose, the behaviour of credit was generated mostly by the conditions in the banking system, it is important to shed some light on the different financial conditions faced by different banks that allowed for different patterns of credit supply. Particularly, in case the alternative hypothesis is correct, what were the specific conditions that allowed for the State bank to have a less restrictive credit policy.

Part II is thus structured as follows: Section 2 deals with the methodological aspects of the empirical research and briefly characterizes the Portuguese financial system. Section 3 looks at the major trends in credit behaviour for the selected period and tries to determine its main demand and supply side causes. Section 4 analyses the differences in lending behaviour according to the banks' ownership structure, Section 5 looks at the specific financial conditions faced by banks and Section 6 contains some concluding remarks on Part II. Part III concludes.

2. The Portuguese banking system

2.1. Methodological aspects

This study relies on data from several sources in order to construct an extensive dataset, covering numerous aspects of the banking system evolution in Portugal.

In order to address the impacts of the financial crisis in the banking system, data was obtained for the 2005-2011 period, mostly in annual basis, but also in quarterly basis. For 2011 we use the last available data for each specific variable.

In order to make a clear distinction between the State-owned bank and the remaining private banks in the system, we analyse the five largest banks operating in Portugal:

- Caixa Geral de Depósitos (CGD), 100 per cent owned by the Portuguese State;
- Millenium BCP (BCP), domestic bank, 100 per cent owned by private shareholders;
- Banco Espírito Santo (BES), domestic bank, 100 per cent owned by private shareholders;
- Banco Português de Investimento (BPI), domestic bank, 100 per cent owned by private shareholders;
- Banco Santander Totta (Santander or BST), foreign bank[34], 100 per cent owned by private shareholders;

Together, these institutions account for a large majority of the banking sector activity in Portugal. They account together for 75,5% of total assets in the banking sector.

Most data on the financial system was obtained from the Bank of Portugal (BdP) and can be found in the statistical chronological series of the Financial Stability Reports and in the Bank Lending Surveys, both published by the Bank of Portugal. The aggregate data on the banking system used in Section 3 was obtained by summing individual data from the Portuguese Banking Association. Banks individual data was extracted directly from Annual Reports, which are available at the banks' websites. Data on firms' perception on investment was obtained from INE – Statistics Portugal Survey on Investment.

Most banks report balance sheet data at both the consolidated and unconsolidated levels. In order to avoid duplications it is necessary to use only one of the two definitions. Consolidated Statements include information on the banking group activity in general, encompassing the various branches and financial services (investment banking, brokerage services and venture capital, insurance asset management, specialized credit, e-commerce, and cultural activities).

[34] Santander Totta is part of Santander Group (Spanish), the fourth largest bank in the world by profits.

On other hand, individual Statements include only information on the core banking activity, mostly domestic. Taking in consideration the rather restricted scope of this study – i.e., the impacts of banking activity in the domestic economy – an option was made for unconsolidated information. Notwithstanding the advantages arising from this option – such as the possibility of excluding from balance sheet data values related to activities other than "regular" banking activity – there are also some costs. In fact, most individual Statements lack some of the information that is available only at the consolidated level and some banks even lack their individual Statements for some early periods – this is the case of CGD for 2005, 2006 and 2007.

2.2. Key features of the financial System

Financial intermediation in Portugal is highly dominated by the banking sector. While Portugal's financial market debt was historically lower than the euro-area average (IMF, 2006), bank loans represent a larger source of financing for the private sector.

Banking market concentration has increased also as a consequence of the privatization and financial liberalization and deregulation processes of the 1990's, and this trend became more pronounced after the creation of the European Monetary Union. However, according to the IMF (2006), there is enough evidence suggesting that "competitive conditions in the Portuguese banking have remained strong".

According to the Portuguese Association of Banks, there were 33 banks operating in Portugal in 2010 (Table 1). Out of those, 36% were foreign-owned banks and 61% domestic privately owned. The Portuguese State continues to hold a significant stake in the banking sector through the fully State-owned CGD. In terms of total assets, domestic private owned banks accounted for 58% of the total, followed by the State-owned bank with about 22% of the assets[35]. The 12 foreign owned banks represent no more than 20% of the total assets in the banking system (Figure 2).

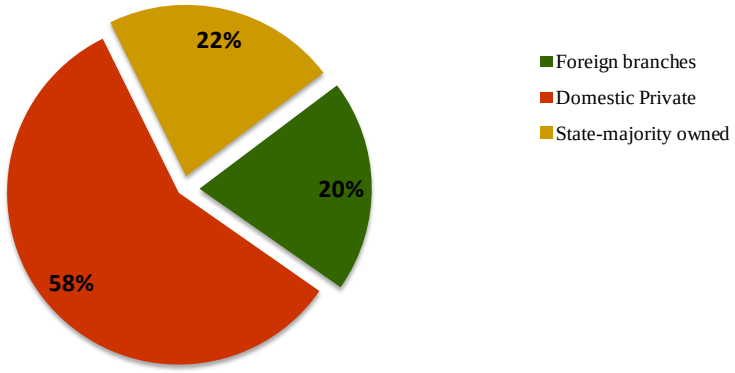
[35] CGD also holds 3% of BCP.

Table 1
BANKS OPERATING IN PORTUGAL

	2010	
	n.º/€	% total
Total Number	33	100
Of which		
Foreign-majority owned (branches)	12	36
Domestic private-majority owned	20	61
State-majority owned	1	3
Total Assets (thousands)	506 185 293	100
Of which		
Foreign-majority owned (foreign branches)	101 286 508	20
Domestic-majority owned	291 995 975	58
State-majority owned	112 902 810	22

Source: Based on Associação Portuguesa de Bancos – Statistical Factsheet – Individual Balance Sheet account

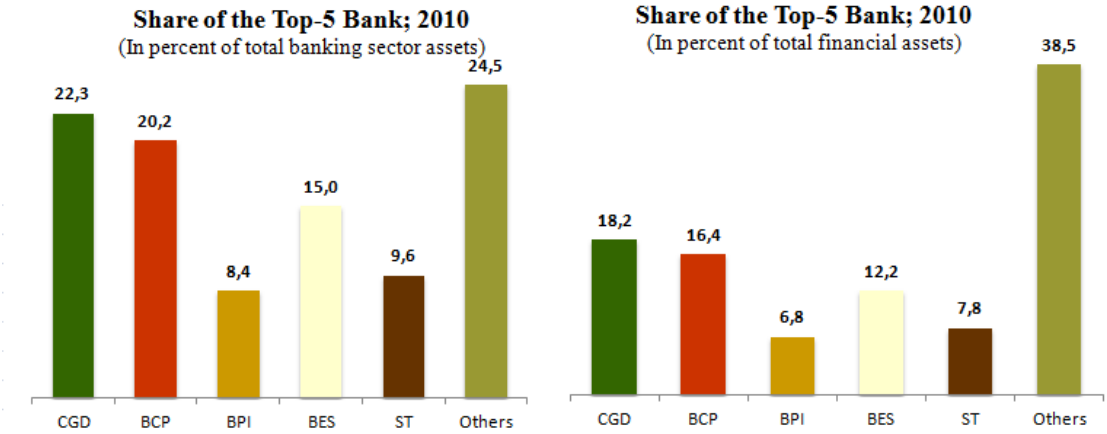
Figure 2
Banking Sector Structure by Ownership, 2010
(Percent of banking sector assets)



Source: Based on Associação Portuguesa de Bancos – Statistical Factsheet – Individual Balance Sheet accounts

As stated in the previous section (see section 2 in Part II) this study will focus on the five major banks operating in Portugal: CGD, BCP, BES, Banco Português de Investimento and Banco Santander Totta. The relatively high level of concentration in the banking sector supports for this decision. As one can see, these five institutions account together for 75,5% of total assets in the banking sector and 61,5% of the total financial assets in the economy. It is also possible to confirm that CGD represents the major share of total assets (both in the banking system and in the whole economy), followed closely by BCP (Figure 3).

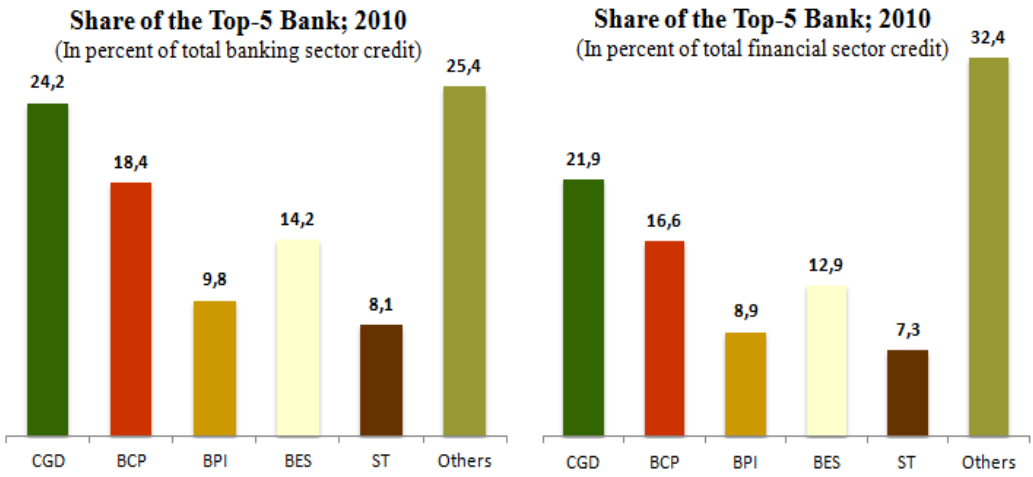
Figure 3



Source: Based on Associação Portuguesa de Bancos – Statistical Factsheet – Individual Balance Sheet accounts and Bank of Portugal

Individual bank shares of total credit show a similar pattern to the one found for total assets. Together, these five banks are responsible for 74,6% of the total credit given by the banking sector, and by 67,6% of the total credit in the financial sector. Again, CGD stands out, with 24,2% of the credit in the banking system. BCP has the second larger share of credit (Figure 4).

Figure 4



Source: Based on Associação Portuguesa de Bancos – Statistical Factsheet – Individual Balance Sheet accounts and Bank of Portugal

Portuguese banks have maintained over the years a solid profitability, while strengthening their capital positions. In several reports by the IMF and the Bank of Portugal, profitability levels achieved by these banks are mentioned as high in comparison with that of other euro area countries[36]. The five major banks operating in the country represented, in 2010, 85,9% of

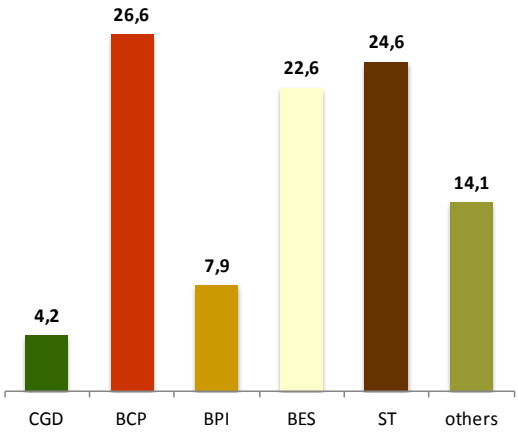
[36] See IMF (2006) and Banco de Portugal, Financial Stability Reports.

the total net income declared by the banking sector. However, the overall picture of the distribution of net income share among these banks is radically different from the patterns described above regarding assets and credit. Although CGD appears frequently as the most significant institution in terms of activity, it is the one presenting the lower share of net income, 4,3% of the total. The most profitable bank in 2010 was BCP, followed by Santander, a foreign owned bank, that counts for 24,6% of total net income (see Figure 5).

The reasons behind the differences in profitability between private and State banks have been thoroughly discussed in a rather large number of empirical studies mentioned in the first part of this dissertation. Theoretically, this finding can be explained in different ways, depending on the perspective taken. Most authors working within the *financial repression* framework (see Section 2.2.1 in Part I) will, most likely, argue that State banks present low levels of profitability due to their lack of efficiency. On other hand, authors that are more sensitive to a Keynesian approach will probably tend to argue that low profitability of State banks is admissible and justified, as long as they are able to finance social and structural investments in the economy and to maintain their counter cyclical intervention[37].

Figure 5

Share of the Top-5 Bank; 2010
(In percent of total banking sector net income)



Source: Based on Associação Portuguesa de Bancos – Statistical Factsheet – Individual Balance Sheet accounts

A more detailed analysis of the financial conditions underlying banks activity will be developed further in sections 3 and 5 (Part II).

[37] Please note that this distinction is made taking in consideration the three theoretical perspectives mentioned earlier, in Part I. There is no intention in drawing rigid or even "false" theoretical frontiers between these categories. In fact, as showed before, within the Keynesian fashion, theories diverge about the motives underlying State banks intervention.

3. Impacts of the financial crisis in the Portuguese economy

3.1. Bank Credit evolution

Available data shows that total (nominal) credit from resident credit institutions to the non-financial sector was growing steadily during the years prior to 2007 and started decelerating after the beginning of the international financial crisis (Table 2). However, this behaviour was not completely identical for retail and corporate sectors. The deceleration in retail credit growth began in 2007, and significantly decelerated until the first months of 2011.
Regarding non-financial corporations, annual credit growth started declining only after 2008, from 13% to 3%, and presented a significant decrease in 2010, falling to -3%.

Table 2
CREDIT GROWTH RATE TO NON FINANCIAL SECTOR

	%	
	Retail	**Corporate**
2004	7%	3%
2005	10%	4%
2006	15%	9%
2007	11%	14%
2008	4%	13%
2009	4%	3%
2010	2%	-3%
2011[38]	0%	2%

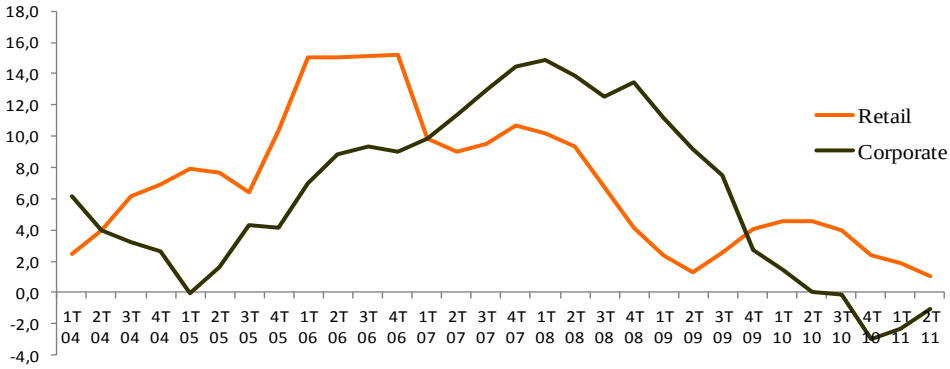
Source: Own calculations using data from Bank of Portugal
Notes: Includes titularized credit and excludes Public Administration

Looking at the quarterly indicator for the year-on-year evolution of credit to non-financial sector one can see that corporate credit growth began to fall, in year-on-year terms, during the first two quarters of 2008. (Figure 6) Albeit the fact that retail credit growth rate started first declining before the financial crisis, in 2007, suggesting that there may be other factors involved in this trend, it was after the last quarter of 2007 that this decline became more visible.

[38] First quarter of 2011

Figure 6

Retail and Corporate Credit (YoY growth rate)

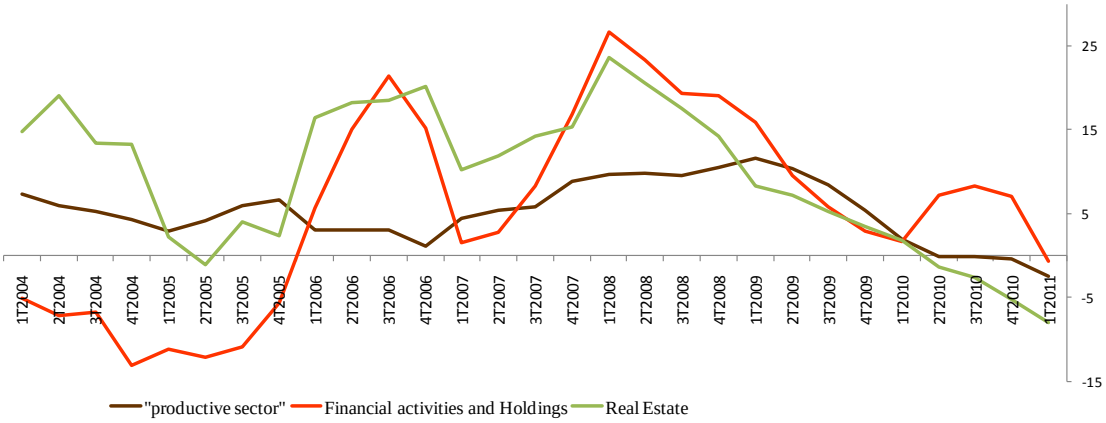


Source: Own calculations using data from Bank of Portugal
Notes: Includes titularized credit and excludes Public Administration

Credit to the "productive sector" (Figure 7) appears as the most stable variable, and the last to fall in terms of year-on-year growth rate. After a period of steady growth, until the first quarter of 2009, it started declining, and growth rates became negative after the third quarter of 2010. Credit to financial activities, on other hand reached a pick in 2008, after the beginning of the financial crisis, and presented a significant decrease in 2009. Regarding credit to real estate activities, one can see that it shows a steady decline after the first quarter of 2008.

Figure 7

Corporate Credit by area (YoY growth rate)



Source: Own calculations using data from Bank of Portugal
Notes: Excludes titularized credit and Public Administration

In general, a brief analysis of available data on credit from 2005 to the beginning of 2011 leads to the conclusion that there was in fact a steady reduction in the growth of loans supplied from resident credit institutions to corporations and households after 2007.

The impact of the financial crisis on credit activity was particularly visible after 2010, when, for the first time since 2004, the amount of credit to corporations started declining in absolute terms. When looking at credit growth by business area, one can see that the reported decline could have been greater if it was not for the positive credit growth to financial activities.

3.2. Interest Rates

Between 2005 and late 2007 the ECB reference rates increased gradually. This rate started to decline after 2007, as part of the European Central Bank monetary response to the financial crisis. After October 15th, the Refi decreased from 3,75% to 2%, in January 2008, and stayed under 1.5% until 2011. Only in July 2011 the ECB raised its main refinancing rate, but only by 0,25 pp. (see Appendix A).

Table 3 resumes the impact of ECB monetary policy on interest rates in the Interbank Money Market. Both overnight and Euribor rates increased their average values between 2007 and 2009, albeit the sharp decline in Refi[39] during the same period. However, after 2009 the IMM rates started to decline, reflecting the ECB monetary policy in interest rates.

Table 3

RATES IN THE IMM

	OVERNIGHT	EURIBOR		
		3M	6M	12M
2011	1,14			
2010	0,502	0,814	1,084	1,353
2009	0,714	1.218	1.429	1.610
2008	3,899	4,634	4,716	4,814
2007	3,964	4,278	4,352	4,450
2006	2,906	3,091	3,247	3,451
2005	2,130	2,153	2,205	2,305

Source: European Central Bank

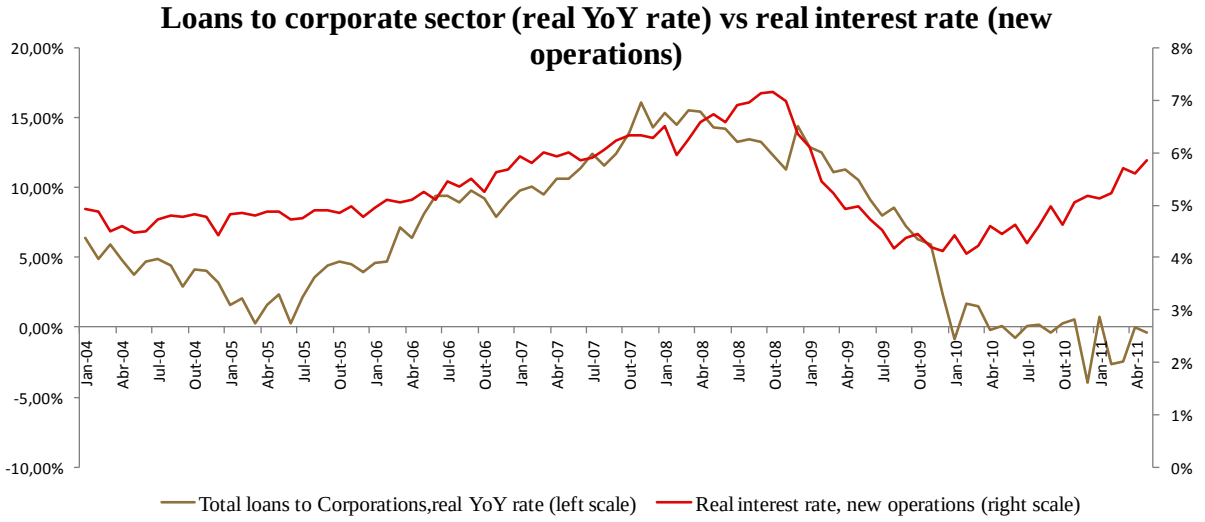
Real interest rates charged by banking institutions to the private sector are plotted in Figure 8 and 9, against the growth rate of total loans to corporations and households, in real year-on-year terms.

Active (real) interest rates associated with loans to corporations followed, somehow, the behaviour just reported for IMM rates. After a period of steady growth, interest rates started

[39] Such divergence is mostly related to the generalized mistrust climate in financial markets, as financial institutions became aware of the real amounts of "toxic mortgage securities" placed in uncertain parts of the financial system.

declining sharply in 2008. However, active rates to corporate sector initiated a new upward movement after January 2010, whereas rates in IMM were still in a declining trend by April 2011. This indicates that the *spread* charged by the banks in Portugal increased considerably since the first quarter of 2010.

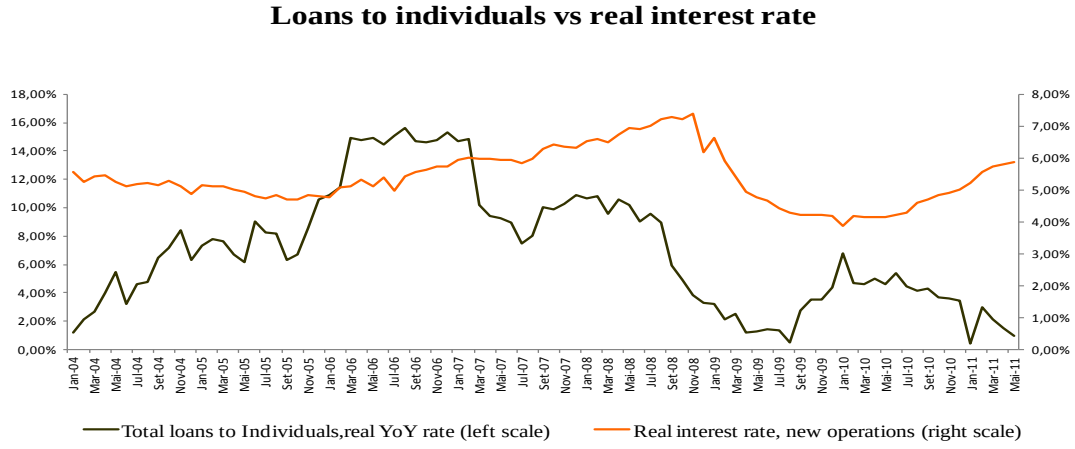
Figure 8



Source: Own calculations using data from Bank of Portugal
Notes: Includes titularized credit and excludes Public Administration

Active (real) interest rate charged to households was also increasing steadily until January 2009. It then declined from around 7,5% to 4% by the beginning of 2010, when it started to rise again. As in the case of corporate credit interest rates, *spreads* between IMM rates and active interest rates started to increase in the retail market mostly after January 2010.

Figure 9



Source: Own calculations using data from Bank of Portugal
Notes: Includes titularized credit and excludes Public Administration

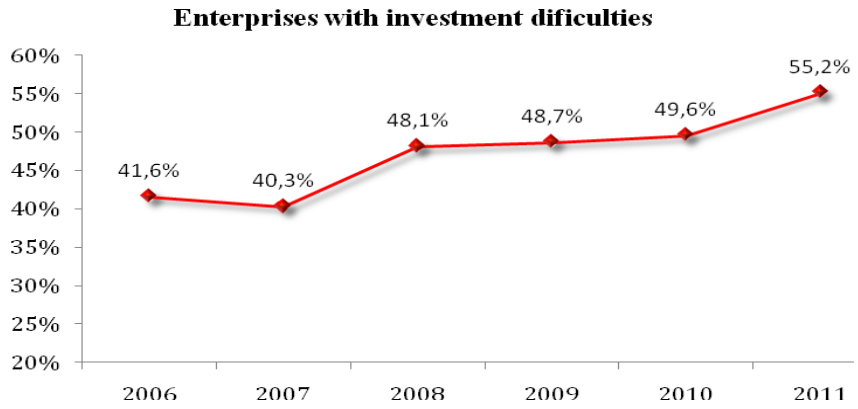
The available data suggest that interests were not the main factor behind the decline in retail and corporate credit growth rates between October 2008 and October 2009. Such trend in credit growth might be explained by other reasons, arising both from credit supply and demand sides. As it will be showed further on, banks were not facing such serious problems in accessing funds in the wholesale markets at this stage; hence, the decline in credit growth may be explained by demand side reasons. On the other hand, the way both variables started diverging after January may suggest that the upward movement in interest rates caused the deceleration in retail and corporate loans. Comparing the behaviour in real interest rates charged to individuals and corporations with IMM rates, one could conclude that banks increased their spreads charged to costumers after 2010. It is also possible that banks could not borrow money from the IMM, independently from the interests charged. This might then explain part of the decline in credit growth rates.

3.3. Investment Survey

The National Statistics Investment Survey[40] constitutes an important source of information concerning the way enterprises see their own access to bank credit. The opinions expressed in this Survey may help to determine whether the reasons behind the decline verified in credit to non-financial sector.

As expressed in Figure 10, the total number of enterprises assuming to be facing investment limitations increased from 40,3%, in 2007, to 55,2% in 2011.

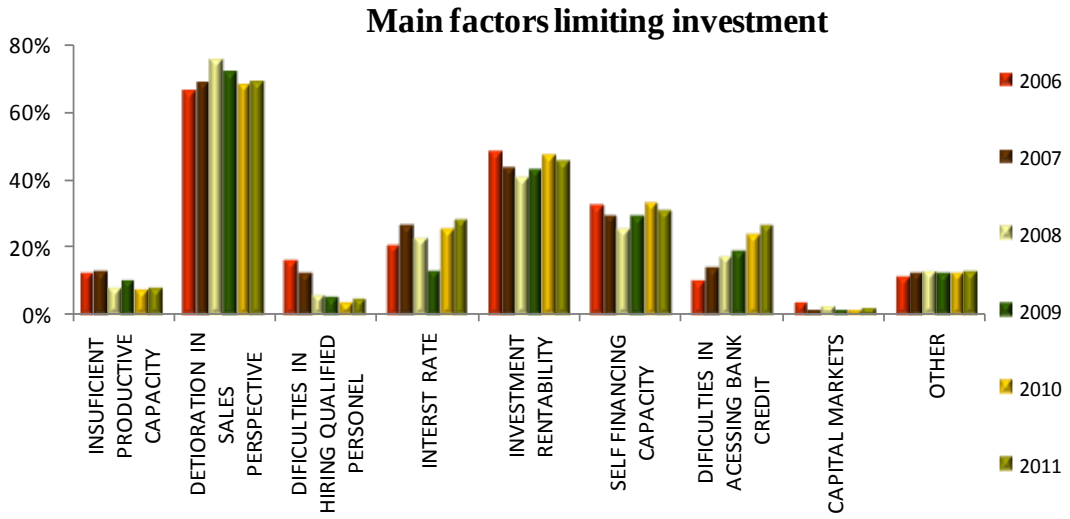
Figure 10



Source: Based on *Inquérito de conjuntura ao Investimento*, INE
Note: no available data for 2005

[40]The Investment Survey is based on a large sample of firms with more than 4 workers, that belong to activities of NACE 13 to 74 and that have a yearly turnover of, at least, €125000. Firms of the referred activities with more than 199 workers are exhaustively surveyed.

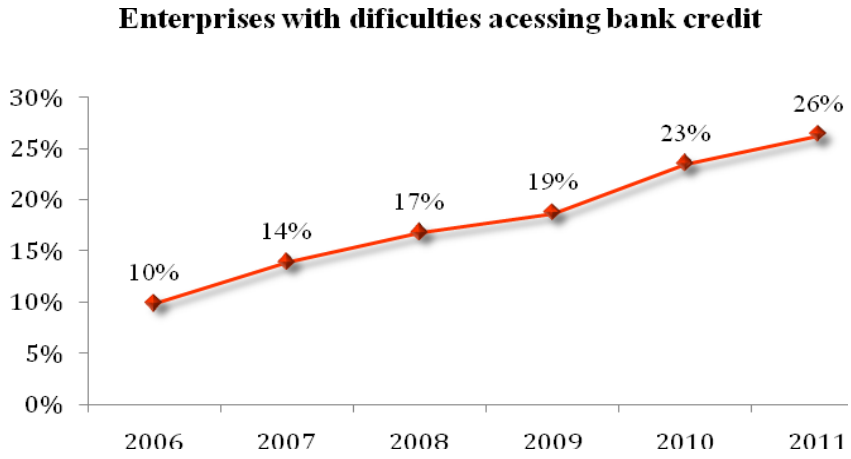
Figure 11



Source: Based on *Inquérito de conjuntura ao Investimento*, INE
Note: no available data for 2005

However, the access to bank credit, although still fourth in the rank, was unequivocally growing in importance since 2006 as one of the main factors limiting investment (from 14,6 to 26% in 2011): see Figure 12 and Figure 13.

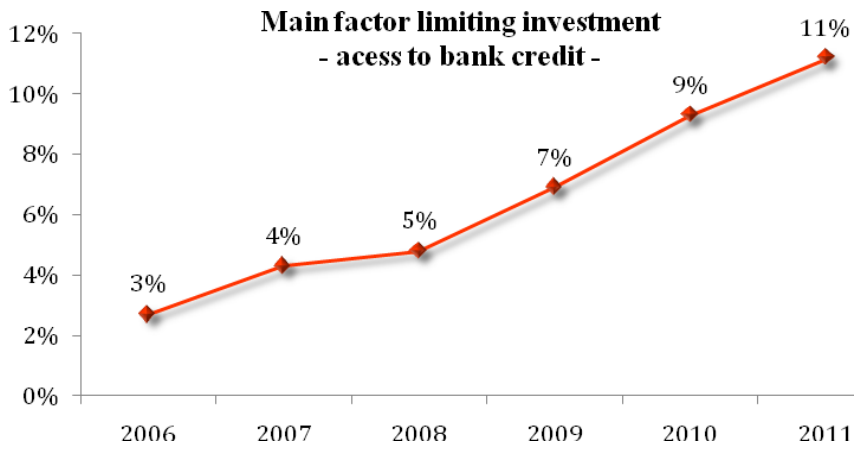
Figure 12



Source: Based on *Inquérito de conjuntura ao Investimento*, INE
Note: no available data for 2005

For the period 2006 - 2011, the number of firms identifying the access to bank credit as their *main* limitative factor for business investment more than tripled, from 3% to 11%. These are record levels, even when considering longer periods – e.g. between 1999 and 2003, when the percentage of firms indicating access to bank loans as their main limitative factor to investment was between 3% and 4,4% (Figure 13).

Figure 13



Source: Based on *Inquérito de conjuntura ao Investimento*, INE
Note: no available data for 2005 and 2005

3.4. Bank lending Survey

The Eurosystem developed the Bank Lending Survey in 2003. The main objective of this quarterly survey is to "enhance Eurosystem's knowledge of financing conditions in the euro area" and to "complement existing statistics in retail bank interest rates and credit with information on supply and demand condition in the euro area credit markets and lending policies of euro area banks."

The survey addresses a number of qualitative questions to senior loan officers of a representative sample of euro area banks. The sample group comprises around 90 banks from all euro area countries, five from Portugal (usually the same group of banks we use in our sample).

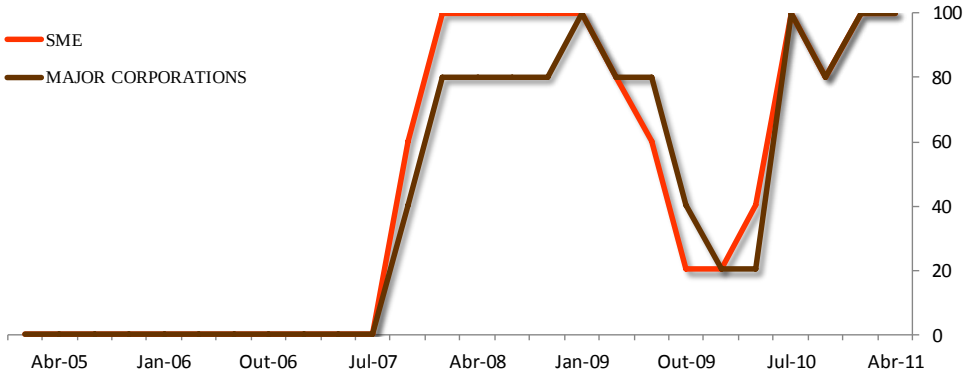
The results of the Bank Lending Survey of the five biggest banking groups since 2005, and published by the Bank of Portugal, suggest there has been a strong tightening of the criteria for the approval of loans to corporations but also to individuals since October 2007 (Figures 14, 15 and 16).

According to the survey, criteria for corporate credit approval became more restrictive in the course of 2008 and 2009. Banks reported a substantial decrease in the approval requirements for loans starting from the last quarter of 2009 until the second quarter of 2010. However, after the second quarter of 2010, there was a new increase in restrictiveness, particularly associated with a deterioration of access conditions to market financing. Figure 14 and 15 show that most banks declared to be relatively more restrictive in the case of loans to small

and medium enterprises SME and long term loans, compared with loans to major corporations and short term loans.

Figure 14

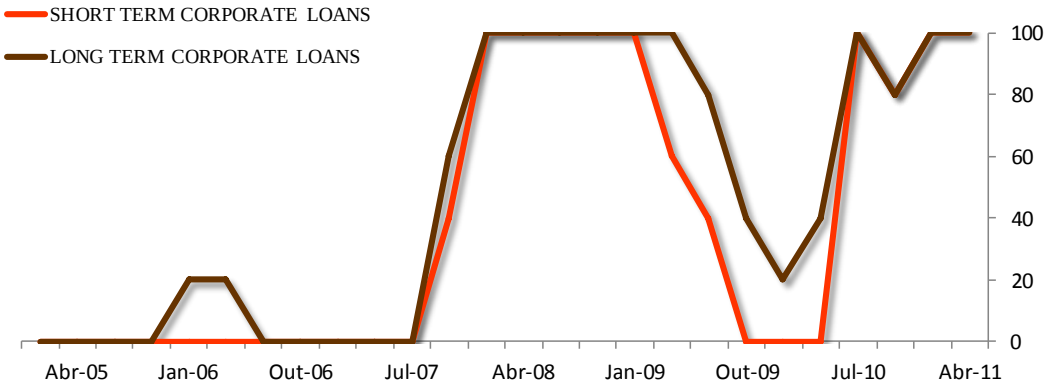
% Banks declaring to be more restrictive in credit supply



Source: Based on *Inquérito aos Bancos sobre o Mercado de crédito*, Banco de Portugal

Figure 15

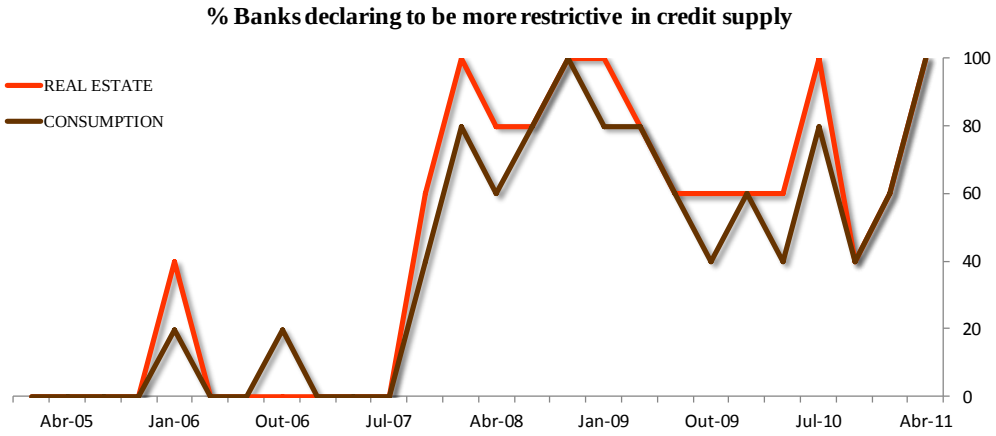
% Banks declaring to be more restrictive in credit supply



Source: Based on *Inquérito aos Bancos sobre o Mercado de crédito*, Banco de Portugal

Regarding households, there is also a clear tightening of the criteria for approval of loans, both for housing finance and consumption.

Figure 16

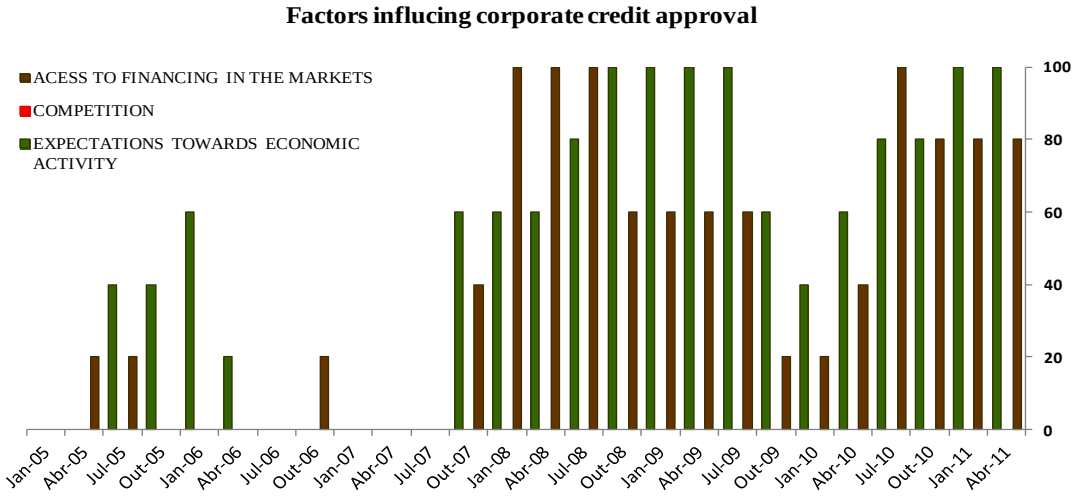


Source: *Inquérito aos Bancos sobre o Mercado de crédito,* Banco de Portugal

The findings of the survey show that the main reasons for more stringent terms on corporate credit approval were the rise in financing costs (access to financial markets) and a negative assessment of the prospects for the economy (Figure 17). The apparent less negative perception of banks about both factors between October 2009 and July 2010 might explain why the squeeze on the level of restrictiveness in credit approval criteria verified between July 2009 and April 2010 was less pronounced.

Evidence seems to support the general idea put forward by the new-Keynesians that banks (in general) tend to fail to internalize the aggregate positive outcomes deriving from their own activity. In fact, as banks credit approval criteria became more stringent, because of the negative economic expectations, the aggregate reduction in the credit available in the markets might have contributed to aggravate the initial situation. This suggests that banks' natural responsiveness to the real economic conditions might be inherently pro-cyclical.

Figure17

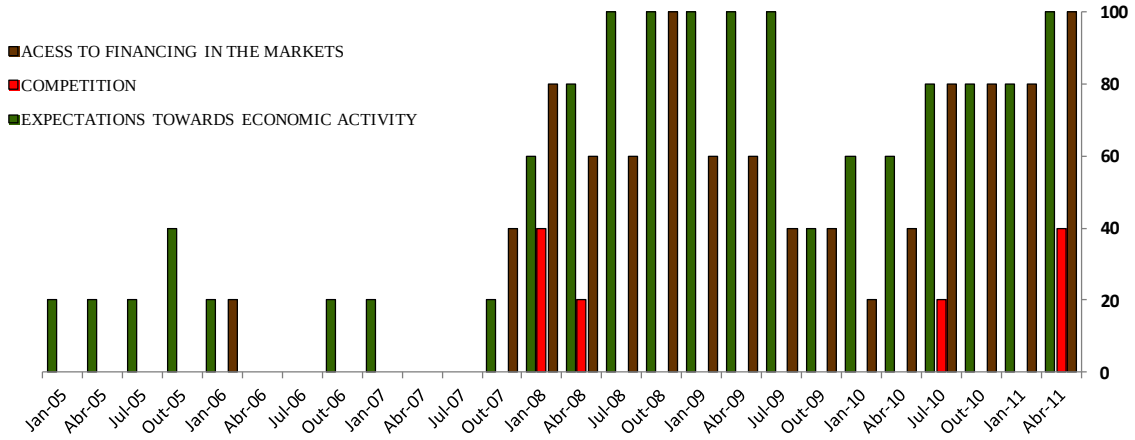


Source: *Inquérito aos Bancos sobre o Mercado de crédito,* Banco de Portugal

In terms of individual loans (see Figure 18), besides the reasons mentioned above, the findings of the survey show that the risks associated with the housing market prospects have had a negative impact on the granting of credit. Also mentioned were the risks of greater difficulty to individuals to pay back loans and the risks that are inherent in guarantees. As a result, according to the Financial Stability Report (Banco de Portugal, 2008), "banks started demanding stronger guarantees for housing credit, lower loan-to-value ratios and a higher cost for each unit of risk is being charged". Also, in terms of credit for consumption and other purposes, "the five major banking groups in the survey reported that their policy reflected the rise in credit risk carrying over to the spreads on offer for new operations, along with commissions and other changes not related to interest" (ibid.).

Figure 18

Factors influencing individual credit approval



Source: *Inquérito aos Bancos sobre o Mercado de crédito,* Banco de Portugal

3.5. The financial situation of the banking system

During the years previous to 2007 the world economy was growing strongly, despite the slowdown verified in the United States activity. This growth was followed by relatively low levels of volatility in the financial markets. Indeed, in the beginning of 2007 stock markets worldwide were experiencing successive historical peaks.

According to the Financial Stability Report (Banco de Portugal, 2008), in the course of 2006 the banking system was still highly profitable with a comfortable solvency situation..

Notwithstanding the favourable development in the economic activity in Portugal before 2007, the strong increase in the degree of corporate and households' financial leverage that

occurred during the previous decade was often considered a major vulnerability in the Portuguese economy. This is especially true considering that the growth in indebtedness was based on an increasing recourse by Portuguese banks to international financial markets.

Indeed, Portuguese banks' sensitiveness to changes in international financial markets became increasingly important as their market financing enlarged and diversified by instrument type, including money market financing, the issuance of debt securities and the securitization of loans. Therefore, as noted in Banco de Portugal 2006 edition of the Financial Stability Report, "In periods of increased volatility and lower available liquidity in the markets, banks may have to face an increased financing cost or even have difficulties in refinancing liabilities maturing in the very short term without jeopardizing the smooth operation of credit activity" (Banco de Portugal, 2006, p.11).

Despite the potential vulnerabilities identified in Portuguese banking system in the course of 2006, developments in market indicators of Portuguese banks were generally positive. The valuation of Portuguese banks' shares was still higher than that recorded by banks in the euro area or in the US, and financing costs in international debt markets remained at low levels. Additionally, the assessments made by rating agencies of the major banking groups in Portugal were clearly positive during this period (see figures 137, 138, 139 in Apendix F).

In 2006, the Financial Sector Assessment Program (FSAP) conducted by the IMF in Portugal, concluded that "Portuguese banking system is "sound, well managed, and competitive" (Banco de Portugal, 2006).

It is widely known that the financial crisis, which began in 2007, and became more serious in September 2008 after the bankruptcy of Lehman Brothers, led to a prolonged and significant disruption in the financial systems worldwide, causing a deep economic recession.

The Portuguese banking system managed, during the first moments of the financial crisis, to obtain the financing needed to continue its lending activity, as seen in section 5.1. This was possible due to a positive trend in resources from customers, but also due to the measures taken by States and central banks to mitigate the consequences of the liquidity shortfall in financial markets. These measures included mainly State guarantees underpinning banks' debt issues and changes in the Eurosystem monetary policy operations, such as a decrease in Refi.

In the course of 2008 and early 2009, Portuguese banks faced serious problems with financing in wholesale markets, especially for longer terms operations. Notwithstanding, according to the Financial Stability report published by the Banco de Portugal (2008), it was still possible for banks in Portugal to issue non-guaranteed debt in the first quarter of 2009.

With the first impacts of the financial crisis in Portugal, Banco Português de Negócios was nationalized and Banco Privado Português was declared bankrupted. Although both these situations were enhanced by the liquidity crisis in financial markets, the main causes of such problems in BPN and BPP reside mainly on illegal operations taking place in both banks.

In short, the Bank of Portugal considered that, during the first year after the financial crisis began, "Portuguese banks have, on the whole, managed to shrug off the impact of the financial crisis and have been able to keep their role as financial intermediaries" (Banco de Portugal, 2008, p. 66).

In general terms, debt securities comprised the main source of financing for banks during 2009. This was possible due to the slight relief felt in international wholesale markets, reflected in more favourable conditions both on risk premiums demanded by investors and quantities issued.

After 2010, the financial crisis entered in a different phase. Increases in public deficits and debts of European countries led to an increase in sovereign risk discrimination among euro area countries. This fact was particularly visible in the peripheral economies, such as the Portuguese, especially after the end of April 2010. This risk differentiation caused an increase in investors' aversion to both public and private debt, affecting banks' liquidity situation. As referred in Banco de Portugal 2010 Edition of its Financial Stability Report, "there were signs of dysfunctionality over the whole spectrum of debt market maturities, including highly significant increases in yields and difficulties in placing issues also in private debt markets, particularly in the case of banks" (Banco de Portugal, May 2010, p. 10). In order to control the situation in financial markets, the ECB announced several policy measures, including the acquisition of public and private debt as well as the prorogation of the undertaking of fixed rate full allotment credit operations with 3 and 6 months maturities.

Hence, the resources obtained from central banks played a growing role in financing banks during the course of 2009, 2010 and 2011.

In general, Portuguese banks continued to expand their activity in the first quarter of 2010. This was due, mainly, to activity related to financial markets, while activity related to customers (lending and borrowing) declined.

In November 2010, the Bank of Portugal reported greater difficulties for banks in their access to financing sources and predicted a contraction of banks' activity which would lead to "an acceleration of the private sector's deleverage process. (Banco de Portugal, 2010a). In fact,

quantitative restrictions[41] faced by Portuguese banks on access to interbank money market caused a sharp increase in the use of ECB resources after May 2010. According to the Financial Stability Report, "Portuguese banks failed to place debt issues in international financial markets after the first quarter [of 2010]." (Banco de Portugal, 2010a).

According to the Bank of Portugal, the expansion verified in Portuguese banking activity was mostly guaranteed by Portuguese banks' recourse to ECB's monetary policy operations. In a period of financial crisis, this expansion, in terms of total assets, was explained by the increases in the purchase of public debt securities along with the rising importance of loans to central government.

With regard to credit, in spite of the growing demand for loans from households and corporations (stimulated by the persistent low interest rates, by the acceleration private consumption and the need for debt restructuring and inventory and working capital financing), banks increased their restrictiveness in terms of credit supply.

The first months of 2011 did not change the previous situation. On the contrary, the pressure on the borrowing costs of the Portuguese State increased and bank's access to international wholesales market remained practically closed. In such context, banks were left with no option other than making intensive use of ECB funds and to engage in a restructuring operation concerning their own balance sheet structures. This included reinforcements of capital, sales of assets, an attempt to intensify deposit taking from customers and a slowdown of lending. On the other hand, credit risk continued to increase slightly in 2010, especially in what concerns loans to households for consumption and other purposes and to non-financial corporations.

According to the Bank of Portugal, one of the Portuguese banking system's main vulnerabilities relies in the pressure associated with liquidity and financing risk, "in a context of strong restrictions on access to the international wholesale debt markets". In such context, "domestic banks, over the short term, are expected to continue to tighten credit standards, reflecting an increase in credit risk and the gradual deleveraging" (ibid.).

[41] Restrictions in accessing international wholesale markets may be reflected, not only in terms of interest rates – price of funds – but also in terms of quantity of securities that markets are willing to absorb.

3.6. Concluding remarks on the Impacts of the Financial crisis in the Portuguese economy

The analysis performed in this section confirmed the first hypothesis put forward in the beginning of the section that credit to non-financial corporations and households declined substantially as a consequence of the economic crisis. This trend in loans to private sector started mostly in 2008, but it does not seem to be over by the time this dissertation is being written.

The financial nature of the crisis until the end of 2009 explains the decline in banks access to financial markets and the contraction in lending supply. This is not the place to conduct a detailed discussion of the beginning and the causes of the financial crisis. Notwithstanding, is important to emphasize that, as the crisis unfolded, it assumed the characteristics of a liquidity (preference) crisis. During this period, most financial agents preferred to hold liquid assets instead of increasing their lending supply. In the presence of generalized distrust and ignorance about their counterparts' financial conditions, banks (as other financial institutions) were not capable to correctly assess risk and, therefore, prices could hardly reflect the economic fundamentals. After 2009, when the sovereign problems replaced the financial crisis, reasons underlying banks financing restrictions changed. Other factors, such as the economic recession, or the international market's assessment of sovereign risk played an important role. Ultimately the "assessment of market players" of the real financial conditions of each individual institution might have had a greater influence in determining banks' access to international financial markets.

Our second hypothesis was that the decline in loans to the so-called "real economy" was mainly explained by supply side factors. In fact, notwithstanding a considerable reduction in demand for loans resulting from the poor performance of the economy in recent years, together with the fiscal adjustment that is being implemented by successive governments, the strongest reasons behind such decline appear to be on the supply side.

As it was made clear in section 3.3., firms in Portugal increasingly point out these difficulties in accessing bank loans as a major limitative factor for investment. On the other hand, surveys to banking groups (section 5.4.) in Portugal show that, all banks applied more restrictive conditions in their lending policies. Such findings provide some support to those theories emphasizing the role of banks as important sources of finance to the economic activity. According to the analysis performed in section 3.6., based on Financial Stability Reports released by the Bank of Portugal, the deterioration of access conditions to market financing

and banks' liquidity positions were the main contributors to the adoption of more restrictive credit standards.

In the next section we turn to the main question addressed in the Introduction – "Did *Caixa Geral de Depósitos* play an important counter cyclical role during the last financial crisis, started in 2007?". The next section will look over credit data concerning each of the five biggest banks operating in Portugal, with the main purpose of finding out if there was any difference in lending policy performed by the State bank – CGD – when compared with their private counterparts operating in the country.

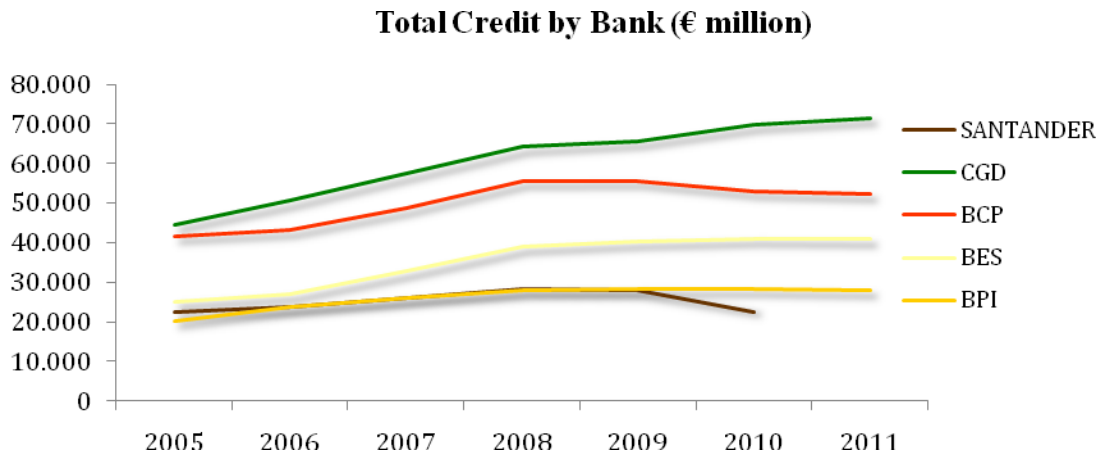
4. Bank Ownership and lending behaviour

4.1. Bank lending evolution

In absolute terms, Caixa Geral de Depósitos kept, for the whole period under analysis, the highest share of credit. However, it seems clear that the gap between Caixas' and the remaining banks' total amounts of credit increased, especially after 2009.

According to the information available in their Annual Reports, the total amount of loans granted by all five institutions grew steadily between 2005 and 2007 (Figure 19). In 2008, credit recorded a marginally positive change for all banks, except for Santander, which was already reducing its loans. After 2009, BCP and Santander decreased considerably their total credit, whereas. Caixa Geral de Depósitos, on the other hand, appears to be the only bank with a consistent increase in credit during the entire period and especially after 2009. In general, the major trends in credit granted by these banking institutions follow the general behaviour already reported in section 3.1. Credit growth showed a strong deceleration after 2008 that turned into negative growth rates in the course of 2010 and 2011.

Figure 19



Source: Based on Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP

Growth rates (see table 4) plotted in Figure 20 allow for a better understanding on the lending behaviour of the five banks. Notwithstanding a certain degree of synchronization in credit growth rates between 2007 and 2009 across all the banks, individual bank lending policies followed heterogeneous paths, especially before 2007 and after 2009.

In 2009, credit growth in every banking institution went from highly positive rates to a situation of stagnation, or even negative growth rates. CGD showed the first reduction in credit growth, from 11,8% in 2008 to 2,5% in 2010, but all other banks changed drastically their lending behaviour in the same vein. After 2009, all private banks showed negative growth rates in their credit levels, leading to a real reduction in the total amount of loans given to the economy.

Caixa lending behaviour before 2009 is more stable, but consistent with the trend in loans by private banks. However, after 2009 there is a marked distinction between Caixa and the remaining credit institutions. While all other banks reduced their lending, CGD increased its lending by 6,3% in 2010 and 2,5% in 2011. Notwithstanding the deceleration in credit growth, CGD was the only bank exhibiting a positive rate of growth of loans to the economy.

It should then be noted that CGD clearly followed a different credit policy with regard to its private counterparts after 2009, albeit its moderate magnitude

Table 4

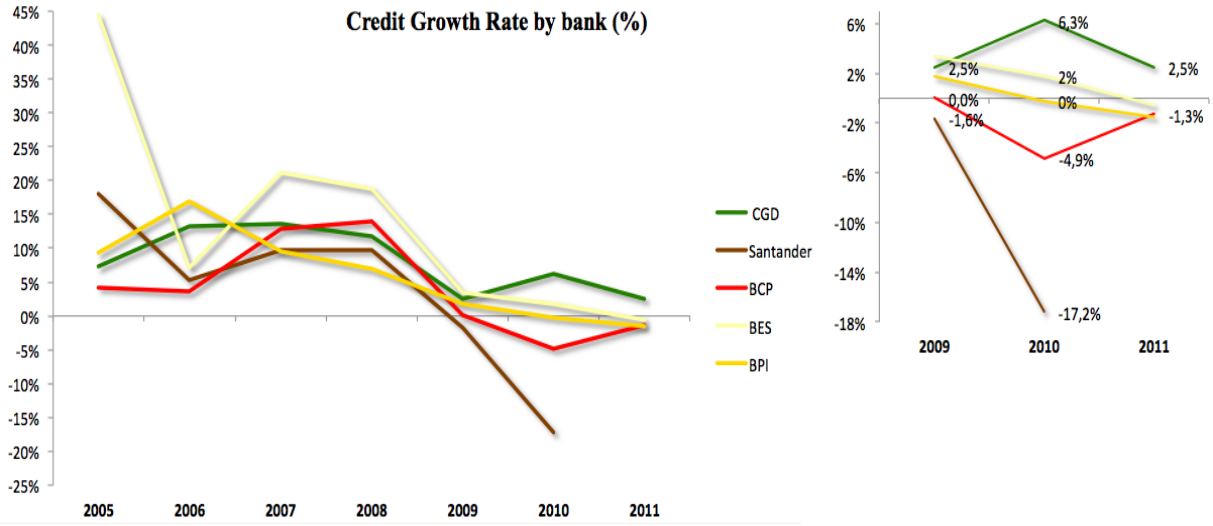
CREDIT GROWTH RATE BY BANK OWNERSHIP

	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**[42]
CGD	7,2%	13,2%	13,6%	11,8%	2,5%	6,3%	2,5%
Santander	18%	5,3%	9,7%	9,8%	-1,6%	-17,2%	n.a.
BCP	4,2%	3,6%	12,8%	14,0%	0,0%	-4,9%	-1,3%
BES	44%	7%	21%	19%	3%	2%	-1%
BPI	9%	17%	9%	7%	2%	0%	-2%

Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP

[42] First quarter of 2011

Figure 20



Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP
Note: There is no available data for Santander in 2011.

The values of total amounts of credit published in banks' balance sheets under the caption "credit to customers" offer a straightforward and very useful information about total amounts of credit granted by each individual institution. However, in spite of the choice for individual (instead of consolidated) information, this general caption may hide or contain other types of credit, such as securitized credit, that will stay out of the balance sheet, or credit to foreigners. Therefore, it might be useful to identify such types of operations in order to get a more reliable picture of the magnitude of loans actually granted to residents.

Because banks follow different methodologies concerning the publication of financial information, it is not possible to establish a perfect direct comparison between variables of credit. Indeed, it is rather difficult to identify the origin of securitized loans, or even to have a clear access to data on securitization operations. Available information on credit (by destination) and securitization levels by banks is plotted in Figure 21.

In what concerns securitization operations, clear conclusions can be drawn only for CGD, BPI and Santander. For the remaining, securitized credit is included in Domestic and Foreign Credit variables. As one can see, CGD increased considerably its amount of securitizations. This may suggest that the total amount of credit granted by CGD in the past five years is not completely reflected in the balance sheet. However, it should be noted that securitized credit by CGD could also have been granted to foreign customers, instead of residents. If this is the

case, the impact of such practice would be neglectable in terms of the analysis performed in this dissertation. The available information does not allow for a clear conclusion on this[43].

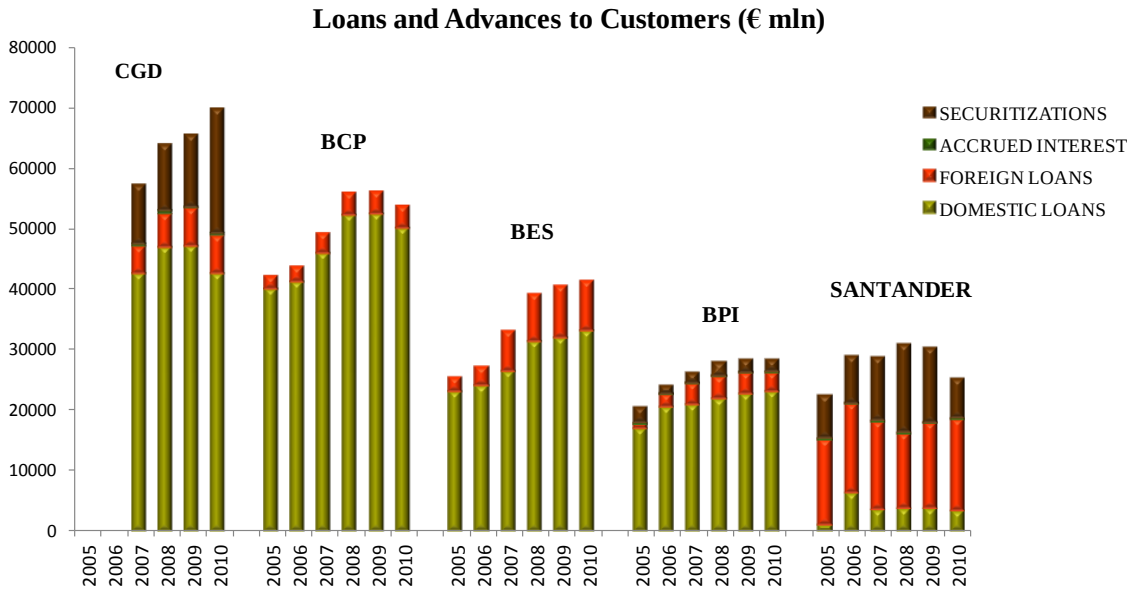
A second aspect that is worth mentioning concerns the distinction between loans to foreigners and loans to residents. In reality it may be the case that the growth in total credit by a certain bank was mainly due to its activity, in Portugal, related to foreign customers or even due to the activity of branches working outside the country (included in individual accounts). In order to extract the final value of credit to domestic customers, total credit should be cleansed of those loans granted to foreigners and should included loans to residents that were subject to securitization. As stated before, it not possible to perform the latter in those cases for which securitizations are not included in total amounts of credit.

According to the information published in Annual Reports, credit to foreigners represents a very small part of the total credit granted by any domestic bank. However, it is possible to identify a slightly growing trend in all banks for this type of loans, particularly in the case of BES. Nevertheless, it does not seem likely that loans to foreigners might have had a large (diverging) impact in total amounts of credit.

Santander is a visible exception that requires a distinct analysis. Apparently, credit to foreign customers plays a major role in total credit granted by Santander and, albeit the increase in loans to residents in the course of 2007, these loans have been decreasing in amount since then. However, high securitization levels performed by Santander might be hiding other patterns in the relation between domestic and foreign credit.

[43] Remember that, by transforming credit in debt securities – just like a mortgage backed securities – banks are capable of moving assets off their balance sheets.

Figure 21



Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP
Note: Corresponds to Domestic and Foreign loans + loans subject to securitization carried out by the banks + accrued interests. Excludes: corrections of the amount of hedge assets + commission relating to amortised cost (net) + overdue loans and interests + impairment losses. Securitizations include. Non subordinated debt securities + bonds + commercial paper + subordinated debt securities

An alternative way to study banks' credit policies is to look at the evolution of loans according to sector of activity

In general, Bank of Portugal reports some differentiation in the sectoral growth profile in 2010, in the context of a cross-cutting deceleration of growth in loans, especially to non-financial corporations.

Once again, it is difficult to establish a direct comparison between banks, in individual terms. Notwithstanding, common features in accounting methods allow for some conclusions (for available data on credit by business sector see Appendix B).

Loans conceded by CGD show a positive growth (in million euros) for most sectors between 2007 and 2010. Despite its small reduction in 2010, loans to "Agriculture, Industry and Commerce" sector as a whole represent around 21,7% of all loans, still more in importance than in 2007 (19%). "Mortgage loans", although growing at a positive rate, lost weight in total credit portfolio. Also "real estate" activities conserved their negative growth trend.

It should be noted that the negative growth trend in some sectors was offset by the acceleration in loans to "Financial Activities". Although a first explanation for such behaviour could point at the massive capital injections into BPN, the nationalized bank (see Appendix C), a closer look at Caixa's Annual Report will show that only a minor part of this caption is reported as being related to BPN[44]. CGD provides no additional information on the real destination of such increase in loans to "financial activities". Nevertheless, it is likely that these funds were channelled to domestic financial institutions.

In general, the main structure of loans granted by Millenium BCP remained rather unchanged since 2007[45].

The level of desegregation in data provided by BES does not allow for the same type of analysis performed above. However, it is still possible to get a glimpse on BES loan structure.

The growth rate of loans granted by BES follow the "typical" trend: positive growth rates in loans to both individuals and enterprises until 2008 and a drastic reduction in the course of 2008. It should be noted that, in 2009 and 2010, loans to enterprises became relatively more important in BES portfolio when compared to 2007. However, because we are dealing with aggregate data, this trend can be related both to credit to manufacturing or to loans to other financial institutions.

In what concerns the amount of loans supplied by BPI it should be noted that total increase in credit in the course of 2009 was due to loans to individuals (mortgage plus consumer and others).

As noted before, Santander performed a major reduction in granted loans, starting in 2009 but mostly in 2010. In the course of 2009 this trend was explained mainly by reductions in loans to "Agriculture, Industry and Commerce" and to "Financial Activities", while mortgage credit continued increasing. However, in 2010, there was a marked contraction in "Mortgage" loans both in absolute and relative terms, followed by a small increase in loans to "Agriculture, Industry in Commerce".

4.2. Concluding remarks on bank ownership and lending behaviour

The analysis performed in the previous section allowed confirming the main hypothesis underlying the present dissertation.

[44] Loans and capital injections related to BPN are registered as "loans to other credit institutions" and, therefore, are not included in "credit to customers".

[45] Loans to financial activities are not identified as such in BCP Annual Report.

As showed clearly in figures 19 and 20 and Table 1, CGD behaviour in terms of credit policy clearly stands out after 2009. In the course of 2009, Caixa was in fact the only bank increasing the amount of credit granted to the economy. By 2010, when most other banks were already contracting their credit supply (in absolute terms), loans supplied by CGD increased 6,3%.

Available data on credit by business sector showed that CGD continued financing families and enterprises after the onset of the financial crisis (particularly in 2008). As stated before, Caixa also reported a considerable increase in loans to other financial institutions. Difficulties in accessing detailed information about such loans do not allow precise considerations on this. However, most straightforward explanation is that CGD was financing troubled financial institutions in the context of a generalized liquidity crisis.

In any case, the evidence suggests that Caixa was an important public resource, to increase the liquidity injections into the economy. It was, in fact, the only banking institution doing so. The amounts, magnitude and characteristics of such operations were (and remain) of course dependent on Caixas' financial limitations as well as on the political forces in power.

As it will be discussed further on this dissertation, Caixa's financing conditions suffered a serious degradation after 2009, as a consequence, among other reasons, of the sovereign crisis. As Caixa's financial limitations increase, its ability and/or capacity to expand its activity trough credit will depend more on governments' willingness (and capacity) to inject capital in the public bank.

Such decisions are, if anything, determined by political motives, depending on the government in charge.

5. Explaining lending behavior with recent evolution of the banking system

Banks' lending capacity is related to various factors, both exogenous and endogenous to their financial situation. As mentioned before, expectations on economic activity and access to financial resources are usually the main variables conditioning banks willingness to supply credit to the economy.

Expectations regarding economic activity are cross-cutting; however, their impacts on lending activity will differ according to the current financial situation of each bank. Everything being equal, banks' capacity to obtain resources through (1) customers, (2) other credit institutions, (3) issued debt securities, and (4) central banks, may determine their lending capacity. Therefore, a closer look into individual balance sheets (see Appendix D), especially into the liabilities structure, may contribute to understand the reported differences in banks lending behaviour.

5.1. Balance Sheet evolution

Notwithstanding the fact that market financing is relatively important for Portuguese banks, their main financing source continues to be customers' deposits. In all private banks, customers' resources represent between 30 and 40 per cent of all liabilities and shareholders' equity. In the case of Caixa, customer resources play a larger role in the financing structure, representing between 50 to 60 per cent of all liabilities.

According to their Annual Reports, BCP and BPI faced greater difficulties in maintaining their share of total resources from customers since the inception of the crisis. Caixa and BES, as well, experienced a minor decrease in resources from customers.

On the contrary, Santander's resources from customers increased in importance, from 28,9% of total assets in 2007 to 37,5% in 2011. Such behaviour may seem peculiar when compared with the remaining banks; however, this may be explained by the fact that Santander is a foreign bank. If we take in consideration the specific nature of the financial crisis after 2009, when it became strongly associated with a national fiscal crisis (as the risk premium on sovereign debt increased), the choice for foreign banks may be a rational reaction to expect from domestic customers.

However, it should be noted that, as Santander's customer's resources increased as a percentage of total assets, the relative weight of "loans and advances to customers" decreased

steadily. This may indicate that the relative increase in liquidity position was not taken by Santander to increase its supply of funds to the economy.

On other hand, "Loans and advances to customers" remained essentially unchanged in terms of their weight in total assets in the case of Caixa Geral de Depósitos. However, if we take in consideration the relative reduction in costumer resources mentioned above, it is possible to conclude that, in order to maintain the relative weight of credit in the balance sheet, Caixa might have had to rely more on other sources of financing.

The situation in the remaining private banks is somehow heterogeneous. In the case of BCP, "loans and advances to customers" decreased in importance in terms of total assets. However, the magnitude of the decrease in loans to customers was smaller than the one reported for customer resources. BES, on other hand, managed to somehow keep the same balance sheet structure in terms of relative weights.

Also in BPI the relative weigh of loans to customers decreased steadily after 2007. The evolution in resources from customers was, somehow, similar to the one performed by loans.

Let's consider now the remaining variables in the assets and liabilities side of the balance sheet. It is possible to find a downward trend in the relative weigh of "loans and advances to other banks" in all banks, except for Santander.

In what concerns other sources of financing, there is an expected and visible increase in deposits from Central Banks, especially after 2008. These correspond to a significant share of total liabilities in case of BCP, BES, and Santander. CGD has the second smallest proportion of central bank liabilities.

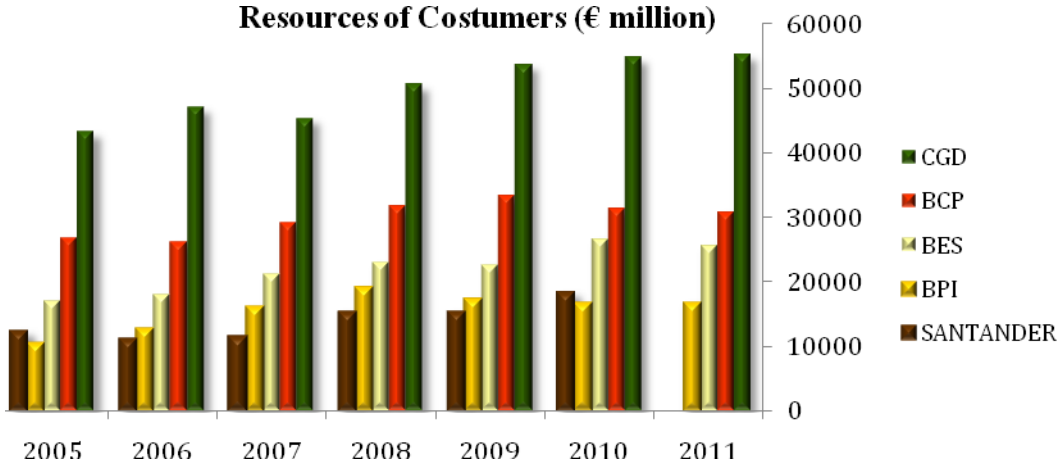
Regarding the liabilities structure, only CGD and Santander benefited from a relative increase in deposits from costumers. The evolution in the remaining sources of financing included in Caixa's liabilities structure was in line with the general trend. From this preliminary analysis, one could conclude that, with the exception of customer deposits, CGD does not seem to have benefited from special financing conditions when compared to other banks.

Next section offers a closer look into each one of these financing sources affecting the bank's lending capacity. Hopefully, this will help determining if CGD benefited from exceptional conditions justifying the reported increase in credit.

5.2. Resources of Customers

Caixa Geral de Depósitos visibly stands out in terms of total resources from customers (Figure 22). It is, in fact, possible to confirm that CGD benefited from a considerable inflow of deposits, as a result of the financial crisis, due to its "solid" image and underlying guarantee from the State. However, this did not imply a direct "transfer" in deposits from private to public banks. The amount of deposits was still growing in most private banks although at lower pace, especially between 2007 and 2009.

Figure 22



Source: Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP

Since 2007, as access to the international wholesale debt markets became more difficult, Portuguese banks sought to increase deposit-taking from their customer base. Albeit at marginally reduced levels, customer resources increased consistently in CGD after 2007. In fact, it is clear that CGD and Santander were the only banks facing strong growth in customer deposits between 2007 and 2009.

After 2009, deposits continued to growth in CGD (Table 5) although at much lower pace than in the previous years. Such slow down of the deposits in Caixa after 2009 it is not surprising. First, one should take in consideration that the crisis after 2009 assumed some distinct characteristics when compared to the previous period (2007-2009). The financial nature of the crisis, between 2007 and 2009, led to the generalized perception that all financial institutions were unstable. Hence, Caixas' public ownership might have had an influence in agent's risk perception, in benefit of Caixas' deposits. After 2009, this social perception of instability in

financial markets changed and new factors gained importance. As the sovereign crisis develops, Caixa lost part of its competitive advantage in relation to private banks.

But there are also other possible reasons explaining the slowdown in CGD deposits. It might have been caused by a decrease in CGD capacity to compete for deposits with other private banks (as consequence of its lending activity). The reduction in deposits growth can also reflect the reaction to an increase in the previous years.

Table 5

RESOURCES OF CUSTOMERS (% GROWTH)						
	2006	**2007**	**2009**	**2008**	**2010**	**2011**
CGD	9%	-4%	6%	11%	2%	1%
BCP	-3%	11%	5%	9%	-6%	-2%
BES	6%	17%	-1%	8%	18%	-4%
BPI	21%	27%	-9%	19%	-3%	0%
SANTANDER	-9%	3%	0%	34%	20%	n.a.

Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP

However, it should be noted that, by 2007, Caixa was the sole banking institution facing a negative trend in its customer resources (in real terms). This trend was completely inverted after the onset of the global financial crisis.

5.3. Resources of Central Banks

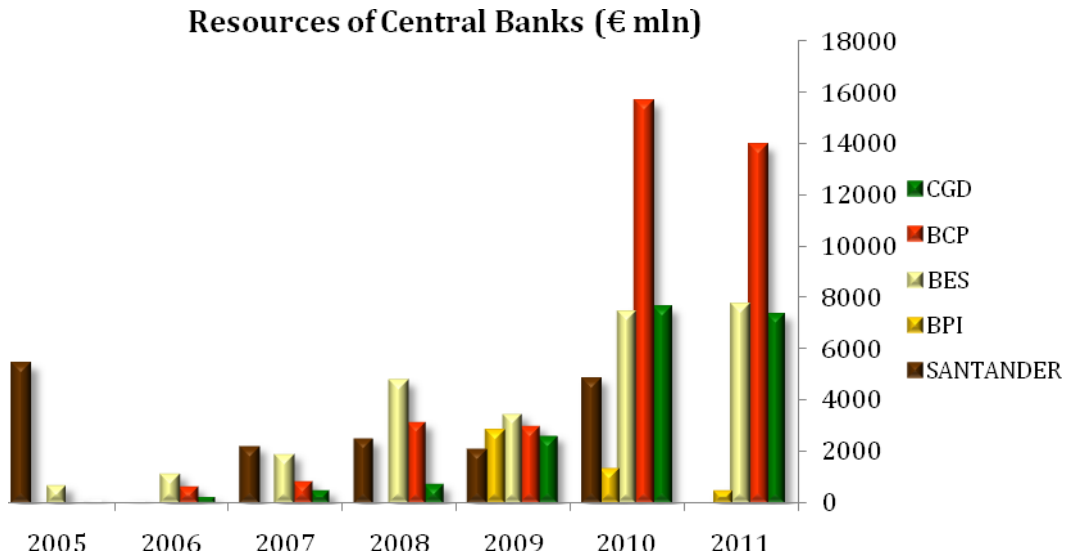
As stated in section 3.5., resources taken from central banks played an important role in financing institutions, especially after 2009. Against the backdrop of heightening tensions in international wholesale debt markets, the continuation of the expansion of banking activity, particularly since 2010, was largely dependent on access to ECB lending operations. Therefore, data plotted in Figure 23 reflects mostly the participation of Portuguese banking institutions in the ECB's liquidity injection operations (fixed rate tenders with full allotments at 3 and 6 months maturities, liquidity swap lines and a programme involving purchases of public and private sector euro area debt securities – Securities Market Programme).

Resources from central banks became particularly important after 2009, among these five institutions. BCP is, by far, the bank relying more on central banks resources[46]. BES and CGD

[46] Although a part of these resources belong to ECB, BCP also benefits from major injections from other central banks (e.g., the Central Bank of Angola).

also increased considerably their holdings of Central Bank deposits, but significantly less than BCP. Surprisingly, BPI reduced considerably its dependence on central bank's deposits since 2009[47]. In what concerns CGD, notwithstanding the increase in resources of central banks (mostly from ECB) in the course of 2010, these are not outstanding levels in relative terms, specially taking in consideration the dimension of Caixa compared to the other banks.

Figure 23



Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BC
Note: There is no available data for Santander in 2011.

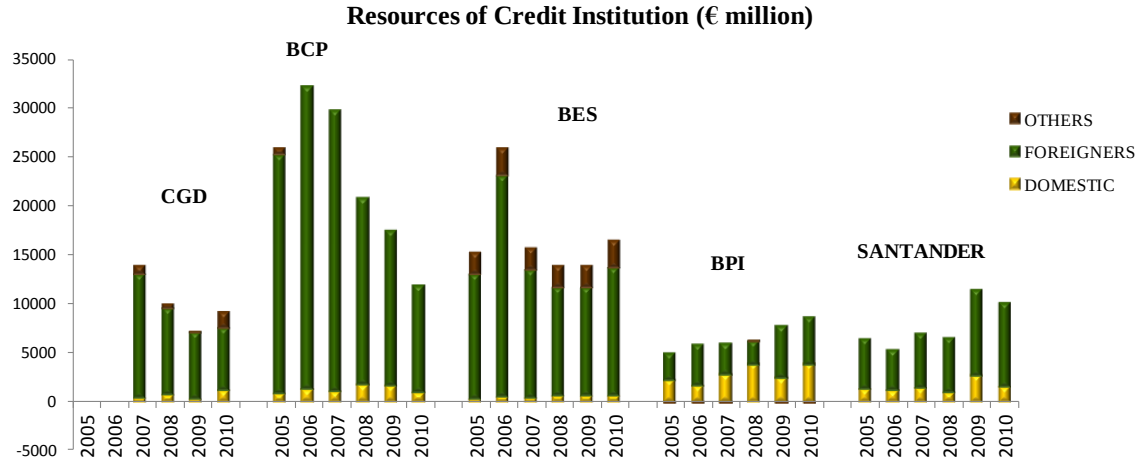
5.4. Resources of Other Credit Institutions

While ECB increased the availability of supplied resources through its liquidity injections operations, other credit institutions reduced their supply of funds as part of the deleveraging process. In other words, one could say that credit institutions reduced their supply of financial funds in the International Monetary Market (IMM) due to their *liquidity preference*. This was particularly true for Portuguese banks, which reduced drastically their "loans and advances to other banks" but also saw a reduction in the use of finance from other credit institutions. With one exception (BPI), domestic and non-domestic institutions recorded understandable differences in terms of their relationship with other market institutions. Whereas domestic institutions concentrated their assets and liabilities with central banks, and

[47] Although BPI is a Portuguese Bank, it has important foreign shareholders, mostly from outside the Eurozone and, therefore, not as affected by the sovereign crisis as the European institutions. This might explain why BPI did not have to rely so much on resources from Central Banks.

reduced their interbank exposure to banks abroad, non-domestic institutions increased their liabilities and, mostly, their assets in comparison to other institutions domiciled abroad.

Figure 24



Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, BCP, BES, BPI and Santander Totta

As one can see in Figure 24, Caixa Geral de Depósitos faced a sharp reduction in the amount of resources obtained from other monetary institutions, especially in the two years following the onset of the financial crisis.

Notwithstanding the slight increase in the resources obtained from domestic institutions, this remained a negligible part of total resources. Increase in "Others" reflects an increase in IMM funds.

The two exceptions to this general trend are BPI and Santander. Resources from other credit institutions grew steadily, although at lower pace, in BPI. The consistent growth in Santander's resources obtained from other credit institutions is less surprising than the previous values reported for BPI. As stated in numerous analyses, performed in the previous sections, Santander seems to have benefited from a better capacity of raising funds from foreign credit institutions[48], when compared with other domestic institutions operating in Portugal.

Finally, it should be noted, concerning Caixa's amount of resources from other market institutions, that, once again, these are not outstanding levels in relative terms, especially taking in consideration Caixa's dimension compared to the other banks.

[48] Santander's international dimension, such as its rather stable financial position in international markets, may have made easier for Santander to access international financing markets.

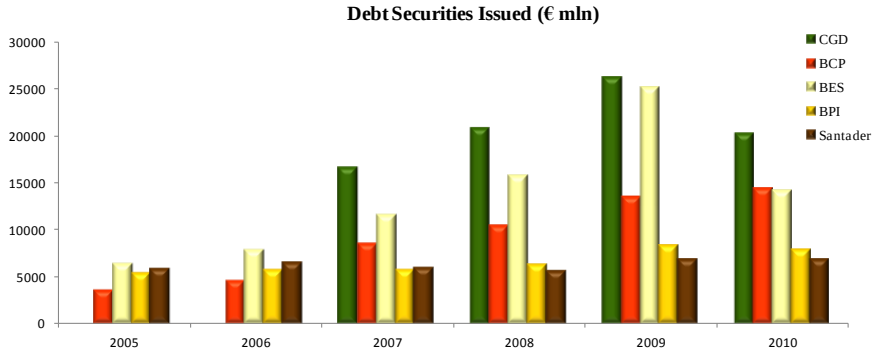
5.5. Ratings and debt securities issued

Rating agencies assessment of the Portuguese banking system acted, especially after 2009, as an "amplifier" for banks' fragilities. These assessments resulted in several downgrades of the ratings allocated to the banks, in line with the evolution of the rating on the Portuguese Republic. In the first place, such negative assessments contributed to undermine investors' confidence, implying higher financing costs (and actual quantitative restrictions) for the banks in the international wholesale debt market. On the other hand, these downgrades, together with downgrades in sovereign debt, had a negative effect on the valuation of assets eligible as collateral for credit operations with the Eurosystem, as well as on banks' capital requirements. In short, lower ratings imply higher financing costs and, as a consequence, a reduction in credit activity by these banks.

As stated before, this "amplification effect" via *rating* is particularly important in the Portuguese banking system, since most of the resources are obtained from other *foreign* credit institutions (Figure 24).

In Figure 25 we can find the outstanding amounts of debt securities issued by the five banking institutions (see Appendix E). The information available in Annual Reports shows a steady increase in the amount of debt securities issued by all five banks, especially by CGD and BES, until 2009. Caixa has, by far, the larger amount of outstanding debt. However one should note that CGD is also, by far, the largest banking institution operating in Portugal. Considering banks relative size, debt securities issued by CGD are at "normal" or even relatively low levels.

Figure 25



Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espirito Santo, Banco Portugues de Investimento, Millenium BCP
Note: Corresponds to: Bonds Issued during the period - Bonds redeemed - Repurchases (net of resales) + Exchange difference. Excludes: Accrued Interest + Correction of the amount of hedged liabilities + Premiums and comissions

In order to avoid such problem it might be useful to analyse the amount of issued debt in terms of its evolution. Since 2009, growth rates of issued debt decreased for all banks, probably reflecting the changes in market conditions in general and, most likely, the persistent downgrades in ratings.

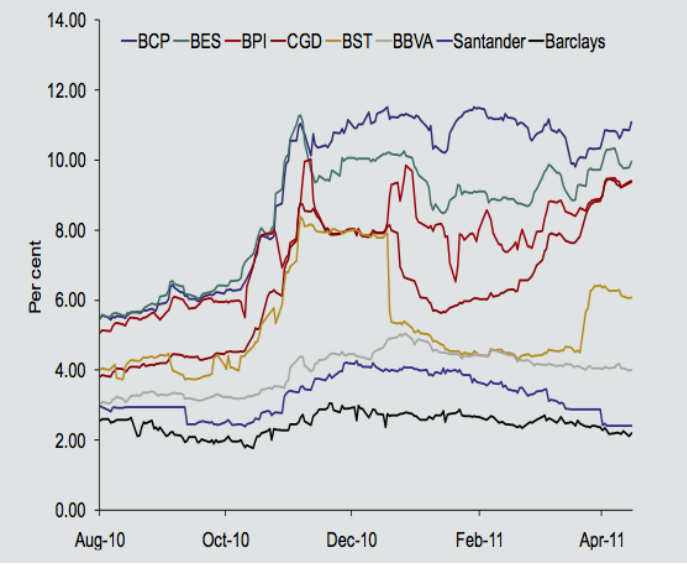
It should be noted, as mentioned earlier, that the investors' assessments of Portuguese banks debt will affect not only the amount of debt issued by each bank, but also the costs of financing in the international wholesale debt market.

In short, in the context of generalized liquidity crisis in international money markets and of a continuous downgrade in investors assessments of banks (individually), these institutions face increasing difficulties in both obtaining loans in financial markets and issuing new debt obligations in order to finance their activity. This situation can be translated either into lower amounts of available resources or into more expensive resources due to higher premium risks.

Figure 26 compares de evolution of yields on medium term maturity senior bonds for a set banking of institutions, from August 2010 to April 2011.

Figure 26

Domestic and non-Domestic banks bond yields



Source: Financial Stability Report, Banco de Portugal, May 2011

The chart shows a clear difference, by 2010, with yields on the bonds of the three domestic private banks (BCP, BES and BPI) being significantly higher than the yields on the bonds of both CGD and Santander[49].

[49] It should be noted that Santander Totta is a foreign branch of The Santander Group, which is the fourth largest bank in the world by profits and eighth by stock market capitalization.

This shows a clear competitive disadvantage of domestic private institutions concerning their capacity to issue debt in the international markets. The fact that Santander (BST) and Caixa faced lower yields on bonds means that they had access to cheaper ways to finance their activity.

However, after October 2010, while the spreads between the bond yields of domestic private institutions became wider, Santander and CGD saw a sharp increase in yields in their senior bonds. After December 2010 there was a clear distinction between CGD and Santander. Yields on Santander's bonds went down, close to other international bank's levels, whereas yields on CGD bonds rose, catching BPI's "price" of bonds. At the end of the period under analysis, CGD lost an important share of its competitive advantage (when compared to other domestic banks) and its yield was synchronized with BPI's (although still lower than BCP or BES).

The evolution in rating agencies' assessment of the five banks is rather consistent with the developments in banks to access to funds in the international markets (see Figure 137, 138, and 139 in Appendix F).

In fact, until late 2010 Caixa Geral de Depósitos benefited from higher ratings, such as Banco Santander Totta (from all major rating agencies – S&P, Moody's and Fitch). This fact might explain the yields differential reported above. Notwithstanding the fact that the international wholesale market remained practically "closed" to Portuguese banks after the onset of the financial crisis, it is to expect that both CGD and Santander benefited from better financing conditions in the international markets, relative to other banks, until 2010. However, after the end of the year, as the public debt crisis worsened in Europe and rating agencies' downgraded Portuguese sovereign debt, Caixas' ratings dropped, eliminating the existent differential relatively to other private banks. The same trend was followed by Santander (except for Fitch, which maintained Santanders' rating at AA).

In short, this trend in ratings and the continuous degradation of Caixas' financing conditions might imply a further reduction in the level of activity, especially in CGD capacity to maintain its levels of credit into the economy.

5.6. Share Capital

Banking institutions can always count on capital injections in order to increase its activity. Increases in shareholders capital will have an impact in solvency and minimum capital ratios, which will then be reflected in the international markets assessment of local banks. In order to

do so, especially in a period of financial distress, shareholders must have the financial capacity to infuse large amounts of capital into banks. Although this might be the case for public banks (in which the State is the sole shareholder), private shareholders may not have the same capacity to perform such operations. Especially when other distressed financial institutions hold the capital.

As one can see in Table 6, Caixa received around 2100 million Euros in new capital injections since 2007. These represent, by far, the largest amount of capital injected in the banking system after 2007.

Table 6

CHANGES IN SHARE CAPITAL (million €)

	2006	2007	2008	2009	2010	2007-2010
CGD	-	150	400	1000	550	2100
BCP	23	-	1083	-	-	1083
BES	1000	-	-	1000	-	1000
BPI	-	-	140		-	140
Santander	-	-	-	-	30,2	30,2

Source: Annual Reports, Caixa Geral de Depósitos, Banco Santander Totta, Banco Espírito Santo, Banco Português de Investimento, Millenium BCP

As with any other public institution, money injected in CGD in the form of share capital is transferred directly from the State budget. Because States' capacity to get indebted is theoretically less limited than private banks', the differences showed in Table 7 are not surprising. This is, in fact, one of the main arguments supporting the intervention of public banks in periods of financial distress.

There is no doubt that State's capital injections allowed Caixa to expand its activity against the general background of financial crisis. However, there are two remarks worth mentioning.

First is that, albeit the increase in credit by Caixa, the main reason justifying such capital injections is directly related to BPN nationalization process. It should be noted that the loans granted by CGD to BPN explain a large part of the rise in CGD assets.

The second concerns the States' capacity to repeat such operations in the future. In the context of a Sovereign crisis and serious fiscal adjustment plans, pressure for deficit reduction might undermine States' capacity to finance Caixas' financial activity in the future.

6. Concluding remarks on Part II

The evidence discussed in Part II shows that there was a visible decrease in aggregate credit supply in the Portuguese economy after 2008, both to individuals and corporations. Such decrease is mostly related to difficulties in accessing financial markets, as a consequence of the financial crisis, and to a deleveraging strategy, in order to decrease the "size" of banks' balance sheet. It was clear from section 3.4. that banks' expectations towards economic activity also played a role, increasing credit restrictions.

Although it might seem that banks in Portugal faced exactly the same problems, as a consequence of the "crisis", this crisis did vary from 2007 to 2011, and, therefore, did not affect banks in the same way. The two very different natures assumed by this crisis – financial, from 2007 until 2009 and sovereign crisis, from 2009 until the present moment – also provide an explanation for Caixa's behaviour in terms of credit supply during this period.

The analysis performed in section 4.1 showed that Caixa was the only banking institution, out of the five largest banks, increasing its credit supply to the economy. CGD maintained increasing growth rates for the total amount of credit to costumers between 2009 and 2010, whereas all other banks showed decreasing growth rates in their credit levels. In the course of 2010, when all other banks were decreasing their total amounts of loans, Caixa's were still increasing (6,5% in 2010 and 2,5 in 2011).

Section 5 analysed and summarized some of the specific conditions faced by different banks with the main purpose of finding the specific conditions that allowed Caixa to have such an expansive credit policy.

Before 2009, when the crisis was mostly of a financial nature, Caixa benefited in fact from an increase in its deposits, and also from cheaper financing in international wholesale markets. The generalized perception of instability in financial markets might have led to a transfer in deposits from private banks to CGD, which benefited from an implicit State guarantee. In the same fashion, because Caixa's ratings were connected to the ratings of the Portuguese Republic, and both were kept at stable and superior levels until 2009, this contributed to facilitate Caixa's access to international financial markets. CGD's access to better financing conditions – bond yields and increase in deposits – might help explaining the increase in credit between 2007 and 2009.

However, it should be noted that the total amounts of resources of other credit institutions held by Caixa were considerably low, when compared to other banks. Likewise, Caixa did not

seem to have benefited from special financing conditions when looking at resources from Central Banks or the amount of debt securities issued.

After 2009, as the sovereign crisis developed, Caixa faced a worsening in financing conditions. When the Portuguese State started being perceived as riskier, Caixa lost part of its competitive advantage in relation to private banks. This was particularly visible when looking at the evolution in historical ratings or in banks bond yields (section 5.5). After 2009, negative assessments by the three most important rating agencies caused several downgrades in Caixa's ratings, which changed from the highest classifications among all Portuguese private banks, until 2009, to the exactly same levels as the other banks in 2011. Such downgrades had a reflection in CGD bond yields, which also favoured the catching up by the group of domestic private banks.

In the same way, the generalized perception that risk was now also associated to the Portuguese State, and not only to private financial institutions, caused a slowdown in the growth of Caixa's deposits.

The available data suggests that the increase in CGD activity, especially between 2009 and 2011, was mainly supported by state capital injections during this period.

PART III

Conclusion: The role of Caixa Geral de Depósitos in the recent crisis

This dissertation attempted to answer the question: "Did *Caixa Geral de Depósitos* play an important counter cyclical role during the last financial crisis, started in 2007?". Because banks can perform such role in a number of ways, one should go further in specifying the departure question. Through credit, universal banks supply an important share of total funds in the economy (a broader discussion about the role of the banking system in the economy can be found in section 2.2. in Part I). These supplied funds will therefore affect investment and economic activity, or, in other words, will have the capacity to influence economic cycles. Having this in consideration, it is now possible to get to a more precise question, concerning Caixa's credit behaviour during the period of the financial and economic crisis: Did Caixa increased (or maintained) the amount of credit during the recent crisis? Was Caixa the sole institutions doing so, whereas the other private banks were reducing their credit supply as a response to the financial crisis? The straightforward answer is yes.

However, before entering in more specific considerations or conclusions about the Portuguese situation, let us focus on a previous discussion: should private banks exist at all? According to *financial repression* related theories the answer is generally "no". According to Keynesian related theories the answer is "it depends".

The conventional neoclassic view reflected in the *market efficiency* hypothesis and in the *financial repression* model, excludes "strong" types of intervention in financial markets. In a developed and complete financial system, such as the Portuguese, direct public intervention would not only be ineffective but it would also lead to several distortions in the financial markets. Even in the worst-case scenario – such as a financial crisis – state ownership of banks would not be an option. Direct intervention trough public ownership would undermine competition conditions faced by private banks, and price determination mechanisms, aggravating the prevailing problems in assessing correctly market risk. Furthermore, because banks are seen only as intermediaries, the counter cyclical effect in the economy should be achieved through other type of policies, focused on protecting savers/investors returns[50]. Finally, even if the above did not hold, the neoliberal perspective sees public management as inefficient by nature and subject to all kind of political pressures, which would only promote corruption and misallocation. Such perspective is well summarized in the words of Charles

[50] Tax incentives or even more deregulation allowing for an easier circulation of capital in financial markets might be examples of such policies.

Calomiris[51]: "Such advocacy [that state-owned banks could be helpful for jumpstarting growth in countries that are still struggling to recover from the recent global economic turmoil] would be short-sighted and irresponsible, since it runs so contrary to clearly observable evidence about the long-run effects of doing so. It would be highly unwise to create wasteful and corrupting fiscal time bombs in the form of state-owned banks out of a desire to temporarily boost aggregate demand during the current lean economic times".

On the other hand, different approaches within the Keynesian tradition have in common the refusal to accept these ideas of banks as passive agents, of money as an exogenous variable in the economy and therefore suggest markets' incompleteness and failures as inherent to its functioning. New and Post Keynesians see financial institutions behaviour as "embedded" in the macroeconomic dynamics.

Indeed, financial markets are not independent actors in a financial crisis, since they can endogenously generate episodes of financial and economic distress. In addition, banks and other financial institutions tend to amplify economic cycles. In case of a crisis[52], banks natural response will be to constraint credit, causing investment, consumption and, hence, consumption, to drop.

According to New-Keynesians, as economies enter a recession, the effectiveness of price mechanisms tends to suffer strong disruptions. Credit insufficient supply will then be the result of asymmetrical information in financial markets that affects bank's perception of risk. Furthermore, banks fail to internalize aggregate economic benefits in their evaluation, being more difficult to ensure that liquidity will be conducted into the economy.

In a Post Keynesian perspective, State-owned banks may be the only way to minimize liquidity preference in moments of financial distress, avoiding a sudden downfall in aggregate credit amounts to the economy, and also the probability of having a liquidity crisis. Above all, State-owned banks would contribute to reduce the level of uncertainty in the market.

In sum, both views agree on two particular aspects, which are crucial to the discussion around Caixa's intervention in the economy: 1) credit plays a crucial role in investment dynamics and, hence, in economic activity and employment levels; 2) government intervention in order to provide a monetary stimulus in the economy (trough credit) is one of the most effective ways to overcome a period of economic crisis.

In Portugal, as we could see in the first section of Part II, bank credit plays a major role in

[51] http://blogs.worldbank.org/allaboutfinance/the-aaf-virtual-debates-charles-calomiris-on-state-owned-banks

[52] And, in this case, it is not important whether this crisis was generated due to persistent market failures (which effects can be minimized by state intervention) or by intrinsic *uncertainty.*

financing consumption but also non financial corporations. Despite the growing direct access by enterprises to capital markets, such dependence on bank loans is showed in section 3.3 in Part II, where one can see the increase in the number of firms identifying the access to bank credit as their main limitative factor for business investment.

There was a visible decrease in aggregate credit supply in the Portuguese economy after 2008, both to individuals and corporations. Such decrease is mostly related to difficulties in accessing financial markets, although expectations towards economic activity also played a role, increasing credit restrictions. Banks' reaction to the economic and financial conditions reported in section 4 suggests that individual banks failed to internalize some of the positive aggregate externalities that would arise from an increase in credit supply (as pointed by the new Keynesian perspective). Growing difficulties faced by banks in the financial markets also seem to reflect the generalized preference towards more liquid assets (*liquidity preference*), making the lending activity more costly and risky, as predicted by the pos-Keynesian theory.

The analysis performed in Part II showed that Caixa was the only banking institution, out of the five largest banks, increasing its credit supply to the economy. CGD maintained increasing growth rates for the total amount of credit to costumers between 2009 and 2010, whereas all other banks showed decreasing growth rates in their credit levels. In the course of 2010, when all other banks were decreasing their total amounts of loans, Caixa's were still increasing. Between 2007 and 2011, Caixa provided around 14 billion Euros in the form of loans to customers. In spite of the growth of credit to financial activities, CGD managed to increase its amount of loans to individuals, non-financial activities and public administration from 2007 until 2011, suggesting that CGD played, in fact, a countercyclical role in the Portuguese economy.

Part II also analysed and summarized some of the specific conditions faced by different banks with the main purpose of finding the specific conditions that allowed for Caixa to have such expansive credit policy.

In short, in seems that Caixa might have benefited from its "public" status until 2009, both in terms of deposits and financing conditions in the international markets. Most probably, this improvement in financing conditions, when compared to other banks, may have helped fostering credit. However, the same conclusion does not apply after 2009 – when differences in markets and people's perceptions according to banks' propriety disappeared.

Evidence suggests that the increase in CGD activity between 2007 and 2011 was mainly supported by state capital injections during this period. However, one should take in consideration Caixa's capital needs after BPN's nationalization. Having in mind that 1) Caixa

did not benefited from any particular financing conditions, especially after 2009; and that 2) capital injections were mainly channelled to rescue BPN – which was not registered under "loans to costumers" caption – the increase in CGD credit amounts during the period of crisis may reflect Caixa's political orientation towards other goals rather than profitability, such as the aggregate economic activity.

In general, these findings seem to support the argument, mainly developed within the Keynesian perspectives, that public banks may constitute important instruments in order to implement countercyclical policies in periods of financial and economic crisis.

In spite of some beneficial conditions in accessing financial markets, the increase in CGD activity appears to be related to its capacity to internalize the positive consequences of such liquidity injections in the economy. Moreover, what is sometimes referred as a negative aspect related to State ownership of banks – the political interference in markets thought large capital injections by the state in state banks – seems to be one of the main factors that allowed Caixa to continue financing the economic activity in Portugal.

Hence, evidence appears to support some of the arguments presented by both new and post Keynesian theories, concerning public banks' stabilization and countercyclical capacity, and to exclude the main idea within the *financial repression* theory that State-owned banks would always have a deleterious effect in the economy. However, the empirical analysis performed along this dissertation did not cover all aspects related to public banks activity. Thus, it is, in fact, difficult to draw more precise considerations about how the political[53] interests may have affected Caixa's lending behaviour. This question certainly deserves further research.

[53] "Political interests" in this context should be interpreted as the interests of specific politicians and political forces or parties that differ from the general interests of the society.

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APPENDIX A

Table 7

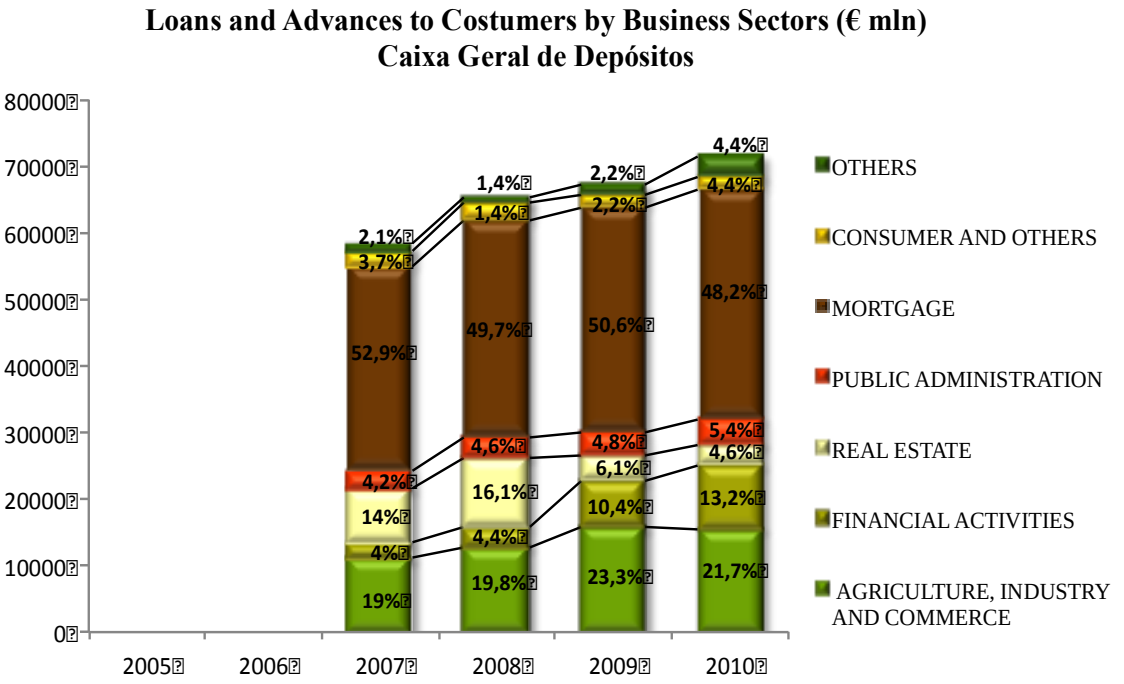
ECB MAIN REFINANCING OPERATIONS RATE

	Day	REFI
2011	13 Jul.	1.50
	13 Apr.	1.25
2009	13 May	1.00
	8 Apr.	1.25
	11 Mar.	1.50
	21 Jan.	2.00
2008	10 Dec.	2.50
	12 Nov.	3.25
	15 Oct. (5)	3.75
	9 Oct. (4)	-
	8 Oct.	-
	9 Jul.	4.25
2007	13 Jun.	4.00
	14 Mar.	3.75
2006	13 Dec.	3.50
	11 Oct.	3.25
	9 Aug.	3.00
	15 Jun.	2.75
	8 Mar.	2.50
2005	6 Dec.	2.25

Source: European Central Bank

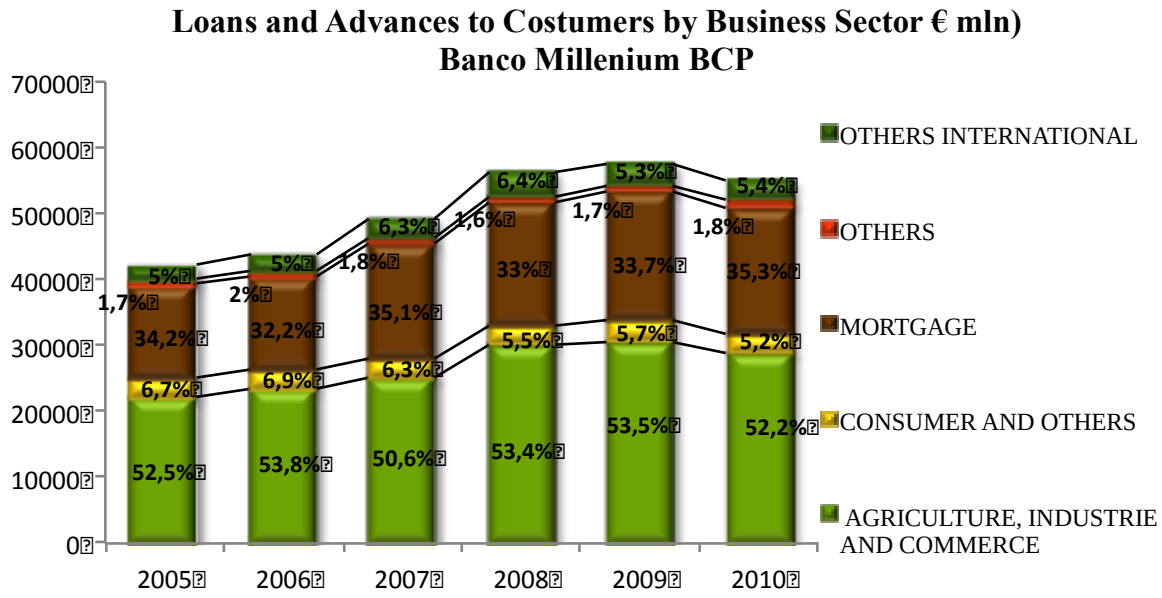
APPENDIX B

Figure 27



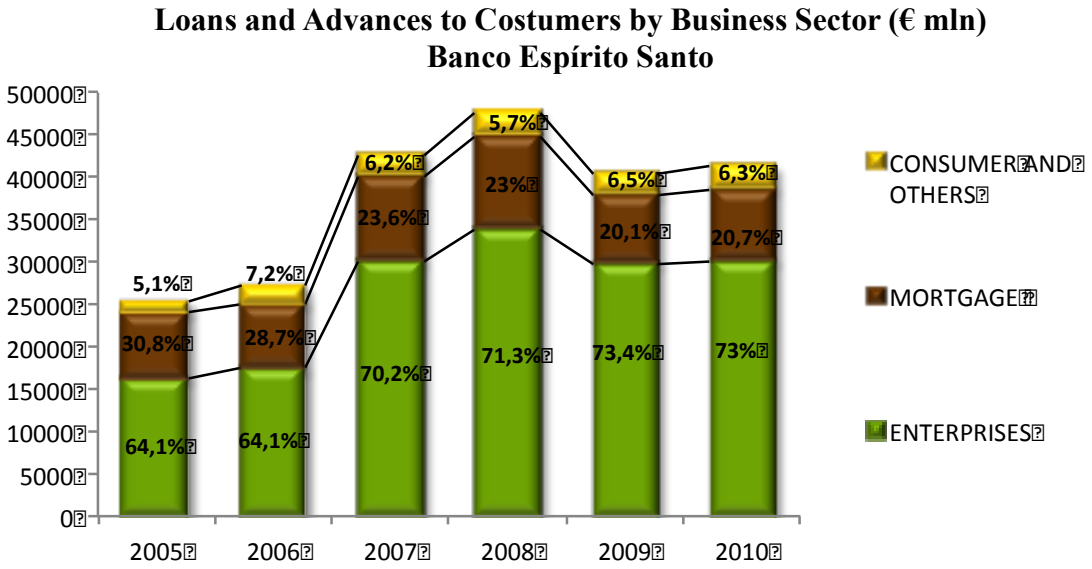
Source: Own calculations based on data available in the Annual Reports, Caixa Geral de Depósitos

Figure 28



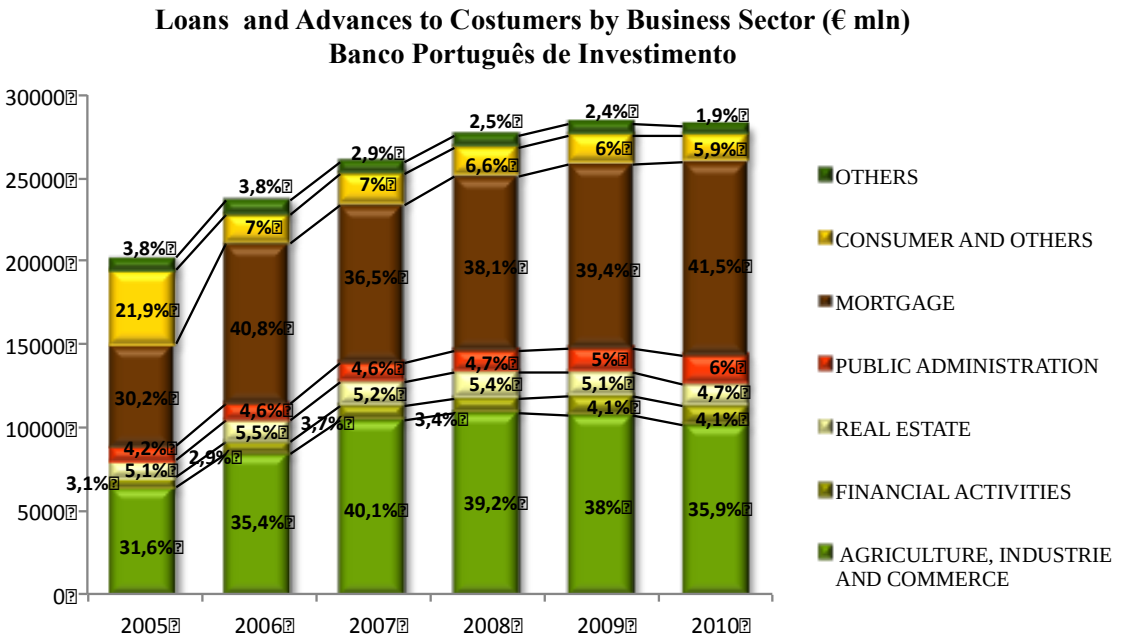
Source: Own calculations based on data available in the Annual Reports, Millenium BCP

Figure 29



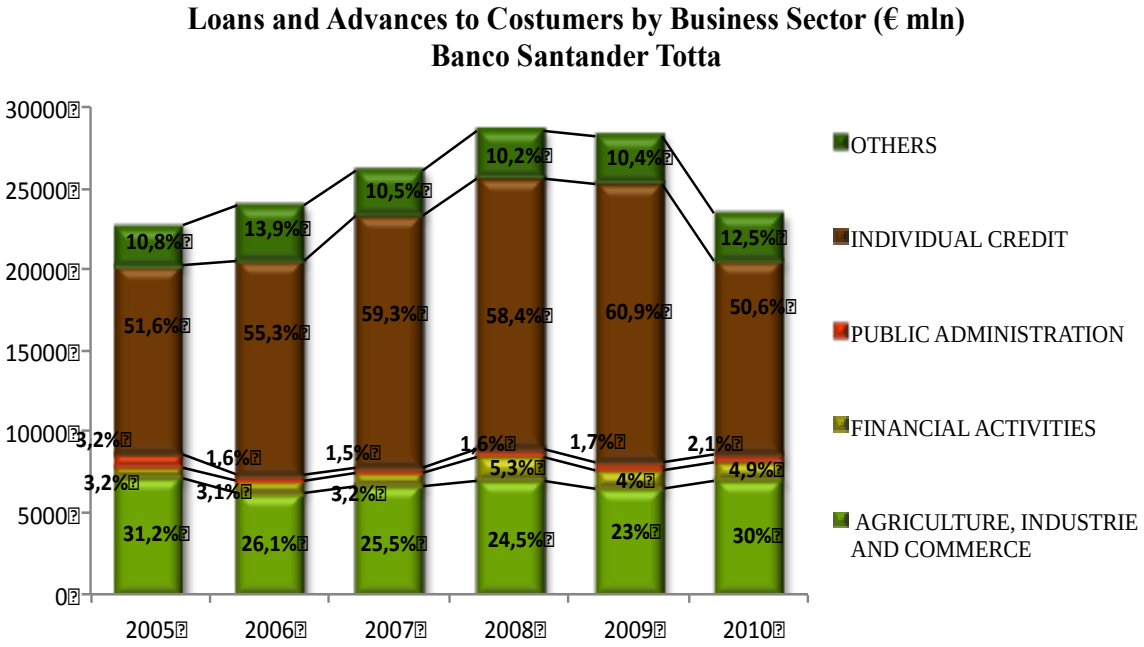
Source: Own calculations based on data available in the Annual Reports, Banco Espirito Santo

Figure 30



Source: Own calculations based on data available in the Annual Reports, Banco Português de Investimento

Figure 31



Source: Own calculations based on data available in the Annual Reports, Banco Português de Investimento

APPENDIX C

Troubled Banking Institutions in Portugal: Banco Português de Negócios (BPN) and Banco Privado Português (BPP)

"In the first case, Banco Português de Negócios (BPN) was nationalised. Although it was small, with a market share of around 2 per cent in terms of total assets, it was considered to pose the risk of some systemic impact. More specifically, the aim was to avoid the bank having to cease making payments because of its manifest problems in finding liquidity as it struggled on the brink of insolvency. One of the factors that weighed in the balance at the time when the systemic nature of the institution was being assessed was its liabilities in international markets, including securitised debt. Its demise could have jeopardised the prospects for other institutions looking to refinance their debt in these markets.

It should be remembered that the solvency of the bank emerged as a new and serious issue in June 2008, when the board of the SLN admitted to Banco de Portugal supervisory authorities that the group had a majority holding in Banco Insular, which was headquarted in Cape Verde, and held a credit portfolio of around 300 million euros. It transpired that there was also a so-called virtual bank, with a credit portfolio of more than 390 million euros, and this had not been booked in the ledgers of any entity in the group. This virtual bank had a considerable negative potential for impairment, which would have to be recorded by the group. It then became apparen that the problems of the BPN stemmed from fraud and that this fraud was persistent and deliberate, carried out at the highest level of the group. It was not related with situations that had been identified and handled within standard supervisory parameters.

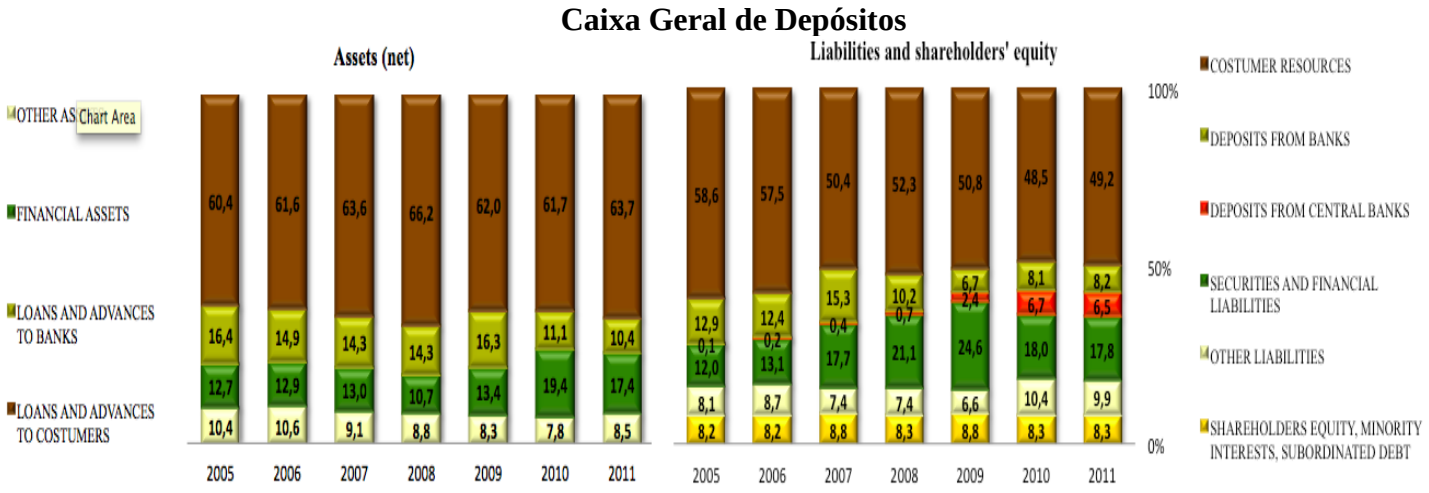
These situations had been pinpointed in various inspections carried out at the bank, but of themselves they did not place the existence of the bank nor its viability at risk. The problems that surfaced during inspections did not raise a serious issue of solvency or liquidity at the institution." In Financial Stability Report, Banco de Portugal, 2008.

With the nationalization process, BPN was included in CGD group and benefited from major capital injections and loans from the public bank. As a consequence, CGD loans to BPN were approximately 4.5 billion Euros. In 2011 BPN's privatization was still in course, without precise information on the possibility of Caixa receiving back the money injected in BPN.

"The second case involved the Banco Privado Português. A market solution was found here for what was essentially a small credit institution. Its size and highly specialized business area implied a small systemic impact. In the first phase, a provisional board was nominated to ensure that commitments were honored and to assess the real situation of the bank. A consortium of some of the country's main banking groups provided a 450 million euro loan to cover withdrawals of deposits and the repayment of loans. The operation was underwritten by the State, which took special rights over the bank's assets." In Financial Stability Report, Banco de Portugal, 2008.

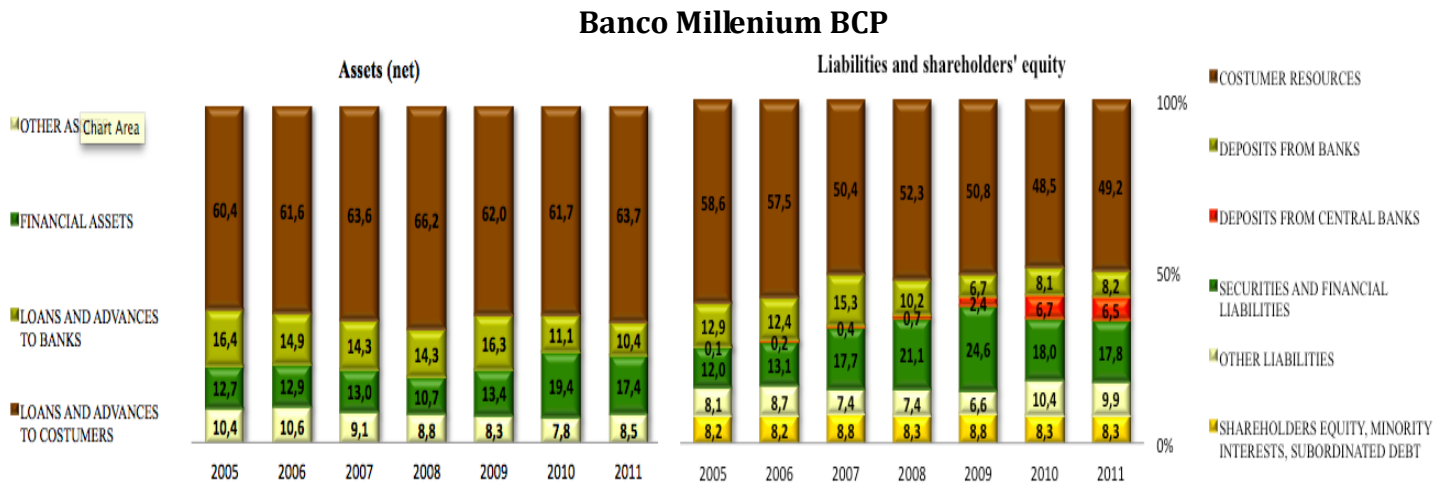
APPENDIX D

Figure 32



Source: Own calculations based on data available in the *Anual Report*, Caixa Geral de Depósitos

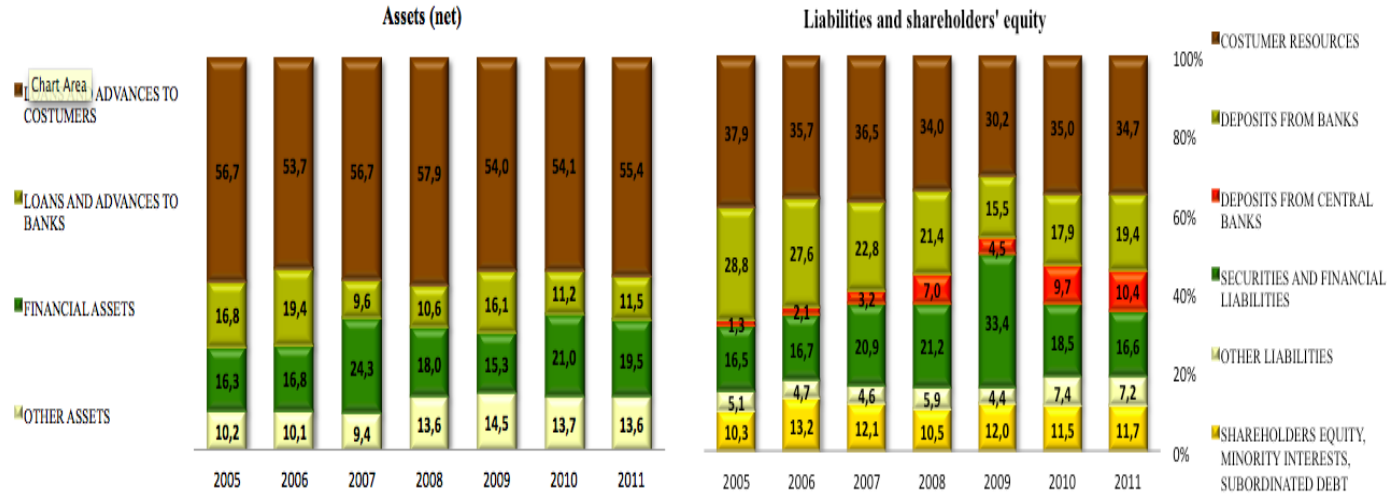
Figure 33



Source: Own calculations based on data available in the *Anual Report*, Millenium BCP

Figure 34

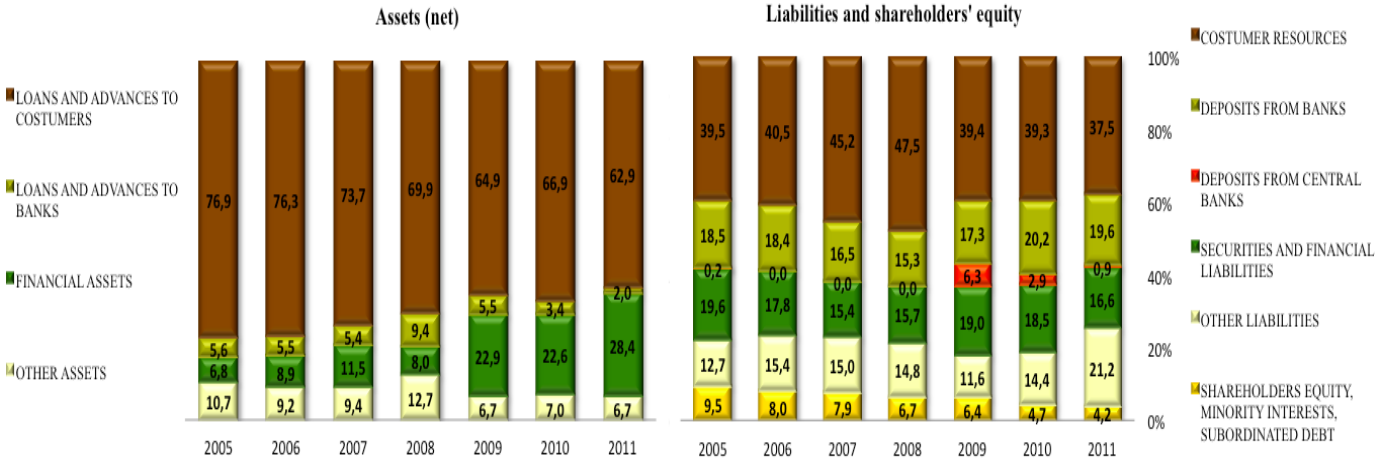
Banco Espírito Santo



Source: Own calculations based on data available in the *Anual Report, Banco Espirito Santo*

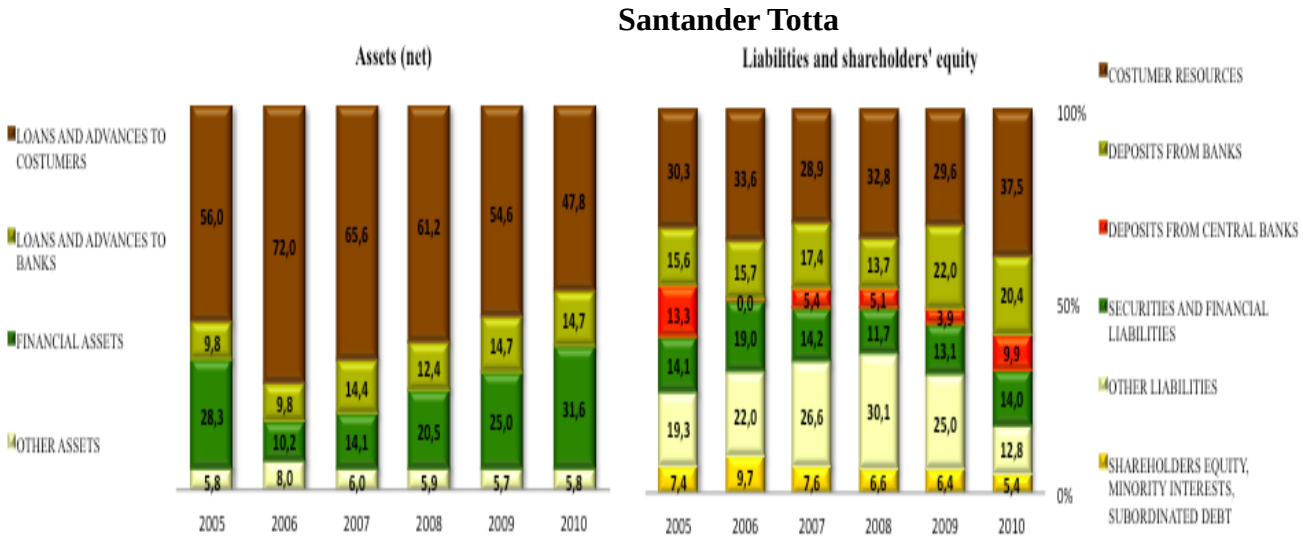
Figure 35

Banco Português de Investimento



Source: Own calculations based on data available in the *Anual Report, Banco Portugues de Invetsimento*

Figure 36



Source: Own calculations based on data available in the *Anual Report*, Banco Santander Totta

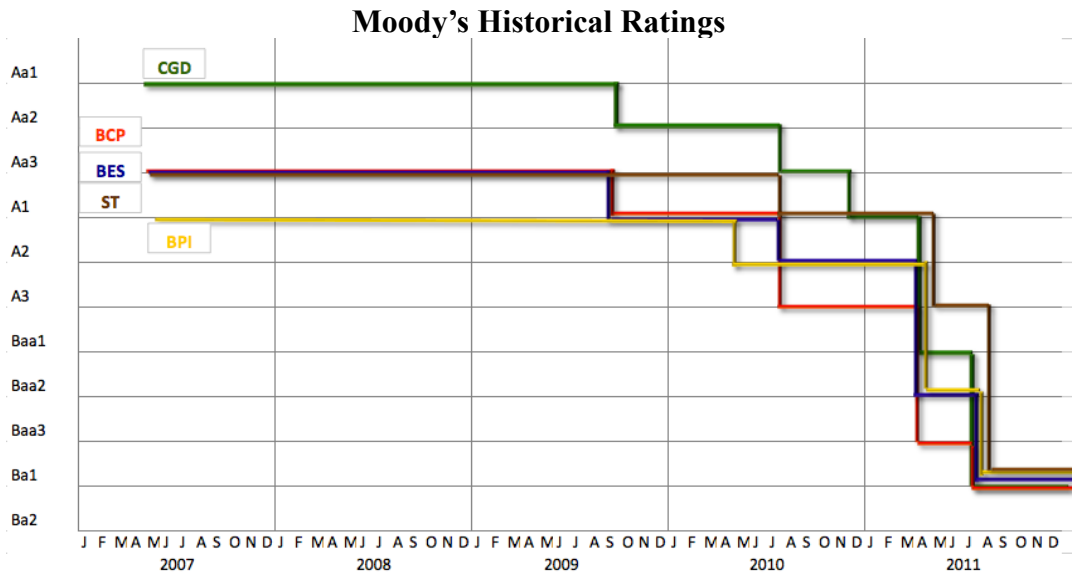
APPENDIX E

DEBT SECURITIES ISSUED

CGD	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Balance (Bonds Issued during de period- Bonds redeemed - Repurchases (net of resales)+ Exchange difference	8729	8870	10708	16560	20674	26111	20112	-
Accrued Interest+corresction of the amount of hedged liabilities + Premiums and comissions				-521	-287	-34	252	-
Balance value	8729	8870	10708	16038	20387	26077	20364	-
BCP	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Balance (Bonds Issued during de period- Bonds redeemed - Repurchases (net of resales)+ Exchange difference	2753	3424	4433	8368	10339	13382	14255	-
Accrued Interest+corresction of the amount of hedged liabilities + Premiums and comissions	23	-4	29	74	87	141	162	-
Balance value	2777	3420	4461	8442	10426	13523	14417	-
BES	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Balance (Bonds Issued during de period- Bonds redeemed - Repurchases (net of resales)+ Exchange difference	4767	6183	7684	11432	15585	24986	14018	-
Accrued Interest+corresction of the amount of hedged liabilities + Premiums and comissions		1190	760	657	-1258	-1	37	-
Balance value	4767	7372	8444	12089	14326	24985	14055	-
BPI	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Balance (Bonds Issued during de period- Bonds redeemed - Repurchases (net of resales)+ Exchange difference	5197	5214	5587	5526	6151	8182	7718	-
Accrued Interest+corresction of the amount of hedged liabilities + Premiums and comissions	48	-45	-52	90	80	110	138	-
Balance value	5245	5170	5535	5616	6231	8292	7855	-
SANTANDER	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Balance (Bonds Issued during de period- Bonds redeemed - Repurchases (net of resales)+ Exchange difference	5763	5698	6343	5726	5389	6643	6700	-
Accrued Interest+corresction of the amount of hedged liabilities + Premiums and comissions	29	-22	-97	-97	58	79	112	-
Balance value	5792	5676	6245	5629	5447	6721	6812	-

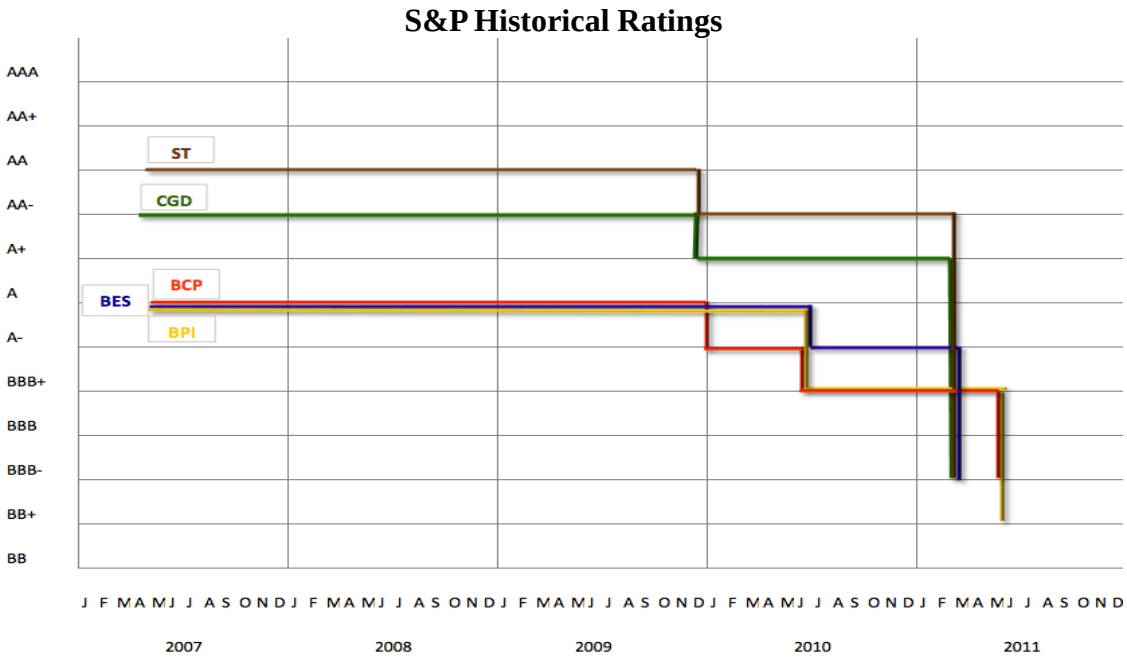
APPENDIX F

Figure 37



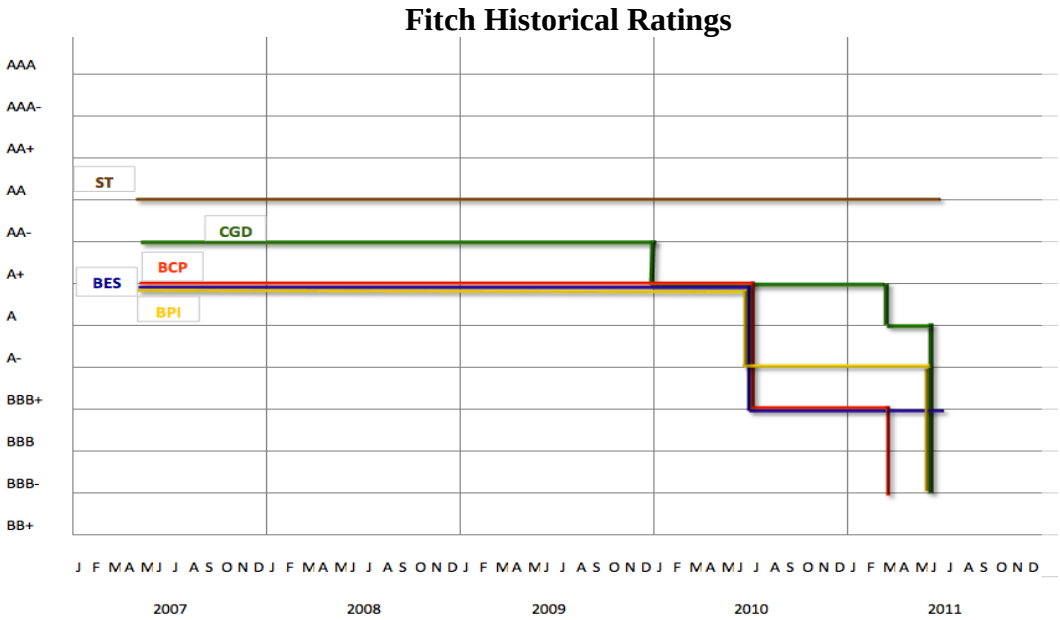
Source: Moody's. Moody's rating refer to the long Long Term Bank Deposits category

Figure 38



Source: *Financial Stability Reports*, Bank of Portugal. S&P ratings refer to the LT Local Issuer Credit category

Figure 39



Source: *Financial Stability Reports*, Bank of Portugal. Fitch's ratings refer to the LT issuer De