José Miguel Cruz da Silva Quintas

FAIR VALUE IN PENSION FUNDS THESIS

Case Study: Caixa Geral de Depósitos

Lisbon, 2011

Universidade Católica Portuguesa

CATÓLICA LISBON, School of Business Administration

MSc in Business Administration

FAIR VALUE IN PENSION FUNDS THESIS

Case Study: Caixa Geral de Depósitos

José Miguel Cruz da Silva Quintas

Advisor

Dr. Paulo Azenhas

Dissertation submitted in partial fulfilment of the requirements for the degree of MSc in Business Administration, at Universidade Católica Portuguesa, June 2011

Acknowledgements

There are a few people that were relevant to this work. Each one played a unique role, but all of them were essential to the final output. Dr. Paulo Azenhas provided me with enthusiastic and constant guidance since day one. I thank him for the patience, constructive criticism and availability to constantly improve the final output. Drª Cristina Neto de Carvalho was crucial in helping me to choose the specific topic of this thesis. Finally, two elements of Caixa Geral de Depósitos were responsible for making available to me the information I needed. There were kind enough to answer my questions and clarify concrete aspects of the Pension Funds and Accounting at Caixa Geral de Depósitos.

Abstract

The developed world is facing the problem of an ageing population. The ratio of active to inactive workers is decreasing, putting at risk the future solvency of the public social retirement schemes. Private pension funds are therefore increasing, which makes the understanding of whether they are reliably calculated and covered a relevant issue. Due to accounting rules revisions issued by the IASB (International Accounting Standard Board) and the FASB (Financial Accounting Standard Board), the principle of Fair Value has become more important during the last decade, despite criticisms that link it to the current financial crisis. This work studies the role of Fair Value in the biggest Portuguese Bank's Pension Fund, namely its calculation and impact on financial statements. Based on public information, clarifications provided by the staff at Caixa Geral de Depósitos, benchmark and data analysis, the case-study supports the importance of Fair Value on pension funds and concludes that Caixa Geral de Depósitos Pension Funds are reliably calculated due to the several rules issued by IASB and the Portuguese supervisory entity – Instituto Superior de Seguros (ISP).

Index and Abbreviations

Abbreviations

ALM – Asset Liability Management

CAPM – Capital Asset Pricing Model

CGD – Caixa Geral de Depósitos

CGD Pensões – Caixa Geral de Depósitos Pensões

DB – Defined Benefit

DC – Defined Contribution

DL – Decreto-Lei

FAS – Financial Accounting Standard

FASB – Financial Accounting Standard Board

GAAP – US Generally Accepted Accounting Principles

IAS – International Accounting Standard

IASB – International Accounting Standard Board

IC – Insurance Companies

ISP – Instituto Superior de Seguros

NPL – Nonperforming Loans

PBGC – Pension Benefit Guarantee Corporation

PFM – Pension Funds Manager

PUCC – Projected Unit Credit Cost

SEC – Securities and Exchange Commission

I. Introduction

Developed countries are facing a process of demographic ageing. This means that pension funds will play a fundamental role on these countries' economic future. Strictly linked to pension funds is the Fair Value accounting concept, which is crucial to measuring the funds' value. This thesis demonstrates the relationship between these three topics and their relevance through the analysis of a specific company: Caixa Geral de Depósitos.

Accounting has been a part of corporate life around the world since the beginning of the existence of firms. It is an activity crucial to the financial control and performance analysis, and auxiliary in the forecasting of a company's future. Like all other sciences and techniques, it must evolve in order to keep track of economic trends. This study focuses on one specific aspect of the evolution of accounting – Fair Value – striving to address the question of its increasing importance.

Because the number of active workers is declining while the number of retired people is on the rise, the sustainability of social policies concerning retirees is at risk. Thus, private pension funds are increasingly looked upon by many as a necessary safeguard for the future, which explains the growing importance of the role they play on the developed world's economy.

This thesis analyses the Fair Value of the pension funds of a specific company: Caixa Geral de Depósitos Group (CGD). CGD is the biggest Portuguese bank and has a relevant pension fund that is managed by a company of the group: CGD Pensões. The study relies on public information, further clarified during two meetings with members of the company's staff, and aims at answering the following questions: What are the company policies to control and record the Fair Value of Pension Funds? Is it reliable calculated? Moreover, there are some rules that pensions funds' accounting must apply; does CGD's Pension Funds accounting apply them?

This work is composed of two main parts: the literature review and the case study. The literature review discusses several concepts linked to Fair Value as they are understood and presented by academics. It demonstrates the main pros and cons of the usage of Fair Value, as well as its relation to the current financial crisis. The case-study departs from the theoretical arguments by looking at CGD, comparing it to other Portuguese banks and investigating the reliability of the values recorded on CGD's financial statements.

II. Literature Review

1. Fair Value

A. Importance and Principles of Accounting

Some people argue that accounting is a simple record of transactions of a given firm, a technique defined by arcane measurement rules that does not have a huge impact on management performance as it merely registers the past. In reality, accounting is the basis of the stakeholders' and senior management's decision-making process, and is crucial to project the future of the company's cash-flows. In the words of Haresh Sapra: "Measuring a firm's operations affects the firm's actions that, in turn, influence the underlying distribution of cash flows being measured" (Haresh Sapra, 2010).

Good accounting should reveal as much information as possible, in order to reduce opacity in the environment in which the company lives and interacts. However, managers do not want to reveal everything to the market and their competitors; sometimes, it is not even possible to do so, and there will always be confidential information. Still according to the same author: "Accounting measurement is relevant only because we live in an imperfect world where markets are not always fully liquid, firms' decision makers may have private information that cannot be readily disclosed to outsiders, and decision-makers incentives may be distorted." (Haresh Sapra, 2010).

Nowadays, accounting is based on two assumptions and four main characteristics relevant for an analysis of Fair Value (the following is based on the International Accounting Standard 1 – IAS 1):

- ✓ **Accrual Basis** (Assumption): the effect of transactions and other events are recognized when they occur, not when cash is gained or paid;
- ✓ **Going Concern** (Assumption): an entity will continue to exist for the foreseeable future;
- ✓ **Understandability** (Characteristic): the information is presented in a way the users can read and interpret, taking into account that they have a reasonable knowledge of business and accounting
- ✓ **Relevance** (Characteristic): the information disclosed is meaningful to the users.

Associated with this characteristic there are two important points: materiality and timeliness. Materiality means that financial statements should not contain any errors/inconsistencies that could influence third-party economic decisions. Timeliness points to

the need of issuing financial reports within a period of time relevant for the users' decisions and to reduce the risk of privileged information.

- ✓ **Reliability** (Characteristic): financial accounts must be free from material errors and are not built aiming to influence user decisions in any particular way.
- ✓ **Comparability** (Characteristic): financial statements should be comparable over time and among firms.

B. Fair Value: Concept

As we saw in the previous section, accounting must display four main characteristics; accounting policies should follow economic trends and ensure the application of these characteristics. Fair Value accounting was created to fit the current globalization trend and common international transactions and is one of the main points of convergence between the IAS and US GAAP. In order to understand the creation of Fair Value and its increasing use in the measurement of certain assets and liabilities under the international accounting standards, we must consider specific factors such as the development of capital markets and the consequent increased pressure from shareholders regarding the creation of value, as well as the need to strengthen the link between the value generated by the firm and its stock market performance.

"Fair Value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (IASB Exposure Draft May 2009). An orderly transaction means that it is not forced, that the reporting entity is a going concern that does not need or intend to liquidate its assets (Novoa, Scarlata and Solé, 2009) and that the asset or liability is exposed to the most advantageous possible market – in which we can sell an asset for the maximum amount or pay the minimum to transfer a liability, considering transaction and transportation costs. This ideal market presents a high volume and level of activity in order to achieve the best value estimate. From the above mentioned, we can define Fair Value as an "exit price", namely when "the highest and best use of the asset is in exchange – in-exchange valuation premise" (IASB Exposure Draft May 2009).

To ascertain the Fair Value of any given asset, we have to take into account its physical characteristics, any legal restrictions on the use of the asset and the investment return. These assets usually provide their maximum value on a stand-alone basis. On the contrary, other assets provide the maximum value through its use in combination with other assets and liabilities; so, "if the highest and best use of the asset is in use, the Fair Value of the asset shall be measured using an in-use valuation premise" (IASB Exposure Draft May 2009). This kind of valuation

entails many implicit assumptions, thus increasing the subjectivity of the accounting activity and reducing comparability. This is why it should be done by specialists, aiming to obtain the most accurate value possible. Regardless of their competence, however, it is normal that two skilled valuators, working independently, arrive at similar but different values.

Sometimes, when valuing a liability, there is not an observable market price for it. In these situations, companies should measure it at the same value the counterpart does. If it is not easy to find the corresponding asset, the company must use present value techniques, discounting and estimating the future cash outflows.

When the company pays to buy an asset or assumes a liability and receives cash as a consequence, the transaction price is the "entry price". So, at initial recognition, the entry price usually does correspond to a market price and is the same as the "exit price". This means that "the transaction price is the best evidence of the Fair Value of an asset or liability at initial recognition unless (i) the transaction is between related parties; (ii) the transaction takes place under duress or the seller is forced to accept the price of transaction; (iii) the unit of account represented by the transaction price is different from the unit of account at Fair Value; (iv) the market in which the transaction takes place is different from the market on which the entity would sell the asset or transfer the liability" (IASB Exposure Draft May 2009).

C. Valuation Techniques

There are 3 valuation techniques to estimate the Fair Value of assets and liabilities at the measurement date: cost approach, market approach and income approach.

i. Cost Approach

The cost approach is based on the principle of substitution, which represents the amount that a prudent buyer would spend when acquiring a similar asset with comparable utility, adjusted for obsolescence. This is recommended when there are insufficient transactions to support sales and when the asset does not generate cash flows. Likewise, this procedure is advisable when it is difficult to determine reliably the part attributable to a specific asset, namely some intangible assets and telecommunication networks. This approach is mainly used "for recently constructed properties because they suffer only minor depreciation and the reproduction cost is likely to the actual incurred expenditures" (Alfred M. King, 2010)

ii. Market Approach

The market approach is based on market transaction values for similar assets/liabilities, hence the default option when there is an active market; "when suitable data is available, it

provides a verifiable and objective measure of value" (Alfred M. King, 2010). Market approach is also supported by multiples valuation by a peer group. The multiples choice requires judgement and the consideration of some quantitative and qualitative factors. These usually include matrix pricing, consisting on a mathematical technique to value specific securities that do not have quoted prices but rely instead on benchmark quoted securities.

iii. Income Approach

Income approach uses the discount method to value assets or businesses. It takes into account the future economic benefits discounted at a rate that represents the risks involved. Intrinsic growth, when existent, should also be taken into account. In this case, the Fair Value will depend on interpretation and judgement of these three factors, such that two skilled valuators could reach two similar but different values. Another problem posed by this approach relates to the fact that the economic future benefits are estimated based on the values reported in the historic financial statements, so that it "may not reflect the true earnings power...This may be due to several reasons, including underlying differences between cost and cash-based accounting systems" (Alfred M. King, 2010). The discount rate is also difficult to calculate accurately. The most commonly used method is the Capital Asset Pricing Model (CAPM), which aims to capture all the risks involved; it contemplates the risk-free rate, the equity risk premium, the industry premium, the specific entity premium and the assessment of risks.

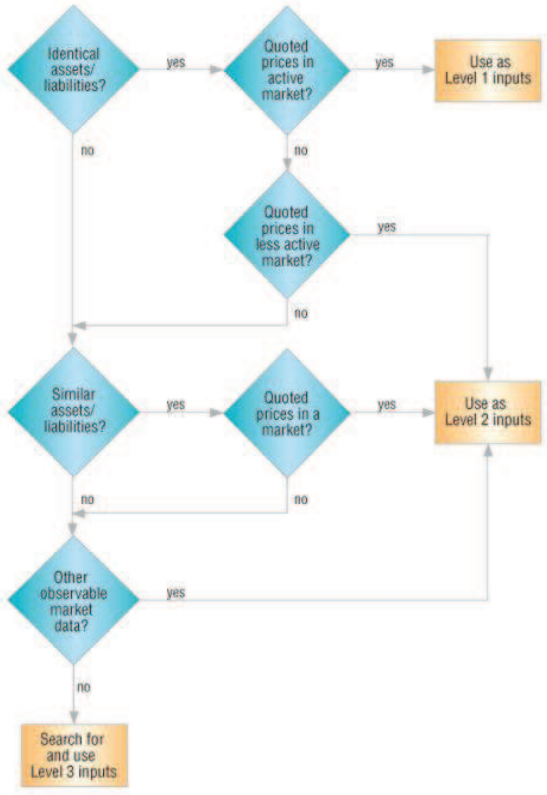

Exhibit 1–Fair Value Hierarchy

D. Hierarchy of Fair Value

Two of the main features of financial statements are their reliability and comparability. As a result, the International Accounting Standard Board (IASB) and the Financial Accounting Standard Board (FASB) have defined a Fair Value hierarchy that prioritises the inputs for the different valuations used to measure Fair Value of assets and liabilities. The reasoning behind this hierarchy is shown in

Exhibit 1[1].

The three valuation techniques previously mentioned comprise different inputs. These inputs are categorized in three different levels, from level one – the most reliable – to level three – the least reliable.

The source of Level One inputs are quoted prices for identical assets/liabilities; "FASB recognizes level one as the most reliable pricing method due to constant market activity (FASB, FAS157, 2006). Information at this level is based on a direct observation of transactions, not on assumptions, therefore offering a superior reliability. However, relatively few items, especially physical assets, are actually traded in active markets.

When there is not an active market for the specific asset, level two presents us with two alternatives. The first is to use the values of a less active market for identical assets/liabilities. If this is not possible, we must analyse the quoted prices of similar assets/liabilities in active markets and make some adjustments. In this scenario, the reporting company has to make some assumptions about the Fair Value of the reported items were these to be quoted in a market.

Level three is the least reliable, hence only used when inputs of levels one and two are not available because there are no observable market data. The aim at this level is still the measurement of an exit price for each asset/liability. "Unobservable inputs shall be developed using the best information available in the circumstances [in order to avoid "fabricated numbers], which might include an entity's own data" (Exposure Draft May 2009). This level incorporates subjectivity, since it depends on internal assumptions, indirect information and/or the viewpoint of a valuation specialist (Karen T. Cascini and Alan DelFavero, 2011).

E. Historical Cost versus Fair Value: Advantages and Drawbacks

Globalization phenomenon has brought a new accounting trend – Fair Value. Nowadays, accounting is focused on giving a truthful and reliable image of the firm to investors, who put a lot of money into companies in whose management, most of the times, they do not take part. Investors are in favour of the Fair Value approach, because it shows them the real and up-to-date value of the firm. The European Central Bank (2004) has argued that as the investors become better informed, there is an improvement of the "scope for market discipline and corrective action... the discipline exercised by informed and uninsured investors is an essential complement of supervisory control." The increased importance of value-based

[1] Source: www.journalofaccountancy.com

accounting models represents the progressive substitution of the traditional system – Historical Cost.

The main principle of Historical Cost is prudence. Historical Cost "leads to a regular under-valuation of the assets, given that it doesn't take into account the effects of price increases in the market", namely the one resulting from inflation (Cozma Diana, 2009). "Historical Cost Accounting prohibits assets write-ups in booms and creates "hidden" reserves, which can be drawn upon in times of crisis" (He and Zhang, 2010). This is why, during periods of high inflation, the Historical Cost method is unreliable. The changes in the value of an asset measured at Historical Cost "is a matter of depreciation adjustments, which have limited applicability" (Tournier J. C., 2000 in "Historical Cost versus Fair Value" by Cozma Diana). If the Fair Value is defined as an "exit price", the Historical Cost may be defined as an "entry price", measured by "the recorded amount in the document that proves the property right over a certain asset" (Cozma Diana). Using this procedure, companies accumulate accounting losses by "recording probable expenses and by not recognizing latent surplus values... [they] accumulate accounting losses that don't genuinely reflect their potential" (Cozma Diana, 2009). Summing up, this accounting system is not accurate enough to allow correct decision-making and does not reveal the true value of the companies. From the point of view of an investor, the main advantage of Historical Cost is that it tells him that, the company should not be worth less than what is conveyed by its financial statements (prudence principle). The constantly increasing importance of financial assets also justifies the introduction and the trend toward is the adoption of Fair Value (Cozma Diana, 2009).

Thus, Fair Value has been increasingly used in accounting, in accordance with the rules set by the FASB and by the IASB, since it improves the reliability of financial reporting, highlighting the "true" economic problems in the company (Karen T. Cascini and Alan DelFavero, 2011). Casta J. F. and Colasse B. (2001) further argue, in favour of the adoption of Fair Value, that it deepens the relationship between the company value creation process and the stock market and it gives management a potentially higher control of the costs the firm incurs. Fair Value is also important to link the performance of the company to the executive's and the employees' salaries. It can be argued that Fair Value is the procedure that represents the present and truth of economic performance.

Ricardo Reis and Phillip Stocken demonstrate one additional advantage of Fair Value with the example of inventories. All firms study their competitors in order to plan their strategies. However, when applying the Historical Cost approach, inventories do not reveal its true level and value. Thus, if inventories are measured at Historical Cost, they "are less capable of anticipating each others' behaviour", making them less profitable. On the contrary, if the firm

applies the Fair Value method, inventories are valued depending on the future cash flow forecasted, revealing the true inventory level and making it possible for firms to anticipate each others' strategy. "Therefore, firms manufacture more inventory, earn higher expected profits and generate larger social welfare when they use Fair Value than when they use Historical Cost" (Ricardo Reis and Phillip Stocken).

However, Fair Value also has drawbacks. The most commonly mentioned is the decrease of comparability when there is not an active market and firms must perform estimates based on assumptions and interpretations. Another disadvantage frequently pointed to is the fact that Fair Value reflects an artificial performance, mainly when applied to assets and liabilities held to maturity. For instance, if a company makes an investment expecting a 35% return over a six year period, the same asset will be recognized in the first period as if it were to be sold today, which could represent a loss or another value completely different from the 35% return. "For assets and liabilities held to maturity, the volatility reflected in the financial statements is artificial and can be ultimately misleading, as any deviations from cost will be gradually compensated for during the life of the financial instrument, pulling the value to par at maturity" (European Central Bank, 2004). Artificial earnings could also arise from short-term price fluctuations or imperfections in the valuation techniques used. Tim Reason, author of "Why CFO's Hate Fair Value", argues that it generates "a great deal of stress for CFO's, since they are forced to alert investors that deterioration in earnings is not due to the company's true performance".

Another consequence of Fair Value highlighted by Katz & Reason (2008) is the counter intuitive effect of liabilities. This arises when an entity enters into financial difficulties and risks defaulting, making the payment of the debt unlikely. At Fair Value, as the probability to pay the debt decreases, the debt value will also decrease, increasing the potential earnings for the year. (Exhibit 2).

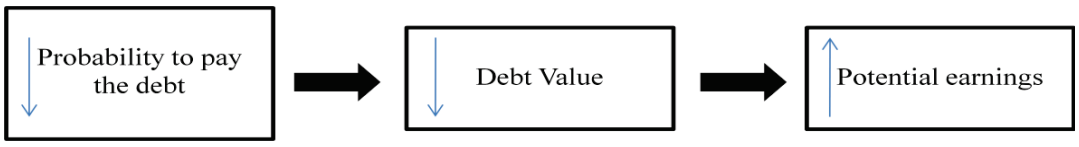

Exhibit 2 – Consequences of a company's financial difficulties

On the other hand, Thomas Linsmeier and Dr. Kathy Petroni have argued that these "gains related to an increase in credit risk was, in long-term, a sign of a larger decrease in asset value since, in most cases, a decline in assets will be larger than the gains related to the

increased default risk" (Karen T. Cascini & Alan DelFavero, 2011). The earnings increase from the decrease of liabilities is a signal of future losses.

One important characteristic of Fair Value is its pro-cyclicality (analysed in chapter G).Basically, in periods of boom, the entity's earnings increase more than its true value, while in recession periods its assets' value decreases more than it should. So, when prices are rising, earnings are high and shareholders ask for higher dividends. However, as these earnings consist of unrealized gains, this capital outflow decapitalizes the firm (European Central Bank, 2004).

F. Fair Value: Evolution

"As early as the 1930s ... Fair Value became part of American accounting system. However, in 1938, President Franklin Delano Roosevelt abolished the accounting measurement technique as it was believed that market-to-market accounting contributed to the severity of the Depression" (Karen T. Cascini and Alan DelFavero, 2011). This decision meant that Fair Value Accounting was not enforced by any standard board and became irrelevant until December 1975, when the FAS 12 – Accounting for Certain Marketable Securities – was issued. This marked the first step towards present-day Fair Value Accounting.

The paper "Fair Value Accounting: A Historical Review of The Most Controversial Accounting Issue in Decades" (Jones, 1988 in David Emersen, Khondkar Karim, Robert Rutledge, 2011) focuses on some aspects related to Historical Cost and Fair Value. The author concluded that the increasing diversity and number of financial instruments brought valuation issues to the fore. "Jones points out that historical cost no longer faithfully represents the economic realities of today's complex instruments" (Jones, 1988 in David Emersen, Khondkar Karim, Robert Rutledge, 2011). In1993, the FASB took into account some of the opinions of this and others authors and decided to issue SFAS 115, which "provided guidance on the valuation of investments in equity securities that have readily determinable Fair Values and for all investments in debt securities (FASB, 1993 in David Emersen, Khondkar Karim, Robert Rutledge, 2011). According to SFAS 115, "debt securities that are held to maturity were to be reported at amortized cost" and the others available for sale "were reported at Fair Value and any unrecognized gains or losses included in income" (David Emersen, Khondar Karim, Robert Rutledge, "Fair Value Accounting: A Historical Review of The Most Controversial Accounting Issue in Decades", 2010). Many people were upset by the SFAS115 issuance and the abandonment of traditional methods, while others thought it did not go far enough.

During the 1990s, the FASB proclaimed several statements that extended Fair Value to other areas:

- ✓ SFAS 119: Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments)
- ✓ SFAS 121: Accounting for the Impairment and Disposal of Long-Lived
- ✓ SFAS 123: Accounting for Stock-Based Compensation

In 2006 and 2007, the FASB went even further, issuing:

- ✓ SFAS 157: Fair Value Measurements
- ✓ SFAS 159: The Fair Value Option for Financial Assets and Financial Liabilities

In this new line of reasoning, the FASB extended Fair Value to several of the items of financial statements. The IASB did the same: over the last 20 to 30 years it has issued new sets of rules that increase the presence of Fair Value in the financial statements.

G. The Financial Crisis and Pro-cyclicality of Fair Value

One of the reasons behind the attacks on Historical Cost and the prominence of Fair Value was the ENRON scandal: "The Enron crisis that shook the American economy to its core in early 2000 pushed the regulators to issue rules to make it easier for investors to understand the value of a company's assets and reduce the complexity of structured finance" (Maria Carmen Huian, 2009). In order to prevent this kind of collapses, regulators aimed to increase the relevance, transparency and comparability of financial reporting, pushing for the adoption of Fair Value as an accounting policy. Fair Value was therefore introduced as an answer for a crisis, but many people argued that it could also be the cause of another kind of crisis – a financial crisis.

Some opposing voices come from the financial sector, since many of their assets are traded over-the-counter, which means that they are not transacted in active or liquid markets; they may measure huge portfolios based on transactions made in different contexts and periods. (Haresh Sapra, 2010) In these situations, when financial institutions are affected by imperfections in the market where the assets are traded, Fair Value introduces an artificial volatility into prices – not only in assets and liabilities measured at levels 2 and 3 but also at level 1. This happens in periods of boom, because optimism leads to the overvaluation of prices (the opposite taking place during bust periods). On the other hand, an effect that also amplifies the overvaluation of prices is that "not only do the prices reflect the underlying fundamentals, but they also influence the actions of financial institution that, in turn, affects prices" (Haresh Sapra, 2010). The volatility of prices can be illustrated by an empirical example – the Millennium Bridge in London. A pedestrian bridge in London, it was built for the celebrations

of the year 2000. When the bridge was opened to the public, it started shaking violently. Why did it happen? In reality, it began to shake slowly, but when people felt the bridge moving, everyone had the same instinct to put the same foot down, at the same time. Finally, the bridge did shake violently and pedestrians clung to the side-rails. Transposing this event to the reality of economics, "financial markets are the supreme example of an environment where individuals react to what's happening around them and where individuals' actions affect the outcomes themselves" (Haresh Sapra, 2010).

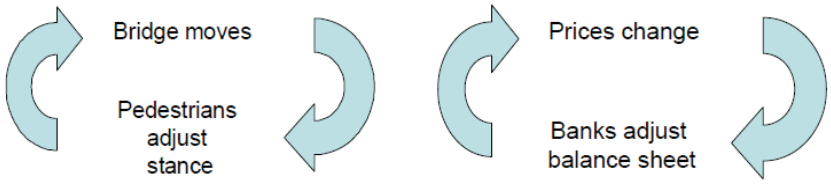

Exhibit 3 – Feedback Effect[2]

In a very simple way, this was the process that led banks to sell their illiquid loans during the financial crisis, introducing additional downward pressure on prices. When other banks anticipated this fall in prices, they too began to sell their loans in order to prevent higher losses.

"Furthermore, the pro-cyclicality of a bank lending could be enhanced, especially if the extension of Fair Value occurs with approximately the same timing as the New Basel Accord" (European Central Bank, 2004). As the New Basel Accord requires capital reserves at a required level, market-to-market accounting meant banks could need to sell-off assets in order to accomplish the defined capital requirements. Because of that, "the bankers required the permission to revert to historical cost during the crisis [2008]" (Maria Carmen Huian, 2009).

Nevertheless, some authors argue that the introduction of volatility by Fair Value Accounting is not a reason to reject it, given that if the companies "were completely successful in [disclosing it], the increased volatility in balance-sheet items would have no impact on investors' perceptions" (European Central Bank, 2004). "Clear and transparent qualitative and quantitative notes to the financial statements regarding the nature of the changes and methodologies could enhance reliability of market-to-model valuations" (Novoa, Scarlata and Solé, 2009).

[2] Source: "The Economic Trade-offs in Fair Value Debate" paper.

H. The Convergence between the FASB and the IASB

The globalization phenomenon, especially in capital markets, requires a widespread acceptance accounting standards of high quality, comprehensively and rigorously applied. Initially, foreign companies that wished to be registered with the SEC (Securities and Exchange Commission) needed to be in accordance with the US Generally Accepted Accounting Principles (GAAP) or the local GAAP, complemented by the US GAAP. European entities must therefore issue their financial statements in accordance with the IFRS and the US GAAP. However, due to the implementation of the Sarbanes – Oxley Act of 2002 requirements, this situation forced companies to incur significant. Because of that, some European companies left the SEC. (Erchinger & Melcher, 2007).

The globalization of capital markets and the costs related to the issuing of rules made the IASB and the FASB work together in order to "establish a global set of high-quality accounting and reporting standards which are understandable by users and enforceable by regulators" (Erchinger & Melcher, 2007). This happened in 2002, when the FASB and the IASB signed a "Memorandum of Understanding with the general objective of harmonizing both accounting systems and working together in the development of those standards" (Erchinger & Melcher, 2007). Since then, European companies can issue their financial statements in accordance to the IFRS and be listed in the USA stock market. The same happens in Europe, where an American company can be listed issuing its financial statements in accordance with the US GAAP. This is a positive step towards improving the business environment in a globalized world.

2. Pension Funds

A. The Trend towards the Adoption of Private Pension Funds

"All developed countries face the process of demographic ageing" (Martin Holub, 2011). The pension schemes of these countries are affected by adverse demographic trends and other factors such as higher unemployment and an increase of administrative social expenditure. (Musil, 1996 in "The sustainability of Pension Systems through the Assessment of the Pension Base Calculation").

The charts below illustrate the following trends:

- ✓ Increase in the number of old people → More pensioners → Increase of the Inactive Population
- ✓ Decrease in the number of young people → Reduction of the Active Population
- ✓ Higher expenses / Diminishing Contributions for Social Security

Average Life Expectancy (Portugal)

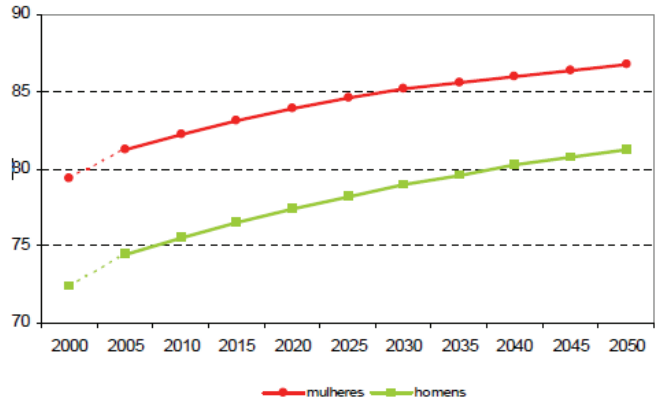

Exhibit 4 – Source: Relatório Técnico da Sustentabilidade da Segurança Social (2006) (*Homens* – Men; *Mulheres* – Women)

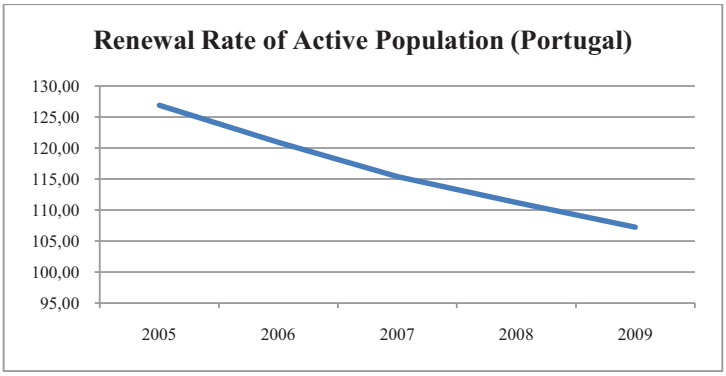

Exhibit 5[3] – Source: INE: www.ine.pt

Projection of the contributions (*contribuições*) and expenses (*despesas*): social security

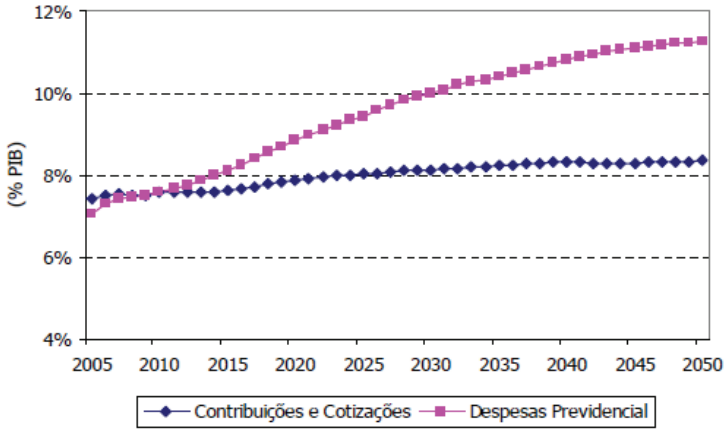

Exhibit 6 – Source: Relatório Técnico da Sustentabilidade da Segurança Social (2006)

[3] Formula of the rate: [P(20,29) / P(55,64)] * 100
P(x,y): Population aged between x and y years

In 2008, in Europe, there were four active workers for each retired citizen. The projections for 2030 point to a ration of two active workers for two inactive and a consequent increase of 2% in medical costs until 2050. (European Parliament Article, 2008) In its article on the topic, the European Parliament concluded that in order to face the current ageing of the population and the associated elevated medical costs, a reform of social security systems is necessary.

The trends that challenge the sustainability of social security European systems, including the Portuguese system, explain the current "shift from unfunded social security towards private funding" (Albina Orlando & Massimiliano Politano, 2010)

B. Pension Funds: Definitions

Before an in-depth analysis of pension funds, it is important to register some general definitions, based on DL nº 12/2006 of 20th of January that will be used in the next chapters.

Pension Plan – a program that defines the conditions of entitlement to a retirement pension for invalidity, old age or survival, in accordance with the provisions of law;

Health Benefits Plan – a program established by an entity that sets the conditions of the right to payment or reimbursement of medical expenses, arising from an involuntary change in the health status of the plan's beneficiary and incurred after the date of retirement due to age or disability, early retirement or death;

Pension Fund – individual fund exclusively dedicated to the management of one or more pension and health benefits plans;

Associate – entity whose pension and health benefits are being funded by a pension fund;

Participant – singular person that contributes to the fund, according to his or hers personal and professional circumstances;

Beneficiary – person that has the right to benefit from the pension or health benefits plan, regardless of being a participant;

Defined Benefit Plan (DB Plan) – plan which defines benefits in advance and calculates the contributions to guarantee the payment of those benefits;

There are three types of DB plans:

- **DB Integrated Plan with Social Security(*Segurança Social*) benefits –** established as a global pension, taking into account the benefit already obtained through the social security scheme
- **DB NOT Integrated Plan Security(*Segurança Social*) benefits –** incorporates the social security pension but establishes a limit to the part paid by the private pension fund.
- **Independent DB Plan –** independent from the benefits obtained through the social security scheme.

Defined Contribution Plan (DC Plan) – contributions are determined beforehand while the benefits are determined by the amount of the contributions delivered and its accumulated earnings;

Contributory plans – plans which involve contributions from participants;

Non-Contributory plans – plans which do not involve contributions from participants;

Closed Pension Fund – composed of only one member or, if there are multiple members, of a membership united by a contractual agreement that requires the group's consent regarding the admission of new associates;

Open Pension Fund – does not require the existence of any contractual agreement between the different members of the fund, adherence depending solely on the fund's manager acceptance.

C. Employee Benefits

When talking about pension funds, I am referring to one particular type of employee benefits among many. It is therefore convenient to mention the different kinds of benefits available for companies to remunerate and motivate their employees.

Employee benefits are essentially regulated by IAS 19 – Employee Benefits – yet IFRS 2 should also be mentioned, as it covers "Share-Based Payments", usually used to align the interests of the directors with those of shareholders through shares or options (a common form of rewarding employee performance). The disclosure requirements of IAS 26 – "Accounting and Reporting by Retirement Benefit Plans" are also relevant in this context. This study focuses particularly on IAS 19, since it rules pension funds.

The employees benefits discussed here and to which IAS 19 apply derive from §3 of IAS 19:

- ✓ Formal plans and agreements between the employer and individual or collective employee;
- ✓ Legal requirements that establish that the entities must contribute to national plans;
- ✓ Constructive obligation deriving from informal practices, that is, what happens when a modification on the informal practice would severely damage the relationship with the employee.

Taking the above into account, what follows is a brief description of each specific benefit:

Short-term Employee Benefits are composed by

- ✓ common wages, salaries and social security contributions;
- ✓ short-term compensation benefits, such as paid annual leave and paid sick leave (when they are expected to occur within twelve months after the end of the period during which the employee has rendered the service);
- ✓ Profit sharing and bonuses payable within twelve months after the end of the period the employee has rendered the service;
- ✓ Non-monetary benefits such as medical care.

This kind of benefits should be recognised by the employer, at an undiscounted amount, as a liability and as an expense.

Other long-term employee benefits are composed by

- ✓ Long-term compensated absence;
- ✓ Long-term disability benefits;
- ✓ Profit sharing and bonuses payable within twelve months or more after the end of the period during which the employee has rendered the service;
- ✓ Deferred compensation paid within twelve months or more after the end of the period during which the employee has rendered the service.

The measurement of these benefits is not as complex as the measurement of post-employment benefits explained below. Actuarial gains and losses or past services costs are directly recognized in the income statement without resorting to a "10% corridor" method[4].

Termination benefits: These differ from the previous ones because they do not arise from the rendering of a service, but from the termination of the employment. The amount of the termination benefit should be discounted if it is to be paid more than twelve months after the

[4] Explained in chapter "Pension Funds Accounting"

date registered in the balance sheet at a discount rate using the market yield on good quality corporate bonds.

Post-Employment Benefits: This is the category that this thesis analyses specifically. It is composed by

- ✓ Retirement benefits, such as pensions;
- ✓ Other post-employment benefits, such as post employment life-insurance and medical care.

Regarding this kind of benefits, there are two main types of pension funds schemes: defined contribution schemes and defined benefit schemes. These are presented and contrasted in the next chapter.

D. Defined Contribution (DC) Schemes versus Defined Benefit (DB) Schemes: Advantages and Drawbacks

Both pension schemes were developed to provide stability for employees in retirement and are based on the service they provided during their employment years. Employers must choose which one, if any, they would like to offer to their employees, taking into account several factors.

Defined Contribution schemes are usually based on the contribution agreed with the employee and paid by the entity to the pension fund. The fund receives the contributions and invests them to yield a return. Thus, the final value of a DC plan depends on the amount of the contributions, usually a percentage of the salary, and on the return obtained from the investments that were made. This is a popular scheme among employers, since it involves a fixed cost and it is the employee who bears all the risk. The employee supports the actuarial risk, the investment risk, the inflation risk and the longevity risk. The latter concerns the facts that, with this scheme, the employees "run the risk that they will run out of money in retirement before they die" (William R. Ortega). Another attractive feature of DC plans "is that contributions are automatically vested[5] and the account is portable upon separation of employment", which means that it is preferable for employees who often change their employer. (William R. Ortega). There are some DC plans in which the employee must also make contributions, as well as others to which the "employer contributes regardless of employee participation" (William R. Ortega).

[5] Vested employee benefits: "benefits that are not conditional on future employment" (IAS 19 definition)

In a DB plan, the final benefit to be collected in retirement is pre-arranged between the employer and employee so that all the risks referred to above are transferred to the company, since employees already know how much they can expect to receive in the future. The benefit amount established to pay in the future usually depends on the length of the service rendered, the employee's age and the average salary paid during the last three years of employment. In what concerns private sector pension funds, there are some distinguishing features: the employer owns the assets of the funds, makes the investment decisions and there is a "Pension Benefit Guarantee Corporation" (PBGC), a state agency that guarantees private sector DB pensions in case the employer files for bankruptcy. Companies must pay a fee to the PBGC (William R. Ortega). In Portugal, there is not a PBGC. These plans are currently the majority of corporate pension schemes; however, they are becoming less popular as new schemes arise, due to the uncertainty of the cost for the employer and to the introduction of stricter regulation requirements (Barry Elliott and Jamie Elliott, 2008).

These are merely two among several reasons for the trend to shift from DB to DC plans. William R. Ortega provides three main explanations for this change. The first one is the fact that DB involves more costs to the employer and many of the competitors offer DC. Thus, companies that offer DB lose competitiveness. Secondly, the work force is less unionized than before and "DB plans have rarely been offered in the nonunionized service sector". Finally, William R. Ortega stresses the increased mobility of the workforce and "zigzag[6]" careers; since "DB plan benefits are not portable, in the event an employee leaves an employer before retirement" he prefers a DC plan.

There are additional factors that make DB too expensive for employers, pushing them to opt for DC instead. People are living much longer than before and "such plans can be very expensive when employees live twenty or more years beyond retirement. [... Moreover,] DB plans are currently underfunded and will require significant cash payments over the next few years in order to be fully funded" (William R. Ortega).

DC plans also have their limitations. A research carried out by the same Ortega shows that people usually make poor investment choices, because they frequently do not have the necessary skills to analyse the various options, that will affect their future DC income (Ellis, 2007 in "Retirement Planning: an Analysis of Defined-Benefit versus Defined Contribution Pension Plans" of William R. Ortega). They usually invest too much in the employer's stocks, thus risking disastrous consequences if the company encounters financial difficulties.

[6] The expression "zigzag" career refers to the frequent change of the functional area in which people work.

III. Case-Study

This analysis of the specific case of the CGD's pension funds of CGD starts with a reflection on the current macroeconomic context, followed by an overview of the banking sector, a brief presentation of CGD and a characterization of the pension funds' global market. The study of pension funds accounting is based on IAS 19, since it is the accounting rule CGD must apply. The final section is dedicated to CGD pension's funds and contemplates separately the assets of the funds, responsibilities and supervision; however, the focus here is on the CGD retirement pension plan. This work relies on public information, discussed with two employees of CGD.

1. Macroeconomic Context

In 2010, the global international economic performance was satisfactory, with an improvement mainly due to Emergent and Asian countries. This economic growth was also caused by central bank policies, based on low interest rates and on the consequent increase of private consumption. However, the global economic growth was not followed by a decrease of unemployment rates, despite the indicators from Emergent countries.

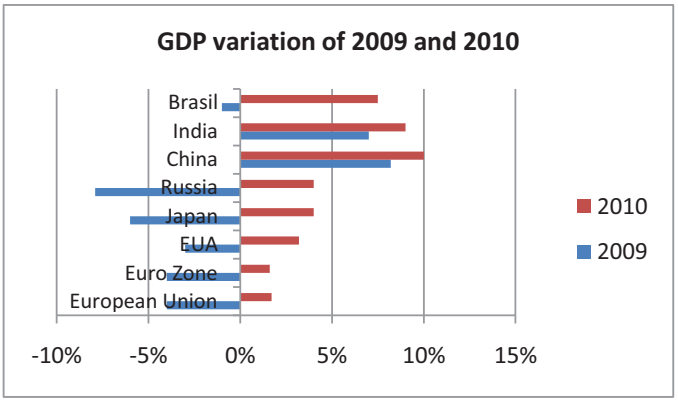

Exhibit 7 – Source: Annual Report CGD 2010

In 2010, national governments needed to finance their economies issuing public debt at high premiums; otherwise, they would not have been able to issue and place new debt. Because of that, austerity measures had to be adopted, affecting the average wealth of the population.

In Portugal the interest rates of public debt are now very high and make headlines in the news every day. The 10-year bond has increased from 4% to almost 10% since January 2010 (Exhibit 8)

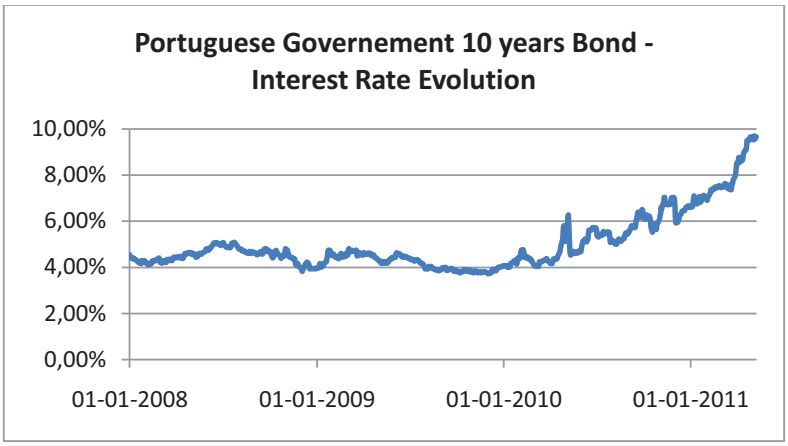

Exhibit 8 – Source: Bloomberg

In spite of the Portuguese economic crisis, the national economy has grown by 1, 4% during 2010. This is due to an increase in exports and internal consumption that compensates the decrease on investment (CGD Annual Report 2010). The unemployment rate remains very high, affecting especially young graduates. The Portuguese economy general performance in 2010 is summarized below:

PORTUGUESE ECONOMY INDICATORS
(in %)

	2008	2009	2010
GDP (Real variation)	0	-2,5	1,4
Private Consumption	1,8	-1,0	2,0
Public Comsumption	1,1	3,4	3,2
Internal Demand	1,2	-2,9	0,8
Exports	-0,3	-11,6	8,7
Imports	2,8	-10,6	5,3
Inflation Rate	2,7	-0,9	1,4
Ratios			
Umemployment Rate	7,6	9,5	10,8
Public Debt (in % of GDP)	65,3	76,1	82,1

Exhibit 9 – Source: Annual Report CGD 2010

2. Banking Sector Overview

The financial sector was at the core of the ongoing crisis, which started with the collapse of some banking giants in the United States. It is therefore important to understand the actual predicament and structure of the Portuguese banks.

PORTUGUESE BANKS STRUCTURE

	2009	2008	Var. (p.p)
ASSETS			
Cash and Equivalents	2%	2%	0%
Loans to Credit Institutions	14%	13%	1%
Loans to Clients	61%	64%	-3%
Finance Assets avalilable for sale at fair value	16%	13%	3%
Investments held until maturity	2%	1%	1%
Hedging Derivatives	0%	1%	0%
Tangible and Intangible Assets	1%	1%	0%
Other Assets	5%	5%	-1%
TOTAL	**100%**	**100%**	**0%**
LIABILITIES AND EQUITY			
Equity	9%	9%	0%
Amouts owed to Central Banks	4%	3%	1%
Amouts owed to Credit Institutions	20%	22%	-2%
Resources from Clients	39%	41%	-2%
Liabilities represented by securities	18%	14%	4%
Provisions	1%	1%	0%
Other Liabilities	11%	11%	-1%
TOTAL	**100%**	**100%**	**0%**

Exhibit 10 – Source: Portuguese Banks Association

Portuguese banks devote themselves mainly to loans to clients (61%) on the assets side and resources from clients (39%) on the liabilities side, which reflects the dependence on financial intermediation that is the nuclear activity of our financial institutions. The crisis that erupted in 2008 is present in the table above, namely in the contraction of the loans to clients (-3 percentage points) and in the increase by 1 percentage point in the resources derived from central banks. The amounts owed to credit institutions and liabilities represented by securities also play an important role on the financing of these banks.

The following table illustrates the situation of Portuguese banks through the decomposition of the credit granted: are:

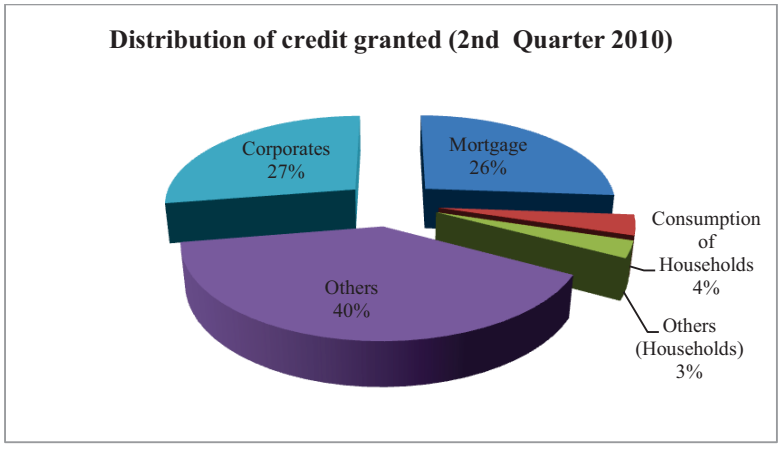

Exhibit 11 – Source: Presentation about Portuguese banking sector overview by Dr. António Sousa

The credit granted comprises three main groups: credit to households, corporate, and others. The most significant part corresponds to the loans granted neither to private or corporate clients, that includes above all credit to other financial institutions. A second category is formed

by the credit to households (33%), of which 26% (the majority) are mortgages, a value very similar to that of the credit granted to firms.

In 2009, the credit to households increased by 4, 1% (Newsletter 2009 of Portuguese Bank Association), essentially due to the increase of mortgages, affected by the decrease of Euribor. In 2011, the Euribor has been showing signals of an economic recovery, with an increase of circa 0, 5%.

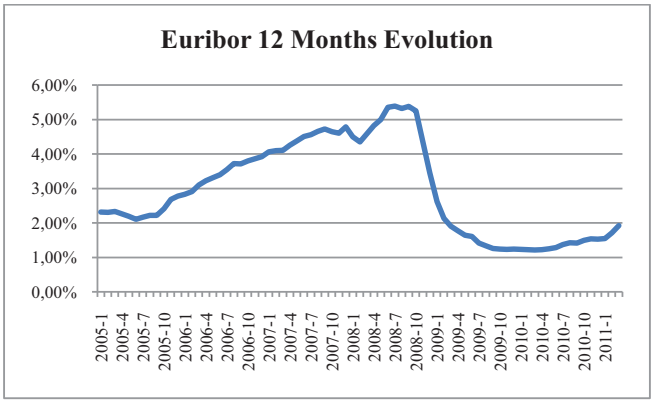

Exhibit 12 – Euribor 12 months Evolution since 2005[7]

However, some of the credits granted may default – Nonperforming Loans (NPL) – whenever clients do not pay interest or capital for more than 90 days. In the chart below, it is clear that NPL of Portuguese corporations increased from 3.000 million Euros (January of 2008) to 7.500 million Euros (July 2010). The NPL of mortgages also increased, but at a lower rate when compared with corporates.

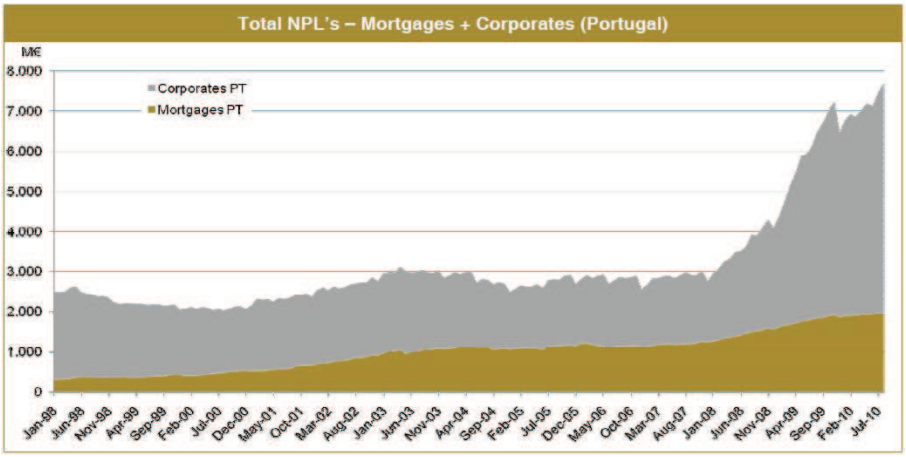

Exhibit 13 – Source: Bank of Portugal

[7] http://euriborupdate.blogspot.com/2009/01/historical-evolution-from-2000.html

Even with these high NPL figures, several EU Countries are in a worse position than Portugal regarding this parameter:

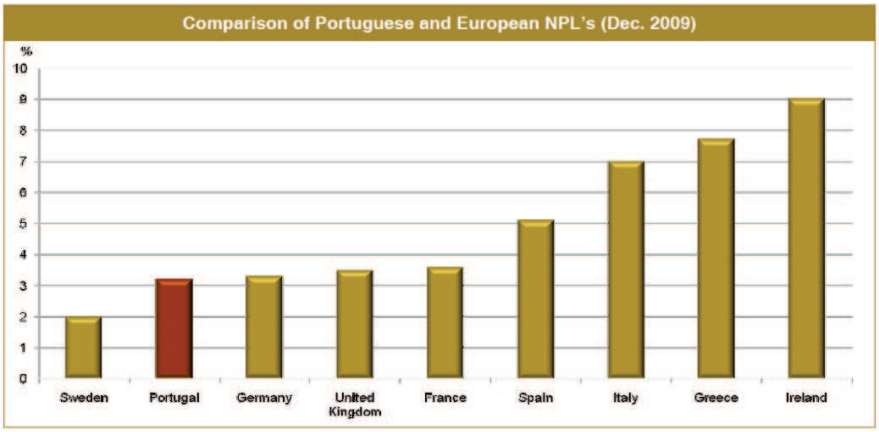

Exhibit 14 – Source: FMI

Portuguese banks resources have increased since 2006, but the highest increase rate was registered in 2009 and was caused by the revival of the access to international markets and emission of securities[8].

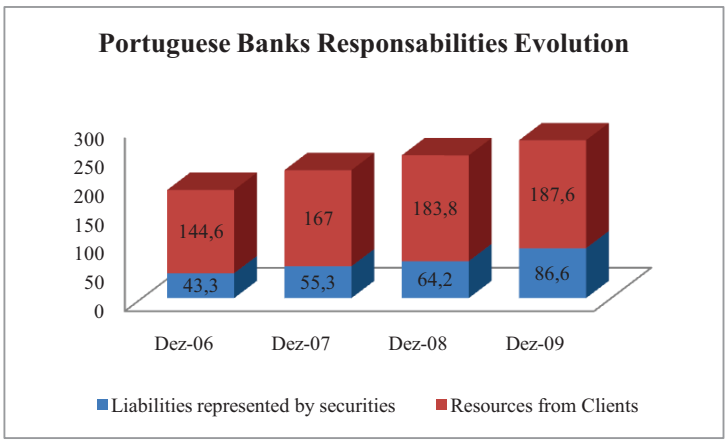

Exhibit 15 – Source: "Boletim Informativo 2009" of Portuguese Bank Association

It is also relevant to understand the composition of the Portuguese banks results since 2006 in three fundamental areas: banking services, financial operations and financial income. The financial income remains the main source of income, as it is traditionally a bank's core business. However, it became less relevant in 2009 (- 4, 3 percentage points), having lost ground to financial operations and banking services.

[8] From: "Boletim Informativo 2009" by the Portuguese Banks Association

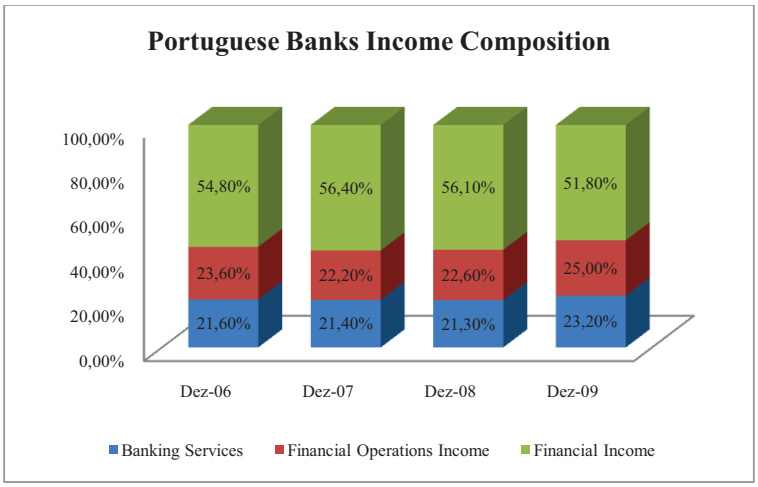

Exhibit 16 – Source: "Boletim Informativo 2009" of the Portuguese Bank Association

Due to the stagnation of the national market, the international presence of the Portuguese banks, particularly the biggest ones, is growing. In 2009, the international presence of the largest 4 four banks[9] is as follows:

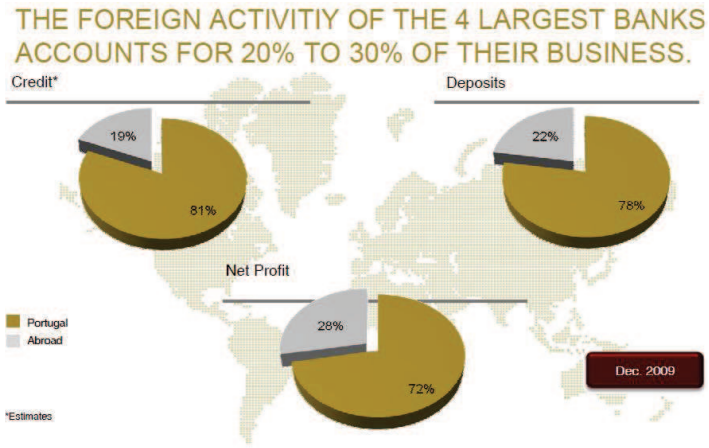

Exhibit 17 – Source: Portuguese Bank Association (Presentation)

The ranking of Portuguese banks in 2009 is presented in Appendix 2.

[9] BPI, BES, CGD, BCP

3. Caixa Geral de Depósitos (CGD)

A. Company Presentation

Caixa Geral de Depósitos (CGD) was created in 1876, during the reign of D. Luís I. Its establishment was extremely influenced by similar institutions in France (Caisse des Dépôsits et Consignations) and Belgium (Caisse Générale d'Épargne et de Retraite) that had been born in 1816 and 1865, respectively. Initially, CGD was intended to receive deposits legally required and to manage the funds of public institutions. On a smaller scale, CGD also received deposits from private clients; these funds were normally used to help financially constrained people.

Until 1929, CGD financed essentially the State (and, residually, private clients),but a reform carried out by Oliveira Salazar, the Portuguese Finance Minister o at the time turn CGD into one of the largest credit banks. In 1969, the "Lei Orgânica" promulgated by the Prime-Minister Marcelo Caetano established a new legal framework for CGD, making it the financial institution CGD it is today – it was transformed from a public service corporation to a public firm administrated by the State.

In 1993, as a result of the general modifications in the banking sector and the integration in the European Community (the accession took place in 1986), CGD became a Limited Liability Company (*Sociedade Anónima*), yet still totally owned by the State (DL 287/93 of 20th of August). In 2010, the Portuguese State approved an increase in its social capital of 550 million Euros – to a total of 5.050 million Euros.

Currently, CGD is the national leader in almost all the business areas in which it operates. The highest market share detained concerns the deposits of private customers (workers in public firms must receive their wages through a deposit made to a CGD account) and the insurance sector. From 2009 to 2010, the business areas that displayed the highest positive variation were the insurance activity and Non-Real Estate Leasing, as demonstrated below:

CGD MARKET SHARES IN PORTUGAL	Dez 2009		Dez 2010	
	Share	Ranking	Share	Ranking
Banking Activity				
Liquid Assets	30,60%	1º	31,20%	1º
Credit to clients	20,50%	1º	20,90%	1º
Credit to companies	15,50%	2 º	16,10%	2 º
Credit to private people	23,60%	1 º	23,60%	1 º
Credit to residence	27,10%	1 º	26,80%	1 º
Deposits of clients	28,90%	1º	28,50%	1º
Deposits of private peolple	34,00%	1º	33,20%	1º
Insurance activity	30,30%	1º	34,50%	1º
Specialized Credit				
Real Estate Leasing	18,70%	3º	21,80%	2º
Non-Real Estate Leasing	14,30%	1º	19,40%	1º
Factoring	14,70%	4º	13,10%	4º
Asset Management				
Non-Real State Investment Fund	23,80%	1º	23,10%	1º
Real State Investment Fund	14,00%	1º	14,60%	1º
Pension Fund	9,60%	4º	11,10%	4º
Asset Managemet	27,70%	1º	27,00%	1º

Exhibit 18 – Source: Annual Report CGD 2010

Nowadays, CGD is a sizeable corporate group, present in many countries and in several business areas, such as insurance, health and real estate (see Appendix 1).

B. Mission and Strategy

CGD wants to consolidate its leadership of the Portuguese financial sector in the coming years, making a contribution to the development of the Portuguese economy, increasing the competitiveness of companies and promoting the stability of the financial sector. The consolidation of the presence in the Portuguese market entails an effective risk management, especially for the duration of the current economic crisis.

The CGD strategy is based on 6 main pillars. Firstly, it aims to continue to grow in order to defend its presence in the market, through the consolidation of traditional business areas (mortgage and resources capture) and a deepened contact with small and medium companies, as well as through the economic growth in international markets. During 2010, CGD expanded their business via important agreements with Angola and Mozambique.

Secondly, CGD bets on an effort to increase the operative efficiency and quality service improvement. During a period of crisis, it is very important to cut costs to overcome financial

difficulties. During 2010, CGD reduced its employee costs and external supplies and services by 2, 3%, but it wants to reduce costs even further in the coming year.

The third pillar concerns the development of risk management capabilities, due to the uncertainty about the future evolution of the international markets.

The fourth pillar has to do with human resources management, based on the values and culture of the company, aiming to enhance employees' performance and productivity.

The cultural and social development and promotion of sustainability of CGD as a reference in the Portuguese market stands as the fifth pillar, while the need for a restructuring of the corporate model restructuring strives to attain an efficient capital structure capable of yielding the necessary resources to invest in important business areas. This is the sixth and final pillar.

C. Financial Indicators

From the analysis of financial indicators it is very clear that the financial crisis started to affect CGD in 2009. As stated previously, the financial crisis began towards the end of 2008 with the collapse of Lehman Brothers, but it only had a significant impact on CGD accounts in 2009. So, before the crisis, all performance indicators were improving except the net income, which had decreased in 2008; since the crisis instantaneously affects the capital market, CGD recognized losses in their financial participations, namely in Millenium BCP and Zon Multimédia. In 2009, the net income was affected mainly by two factors:

- Losses resulting from impairments in financial participations;
- Stagnation of the finance margin due to low Euribor interest rates and to the profile of the loan portfolio, composed largely of medium and long term mortgages.

In terms of Balance Sheet figures, we see an across-the-board increase since 2007, with the exception of debt securities in 2010 (explained by CGD's wish to reduce its exposure to risk). This means that CGD continues to invest, to capture more clients and extend more credit, even during this crisis. .

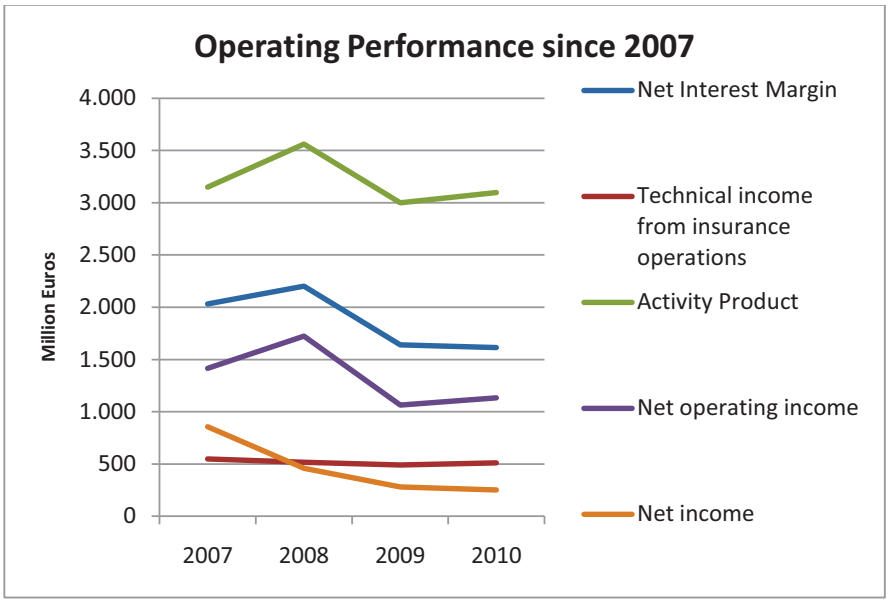

Exhibit 19 – Source: Annual Report CGD 2010

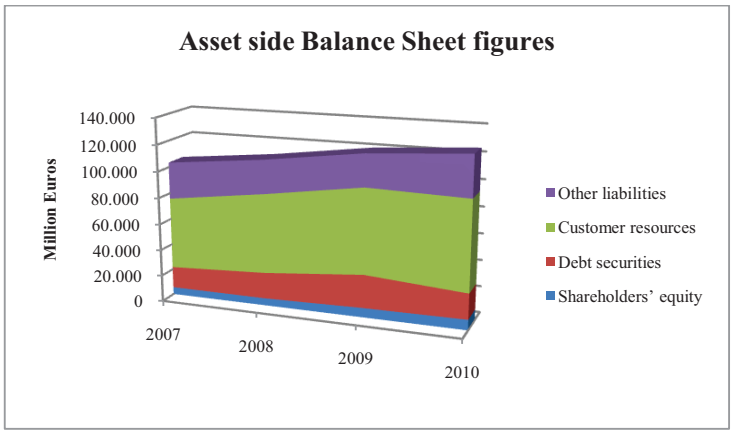

Exhibit 20 – Source: Annual Report CGD 2010

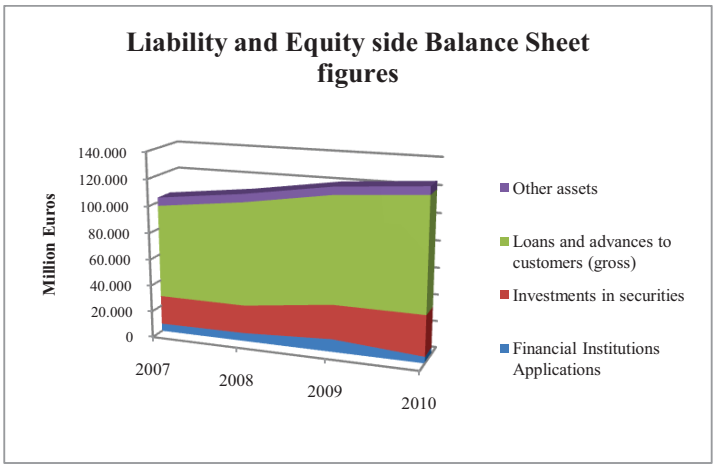

Exhibit 21 – Source: Annual Report CGD 2010

The biggest challenge CGD now faces is liquidity. It is difficult for CGD and other Portuguese banks to have access to credit from other financial institutions, so the main liquidity source is the European Central Bank.

Even with the financial crisis, CGD has been increasing its solvability ratios, having issued capital of 1.000 million Euros in 2009 and 550 million Euros in 2010, raising these values above the requirements of the Bank of Portugal to an appropriate level, given its balance sheet risks. Return on Equity (ROE) decreased significantly since 2007 because of the decrease in the net income (- 71%) and increase of capital (41%).

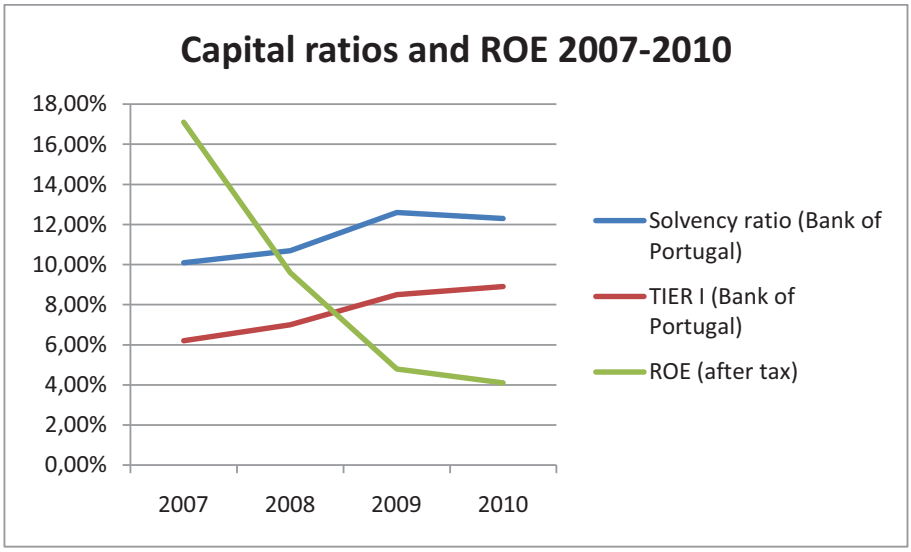

Exhibit 22 – Source: Annual Report CGD 2010

4. CGD Pensões

CGD Pensões is one of the companies of CGD Group, founded in 1992 to manage the pension funds of the employees of CGD. It is totally owned by Caixa Gestão de Activos, SGPS, also 100% owned by the CGD Group.

COMPOSITION OF ASSETS MANAGEMENT AREA OF CGD GROUP

CGD GROUP	Caixa Gestão de Activos, SGPS	100,00%	CaixaGest	100,00%
			CGD Pensões	100,00%
			Fundimo	100,00%

Exhibit 23 – Source: Annual Report CGD 2010

In 1994, CGD Pensões changed its name to Sociedade Gestora de Fundos de Pensões da Caixa Geral Depósitos, S.A, when it began managing the pension fund of BNU, following its integration in the CGD Group. After that, in 1996, CGD Pensões started managing external pension funds. Since 2001, CGD Pensões has been creating open pension funds, allowing private customers the possibility to create their own pension plan:

- "Caixa Reforma Activa"
- "Caixa Reforma Valor"
- "Caixa Reforma Garantida 2022"
- "Caixa Reforma Prudente"

Caixa Gestão de Activos, SGPS, manages third-party assets and provides some management-related services to the three companies of the sub-group (Exhibit 23), namely general back office, real estate back office, investments and compliance. The general back office corresponds to the treatment and accounting of daily operations. The assets management of own assets are performed by CGD's Financial Markets Department.

5. Caixa Geral de Aposentações (CGA)

CGA was created in 1929 as a welfare institution for public workers. Later, in 1934, the "Montepio dos Servidores do Estado" was established, to pay survival pensions to the heirs of public workers (DL[10] nº 142/73 of 31st of March). Initially, both entities worked together and were administrated by CGD; however, in 1993, a legal change (DL nº 277/93) merged both entities and made them independent from CGD, with its own administration.

Currently, CGA manages the public workers' "Segurança Social" scheme , for employees admitted until the 31st of December of 2005 in what concerns survival and retirement pensions and other special benefits. The "Lei nº 60/2005" of the 29th of December, article 2, defines that employees who started working after the 1st January of 2006 must contribute to "Segurança Social" scheme. Therefore, after this date, the CGA fund became a closed one. The universe of subscribers is around 604.000, essentially employees of the public, local and regional administration, except workers in the CGD's banking and insurance sectors.

[10] DL – Decreto Lei – Portuguese Law

6. Pension Fund Market Analysis

In Portugal, Pension Funds management can be performed by two types of companies: Insurance Companies (IC) or Pension Funds Manager (PFM) (Sociedade Gestora de Fundo de Pensões), which is the case of CGD Pensões. From Exhibit 24, we can infer that the majority of pension funds are run by PFM. Despite that, there are more IC managing pension funds, in terms of value managed – the PFM have a market share of 97, 94% (against 2, 06% detained by the IC).

MARKET STRUCUTRE

	Insurance Companies	Management Companies	Total	% of Total
Número de entidades gestoras fundos de pensões	15	13	28	
Number of Pension Funds	48	188	236	100,00%
Closed	36	131	167	70,76%
Open, except PPR, PPR/E e PPA	8	33	41	17,37%
Individual accession (Number of accesions)	2.205	37.113	39.318	
Collective accession (Number of accesions)	13	524	537	
PPR e PPR/E	2	22	24	10,17%
Individual accession	1.408	72.395	73.803	
PPA	2	2	4	1,69%
Individual accession	132	1.380	1.512	
Amount of Pension Funds (thousand of euros)	451.548	21.465.917	21.917.465	100,00%
Closed	426.877	20.372.787	20.799.664	94,90%
Open, except PPR, PPR/E e PPA	14.424	673.102	687.526	3,14%
Individual accession	10.278	206.064	216.342	
Collective accession	4.122	462.970	467.092	
PPR e PPR/E	9.412	409.835	419.247	1,91%
PPA	835	10.193	11.028	0,05%
MARKET SHARE	2,06%	97,94%	100,00%	
Average amount manage by company	30.103	1.651.224	1.681.328	
Average amount manage by fund	9.407	114.180	123.588	

Exhibit 24 – Source: Statistics of Pension Funds 2009 – ISP

There is also a huge gap in relation to open or closed funds. . About 95% of Pension Funds are closed, meaning that access is denied, against 3% of open plans, which allow individual or collective accessions.

Observing Exhibit 27, it is possible to verify that the Pension Funds market has been growing since 2004, a possible result of the anticipated bankruptcy of the "Segurança Social" scheme – people want to ensure their pensions resorting to other options. In spite of the steady increase in the amounts managed, the level of contributions remains more or less constant. The evolution of contributions follows strictly the number of pension funds (Exhibit 28), except during the period between 2008 and 2009, because of the downwards revision of salaries and pension growth rates assumptions (Exhibit 25 and 26).The impact of the salaries and pension rate is larger than the variation on the discount rate.

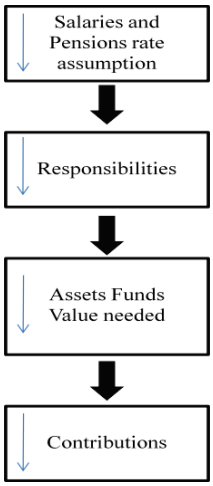

Exhibit 25–Impact of salaries and pension rate assumption change

VARIATION ON ASSUMPTIONS BETWEEN 2008 AND 2009

	Variation (2009 - 2008)			
	CGD	BES	BCP	BPI
Discount Rate	-0,25%	-0,25%	-0,25%	-0,25%
Salaries Increase Rate	0,00%	-1,00%	-0,75%	-0,25%
Pensions Increase Rate	-0,25%	-0,25%	-0,60%	-0,50%
Fund rate of return	0,00%	0,20%	0,00%	0,00%

Exhibit 26 – Source: Annual Reports

As some companies (i.e. CGD, BES, BCP, BPI) have decreased these two assumptions (salaries and pensions increase rate), the responsibilities have decreased and these firms do not need to contribute significantly to have the fund 100%covered, as required.

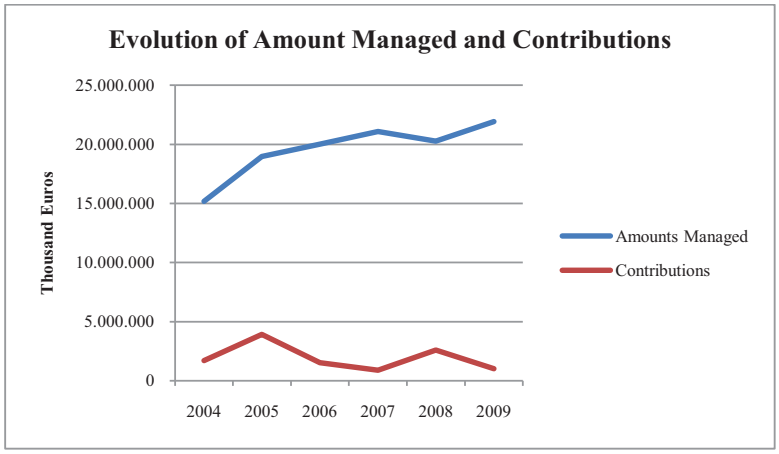

Exhibit 27 – Source: Statistics of Pension Funds – ISP

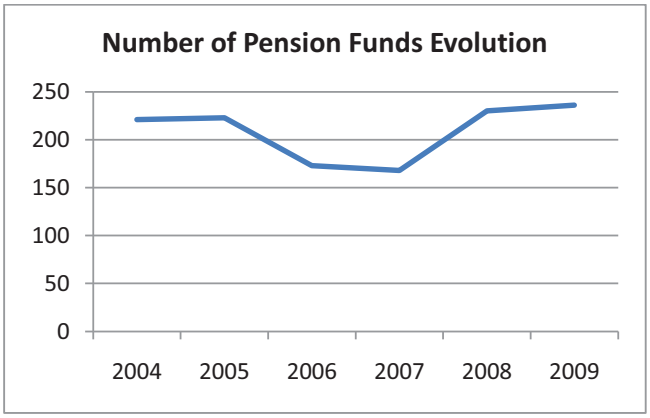

Exhibit 28 – Source: Statistics of Pension Funds – ISP

In terms of the amounts managed by the company displayed in Exhibit 29, the market is led by "PensõesGere", with a market share of 32%. There is a big gulf between the leader and the second contender ("BPI Pensões"), with only 15% of market share. The company that manages the CGD Pension Fund appears in fourth place (in Portugal), with about 10% of the

total amount of Pensions Funds; its market share increased from 2008 to 2009 by 2 percentage points (Exhibit 30).

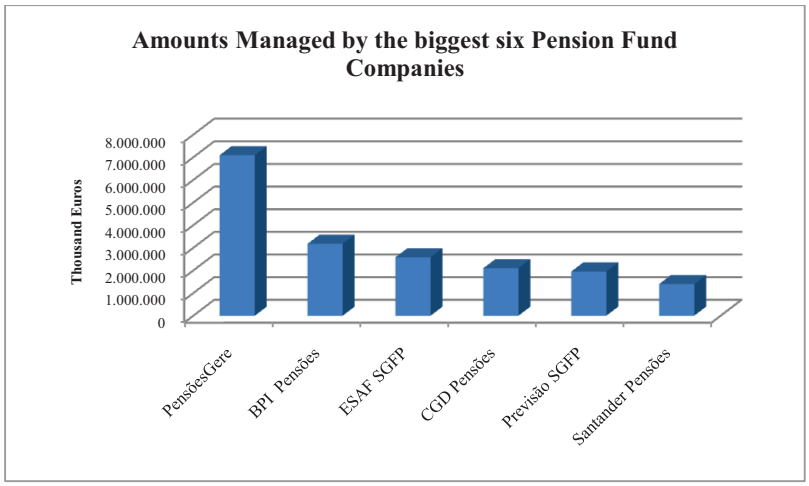

Exhibit 29 – Source: Statistics of Pension Funds 2009 – ISP

ANNUAL EVOLUTION OF THE NUMBER, AMOUNT AND CONTRIBUTION OF THE PENSION FUNDS (Thousand Euros)

	2008					2009					Variations 2008 - 2009	
	Number	Amount Managed	Market Share	Contributions	(%)	Number	Amount Managed	Market Share	Contributions	(%)	Amount	Contributions
Management Entities	**230**	**20.281.910**	**100,00%**	**2.591.266**	**100,00%**	**236**	**21.917.465**	**100,00%**	**1.024.272**	**100,00%**	**8,06%**	**-60,47%**
Insurance Companies	**46**	**393.962**	**1,94%**	**85.701**	**3,31%**	**48**	**451.548**	**2,06%**	**49.294**	**4,81%**	**14,62%**	**-42,48%**
Sociedades Anónimas	**39**	**381.690**	**1,88%**	**84.526**	**3,26%**	**41**	**438.101**	**2,00%**	**48.719**	**4,76%**	**14,78%**	**-42,36%**
AXA Vida	5	45.028	0,22%	8.346	0,32%	5	54.605	0,25%	11.768	1,15%	21,27%	41,00%
BES Vida	2	315	0,00%	0	0,00%	1	4	0,00%	0	0,00%	-98,73%	-
BPI Vida	1	7.213	0,04%	755	0,03%	1	6.486	0,03%	144	0,01%	-10,08%	-80,93%
Crédito Agrícola Vida	3	40.397	0,20%	12.412	0,48%	4	46.768	0,21%	11.738	1,15%	15,77%	-5,43%
Eurovida	2	99.832	0,49%	191	0,01%	2	116.009	0,53%	221	0,02%	16,20%	15,71%
Fidelidade Mundial	1	525	0,00%	5.004	0,19%	1	480	0,00%	354	0,03%	-8,57%	-92,93%
Generali Vida	2	5.085	0,03%	7.165	0,28%	2	5.908	0,03%	3.899	0,38%	16,18%	-45,58%
Global Vida	1	13.755	0,07%	1.756	0,07%	1	15.269	0,07%	1.561	0,15%	11,01%	-11,10%
Groupama Vida	3	4.759	0,02%	159	0,01%	4	5.368	0,02%	298	0,03%	12,80%	87,42%
Lusitania Vida	5	17.576	0,09%	836	0,03%	5	19.585	0,09%	847	0,08%	11,43%	1,32%
Liberty	1	6.883	0,03%	37	0,00%	1	7.034	0,03%	7	0,00%	2,19%	-81,08%
Real Vida	5	116.694	0,58%	44.135	1,70%	6	134.050	0,61%	13.780	1,35%	14,87%	-68,78%
Victoria Vida	6	22.460	0,11%	3.624	0,14%	6	24.982	0,11%	3.797	0,37%	11,23%	4,77%
Zurich Vida	2	1.167	0,01%	105	0,00%	2	1.553	0,01%	304	0,03%	33,08%	189,52%
Filiation outside Eurpean Unio	**7**	**12.272**	**0,06%**	**1.174**	**0,05%**	**7**	**13.448**	**0,06%**	**575**	**0,06%**	**9,58%**	**-51,02%**
American Life	7	12.272	0,06%	1.174	0,05%	7	13.448	0,06%	575	0,06%	9,58%	-51,02%
Management Companies	**184**	**19.887.948**	**98,06%**	**2.505.565**	**96,69%**	**188**	**21.465.917**	**97,94%**	**974.978**	**95,19%**	**7,93%**	**-61,09%**
BBVA Fundos	8	351.962	1,74%	17.694	0,68%	9	391.948	1,79%	38.962	3,80%	11,36%	120,20%
Allianz SGFP	6	33.504	0,17%	5.656	0,22%	5	34.551	0,16%	3.608	0,35%	3,13%	-36,21%
Banif Açor Pensões	12	247.083	1,22%	21.247	0,82%	14	269.386	1,23%	21.906	2,14%	9,03%	3,10%
BPI Pensões	32	2.872.813	14,16%	187.146	7,22%	33	3.178.876	14,50%	225.808	22,05%	10,65%	20,66%
CGD Pensões	19	1.577.592	7,78%	242.416	9,36%	19	2.100.060	9,58%	191.308	18,68%	33,12%	-21,08%
ESAF SGFP	29	2.476.078	12,21%	655.621	25,30%	30	2.582.420	11,78%	76.427	7,46%	4,29%	-88,34%
Futuro SGFP	15	1.121.799	5,53%	140.171	5,41%	15	1.119.555	5,11%	110.300	10,77%	-0,20%	-21,31%
Pedro Arroja SGFP	1	179	0,00%	16	0,00%	1	62	0,00%	8	0,00%	-65,36%	-50,00%
PensõesGere	40	6.898.208	34,01%	845.433	32,63%	38	7.092.642	32,36%	59.522	5,81%	2,82%	-92,96%
Previsão SGFP	4	1.673.289	8,25%	99.235	3,83%	5	1.952.369	8,91%	118.133	11,53%	16,68%	19,04%
Santander Pensões	3	1.393.596	6,87%	215.148	8,30%	3	1.397.688	6,38%	72.537	7,08%	0,29%	-66,29%
SGF SGFP	14	80.536	0,40%	31.782	1,23%	15	84.034	0,38%	9.223	0,90%	4,34%	-70,98%
SGFP do Banco de Portugal	1	1.161.308	5,73%	44.001	1,70%	1	1.262.326	5,76%	47.235	4,61%	8,70%	7,35%

Exhibit 30 – Source: Statistics of Pension Funds 2009 – ISP

Contributions to the Funds, in general, have decreased dramatically (2008-2009), for reasons already exposed (Exhibit 25). From Exhibit 30, we can see that PensõesGere saw its market share fall from 34, 01% in 2008 to 32, 36% in 2009 – the biggest fall amongst all players in terms of percentage points – while CGD Pensões managed to increase its market by almost 2

percentage points, from 7, 78% to 9, 58%. This was the highest gain registered amongst all players.

NUMBER AND AMOUNT OF CLOSED PENSION FUNDS BY TYPE OF PLAN AND ACTIVITY SECTOR

(Thousand Euros)

(2009)	Defined Benefit			Defined Contribution			Mixed Plan			Total		
Activity Sector	**Nº**	**Amount**	**%**	**Nº**	**Amount**	**%**	**Nº**	**Amount**	**%**	**Nº**	**Montante**	**%**
Transformation Industries	29	595.185	2,92%	2	17.511	14,21%	9	164.012	52,61%	40	776.708	3,73%
Electricity, Gas and Water Companies	5	1.154.788	5,67%	0	0	0,00%	0	0	0,00%	5	1.154.788	5,55%
Retail Commerce / Automobiles Reparation	9	132.975	0,65%	4	12.071	9,80%	6	43.634	14,00%	19	188.679	0,91%
Transports, Warehouse and Communications	16	2.152.593	10,57%	2	3.033	2,46%	2	54.528	17,49%	20	2.210.154	10,63%
Finance Activities - Banks	22	15.561.369	76,41%	3	63.459	51,50%	1	1.610	0,52%	26	15.626.438	75,13%
Finance Activities - Insurance and Pension Funds Management	26	342.937	1,68%	1	436	0,35%	1	16.613	5,33%	28	359.986	1,73%
Finance Activities - Other Entities	4	84.812	0,42%	0	0	0,00%	0	0	0,00%	4	84.812	0,41%
Real Estated Agencies, Rents and Services rendered to companies	15	326.623	1,60%	5	26.724	21,69%	2	31.336	10,05%	22	384.683	1,85%
Others	3	13.416	0,07%	0	0	0,00%	0	0	0,00%	3	13.416	0,06%
TOTAL	**129**	**20.364.698**	**100%**	**17**	**123.233**	**100%**	**21**	**311.733**	**100%**	**167**	**20.799.664**	**100%**

Exhibit 31 – Source: Statistics of Pension Funds 2009 – ISP

In the Pension Funds market, the majority of the plans are of the Defined Benefit type, although nowadays this tendency is changing; even mixed plans account for a higher share than DC Plans (Exhibit 31). It is also clear that the banking activity is the sector that covers the Pension Funds market, with a total share of 75% (Exhibit 31). The justification for this is the fact that employees from the banking activity only started making contributions to "Segurança Social" in 2010[11]. Before that, each bank had its own pension plan for employees. These pension plans are not integrated in "Segurança Social" scheme and are always of the DB type. The remaining pension plans are usually integrated in the "Segurança Social" scheme, so they work as a mere supplement of the retirement pension of the State. There are also other types of plans, namely survival and health benefits.

As the company (CGD Pensões) has stated, DB plans will go on decreasing, because they are very expensive for the companies. They incorporate volatility into the firms' accounts because of the assumptions' modifications; currently, the majority of pensioners are former employees from the banking sector who have just moved to the "Segurança Social" scheme.

[11] DL nº54/2009 of 2nd of March

7. Pension Funds Accounting

To start the specific analysis of the Pension Funds of CGD it is very important to understand the pension funds accounting of DC and DB plans, since the company works with both types. The following explanation of how CGD recognizes its Pension Funds is based on IAS 19.

DC plans are simpler than DB schemes. DC plans do not include any actuarial gains or losses; they are measured on an undiscounted basis. (IASB, IAS 19). So, when the related service is rendered by the employees, CGD must recognize DC responsibility as an expense (income statement) and as a liability (Exhibit 32). It is recognized as liability until the moment of the cash-out to the fund. This can happen on a monthly, quarterly or biannual basis.

CGD BALANCE SHEET

Assets	Equity	
	Net Income	- x
	Liabilities	
	Account Payable	+ x

Exhibit 32–DC plans accounting

DB plans accounting is complex since it involves actuarial assumptions to measure future obligations and expenses, obligations being measured on a discounted basis. Exhibit 33 consists of a chart built to show the components incorporated into the Balance Sheet in DB accounting, which we will analyse below.

CGD BALANCE SHEET EXTRACT

Assets		Equity	
Funds Assets:		Net Income:	
5. Shares	+ x	1. Current Service Cost	- x
5. Bonds	+ x	4. Interest Cost	- x
5. Properties	+ x	2. Actuarial Gains / Losses	-/+ x
5. Employer Contributions	+ x	5. Expected return on any plan assets	+ x
5. Invest returns	+ x	3. Past Service Cost	-/+ x
5. Payments to employees	- x	6. Effect of curtailments or settlements	-/+ x
		Liabilities	
		Pension Responsabilities:	
		1. Present Value of DB obligation at reporting period	+ x
		2. Actuarial Gains/Losses not recognized	-/+ x
		3. Past service not recognized	- x

Exhibit 33 – DB plans accounting

1. Present Value of DB Obligation at Reporting Period / Current Service Cost

This component depends on several factors, such as employee turnover, medical costs trends, mortality rates and salaries, so it requires a method of actuarial valuation ("Projected Unit Credit Cost" (PUCC)) that defines the benefits associated to each period of service and the actuarial assumptions and calculations. The PUCC establishes the determination of the benefits gained correspondent to the period during which the employee renders the service. This benefit will be recognized as expense of the period and will increase the future contribution (and actual responsibility) the company must make (liability). However, these amounts are not linear, since we have to take into account the probabilities of employees applying some requirements and probabilities for events like the use of medical benefits. Because of that, the company must use several (§ 73 of IAS 19):

- ✓ Mortality taxes, both during and after employment;
- ✓ Rates of employee turnover, disability and early retirement;
- ✓ Proportions of plan members with dependents that also benefit from the plan;
- ✓ Claim rates under medical plans;
- ✓ Discount rate;
- ✓ Pension growth rate;
- ✓ Future salary;
- ✓ Medical benefits;
- ✓ Expected rate of return on plan assets;

The discount rate is the most important assumption, since it has a material effect on the final amount to be recognized. The discount rate to be used "shall be determined by the reference to market yields at the end of the reporting period on high quality bonds". If there is no "deep market in such bonds, the market yields on government bonds shall be used" (§ 78 of IAS 19).

2. Actuarial Gains/Losses Not Recognized / Actuarial Gains and Losses

Extracted from§94 of IAS 19:

- ✓ Unexpected changes on pensions and salaries increase rate, discount rate and rate of return assumptions;
- ✓ Changes on estimates on pensions and salaries increase rate, discount rate and rate of return assumptions;
- ✓ Differences between the actual return on plan assets and its expected return;
- ✓ Differences between the assumptions and real values;

Every year the actuarial gains and losses shall be calculated and the accumulated amount recognized in the balance sheet. However, they must be represented in the income statement in the part that exceeds the highest amount in-between ("Corridor Method"):

- ✓ 10% of the Present Value of the Obligation;
- ✓ 10% of the Fair Value of the Assets' Plan;

"divided by the expected average remaining working lives of the employees participating in the plan." (§93 of IAS 19).

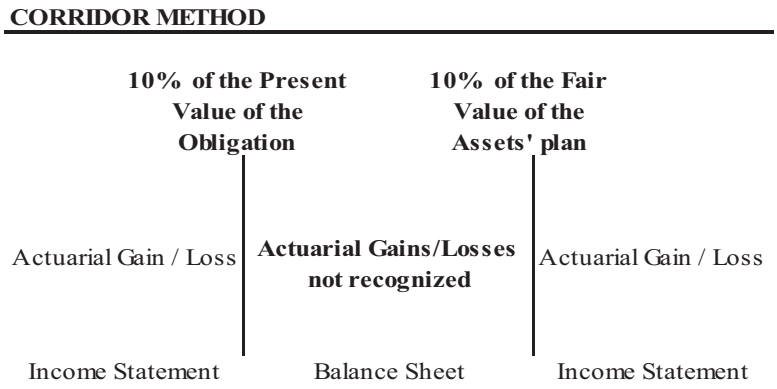

Exhibit 34 – Corridor Method

3. Past Service Not Recognized / Past Service Cost

Past service costs arise when the company makes changes on the DB plan already existent, such as introducing more benefits for the employees. So, these costs should be recognized as an expense in a "straight-line basis over the average period until the benefits become vested". When the benefits are already vested, they should be recognized immediately as an expense (§96 of IAS 19).

4. Interest Cost

Interest cost is computed multiplying the discount rate by the present value of the obligation (§82 of IAS 19). It is recognized in the income statement as a cost and as a liability, increasing the responsibilities amount.

5. Funds Assets / Expected Return on any Assets' Plan

The Funds' assets are composed by various kinds of investments like shares, bonds and properties that the fund owns in order to yield a return. "Assets held by a long-term employee benefit fund are assets that" (§7 of IAS 19):

✓ "...are legally separated from the reporting entity and exists solely to pay or fund employee benefits; and

✓ [...] are not available to the reporting entity's own creditors".

The total amount of the fund increases with the employer contribution and investment returns and decreases with the benefits paid to the employees.

These assets must be measured at Fair Value. Taking into account the hierarchy of Fair Value, they should be valued at level one. However, if there is not active market, it could be necessary to estimate the expected future cash flows using a discount rate that reflects the risk associated to the assets' plan and correspondent maturity date (§102 of IAS 19).

The amount defined by the numbers 1, 2, 3 and 5 must be recognized by the net amount, as an asset or a liability, depending on the positive or negative nature of the result.

6. Effects of curtailments and settlements

Curtailments and settlements occur when an entity decides to materially reduce the number of employees covered by the plan or reduce the benefits associated to the plan. The gain or loss due to curtailment or settlement should be recognized when it occurs, and arises from changes (i) in the present value of the obligation, (ii) changes in the Fair Value of the assets and (iii) any related actuarial gains and losses or past service cost that had not been previously recognized (§109 of IAS 19)

A. Differences between the IASB and the FASB Pension Accounting

There are some differences between IAS 19 and FAS 87/88/106/132R/158, summed up in Exhibit 35. The most important divergences to be taken into account are explained below.

MAIN DIFFERENCES

	IAS 19	FAS 87/88/106/132R/158
Qualified actuary	Recommended	Required
Disccount Rate	Current rates of return on high-quality corporate bonds with maturities consistent with the duration of benefits obligations	Current Rates of Return on high-quality fixed income investments with maturities matching duration of benefits obligation
Rate of Return on plan assets	Current market expectations over the life of obligation	Expected long-term rates over the life of obligation
Cost Recognized	Components of the figure 33 recognized in Net Income	Components of the figure 33 recognized in Net Income +/- temporary deviations from plans

Exhibit 35 – Main Differences between IAS and FASB accounting

8. CGD Pension Fund Analysis

A. Pension Funds Overview

The CGD pension funds have gone through several modifications during their lifespan. Various laws have regulated transfer of pension responsibilities among entities, namely CGD Pensões, CGA and the "Segurança Social" scheme.

According to the DL nº 48953 of the 5th of April of 1969 and the DL nº 161/92 of the 1st of January, CGD became responsible for retirement, disease and survival pensions of employees hired after the 1st January of 1992. Before this date, this responsibility belongs to CGA, which means that, for this effect, the respective employees contribute to the plan with 2, 5% of their salaries. On the 31st of December of 1991, the Pension Funds Plan for the employees of CGD was created.

At the end of 2004, DL nº240-A/2004 of the 29th of December and DL nº241-A/2004 of the 30th of December were published, defining the transfer of the responsibilities with retirement and pension pensions of the service rendered until the 31st of December of 2000, together with the respective provisions and fund assets to CGA. Since 2007, with the publication of Law nº53-A/2006 of the 29th of December, CGD must contribute to the plan with 3, 75% of the remuneration of workers hired before 1991 to CGA.

There are other long-term benefits beyond the retirement and survival benefits; they are the object, however, of a different measurement procedure. After 2005, with the implementation of IAS for the financial institutions and listed companies, there were some significant changes, namely the need to recognize the responsibilities with health benefits during retirement as a liability (provision).

Other long-term benefit recognized as a liability[12] (accrual) is the seniority bonus that CGD pays to the employees that meet 10, 20 and 30 years of work. The accrual value is also based on actuarial assumptions, since it depends on the probability of employees reaching 10, 20 and 30 years of work. The following table summarizes the main types of responsibilities and how they are recognized:

Responsibilites	Financed by assets of the fund	Provision	Accrual
Retirement Pension	X		
Survival Pension	X		
Death Pension after retirement	X		
Death Pension before retirement		X	
Seniority Bonus			X
Health Benefits		X	

Exhibit 36 – Resume of types of CGD responsibilities

[12] As accrual. The same procedure of the recognition of holidays' salary

The Pension Fund responsibilities represented in the CGD Group accounts include the Caixa (Portuguese Bank Institution), Império-Bonança Insurance Company, Fidelidade Mundial Insurance Company and Ex-BNU. The responsibilities represented in the CGD Group's financial statements are represented below:

Pension Responsabilities	Companies	**Caixa**	**Ex - BNU**	**Império - Bonança, Insurance Company**	**Fidelidade Mundial, Insurance Company**
	Responsabilities Dates	- Services Rendered of active workers after 31/12/2000 - Retired people between 01/01/2001 and 31/12/2010: % of sercice rendered during this period - Death pension relative to the service rendered after 31/12/2000	- Retirement and survival pensions responsbilities before the merger date (23/07/2001)	- Employees hired before June of 2005 - Segurança Social Integrated - Between 1999 and 2005, a pension that corresponds to the difference between 80% of the last salarie and the amount paid by "Segurança Social (for antecipated retirement) - Additional benefits defined by the complementar agreement Group Millenium BCP had before Império-Bonança had been integrated (31/01/2005)	- Employees hired before June of 2005 - Segurança Social Integrated contribution
Health Responsabilitеis	Companies	**Caixa**	**Ex - BNU**	**Império - Bonança, Insurance Company**	
	Responsabilities	- Contributions of CGD and employees (8,95% of salaries and pensions paid) to "Serviços Sociais" of CGD	- Retired Employees until the merger date (23/07/2001)	- Lifetime Medical Assistence for retired or pré-retired that transact to this situation after May of 1998	
	Services	- Social Services ("Serviços Sociais" of CGD)	- Medical Assistence Service (Serviço de Assistência Médico-Social - SAMS)		

Exhibit 37 – Current Responsibilities summary

CGD Group has an independent DB plan for employees of Caixa, a DB integrated plan for the insurance companies and a small DC Plan for the employees of Caixa Investment Bank. There are no pension funds for medical benefits for Caixa employees; Caixa only supports the costs and makes regular contributions to "Serviços Sociais". On the other hand, there is a pension fund that covers medical benefits for insurance companies and BNU's former employees.

According to the notification nº4/2005 of 28th of February issued by the Bank of Portugal, Portuguese entities must have their responsibilities with retired and pre-retired employees fully funded (100%) and a minimum coverage level of 95% for responsibilities for past services of active workers. Considering the Exhibit 37 presented above, the CGD's fund is in the following situation:

COVERAGE FUND

	2010				2009				Variation
	CGD	Caixa Seguros e Saúde	Others	Total	CGD	Caixa Seguros e Saúde	Others	Total	Total
Responsabilities for past services:									
Working	875.138	24.015	30.690	929.843	914.244	36.818	29.606	980.668	-5,18%
Retired and Pré-Retired	433.075	181.369	19.495	633.939	418.124	184.987	19.645	622.756	1,80%
Total Respnsabilities	**1.308.213**	**205.384**	**50.185**	**1.563.782**	**1.332.368**	**221.805**	**49.251**	**1.603.424**	**-2,47%**
Pension Funds	1.424.864	144.748	789	1.570.401	1.332.368	153.155	675	1.486.198	5,67%
Mathematic Provisions	0	67.126	-	67.126	-	70.070	-	70.070	-4,20%
Provision for Pensions and other similar expenses	0	-	52.867	52.867	-	-	54.486	54.486	-2,97%
Total Assets	**1.424.864**	**211.874**	**53.656**	**1.690.394**	**1.332.368**	**223.225**	**55.161**	**1.610.754**	**4,94%**
Difference	116.651	6.490	3.471	126.612	0	1.420	5.910	7.330	1627,31%
% OF COVERAGE	**108,92%**	**103,16%**	**106,92%**	**108,10%**	**100,00%**	**100,64%**	**112,00%**	**100,46%**	**7,60%**

Exhibit 38 – Source: Annual Report 2010 CGD

As we can see, the responsibilities are covered in more than 100%, essentially because of the decrease of responsibilities for past services for active workers and increase of assets.

As explained by CGD, at 30/06 of each year the consulting company responsible for actuarial valuations of the fund (Towers Watson) updates the projections for the year and responsibilities, taking in consideration the assumptions of 31/12 of the previous year but incorporating current data for the year on services rendered by the employees. The goal is to have an idea of whether it will be necessary to make significant contributions at the end of the year to have a coverage ratio of 100%. In October, Towers Watson makes a sensitivity analysis with the assumptions provided for the end of the year. Sometimes, it is not necessary to make additional contributions, as happened in the last year. In 2010, with the decrease of the assumption of salaries and pension rate, the responsibilities were reduced and the fund amount grew so CGD did not have to make further contributions and the pension plan displayed a surplus. The referenced surplus (net amount of assets and responsibilities referred on "Pension Funds Accounting" chapter) is recognized in the caption "Other Assets" of the balance sheet (see Appendix 7).

The plan is composed of more than 14 thousand employees. As the plan is closed, the decrease in the number of active workers corresponds to the retirements that occurred during the last year. The difference between this decrease and the increase of the "Retired and Pre-retired" represents the employees that left CGD (3 and 111 for CGD and Caixa Seguros, respectively) (Exhibit 39):

NUMBER OF EMPLOYEES INCLUDED IN THE PENSION PLAN

	2010		2009		Variation	
	CGD	Caixa Seguros e Saúde	CGD	Caixa Seguros e Saúde	CGD	Caixa Seguros e
Working	9.892	2.422	10.287	2.515	-395	-93
Retired and Pré-Retired	4.401	2.791	4.009	2.809	392	-18
TOTAL	**14.293**	**5.213**	**14.296**	**5.324**	**-3**	**-111**

Exhibit 39 – Source: Annual Report 2010 CGD

The components of assets and responsibilities will be explained in detail in the following chapters.

B. Fair Value of Pension Fund Assets Analysis

As explained before, the assets' value must cover the level of responsibilities. Thus, the amount of contributions will depend on the level responsibilities, considering the legal requirement of 100% coverage. CGD Pensões has to manage the contributions amount, investing it on different types of assets, considering some supervision limitations in order to avoid a high exposure to risk. CGD Gestão de Activos, SGPS, has a back office team responsible for these investment decisions. This team is common to the three firms that compose the CGD sub-group, namely CGD Pensões. Investment decisions are made in accordance to the Assets Liability Management model (ALM), and the assets of the fund must be recognized at Fair Value.

It is important to understand the composition of the assets of the fund, split between the pension plan of CGD employees and the insurance companies and health responsibilities:

ASSETS OF THE FUND COMPOSITION

CGD Pensions	2010	2009	Weight	Variation
Shares	100.690	113.741	7,07%	-11,47%
Participations in Investment Funds	356.004	267.409	24,99%	33,13%
Bonds	412.691	546.470	28,96%	-24,48%
Real Estate	529.904	271.730	37,19%	95,01%
Deposits in Credit Institutions	133.433	128.825	9,36%	3,58%
Ohters (Net of Liabilities)	-107.857	4.193	-7,57%	-2672,31%
Total of the Fund	**1.424.865**	**1.332.368**	**100,00%**	**6,94%**

CAIXA SEGUROS E SAÚDE	2010	2009	Weight	Variation
Shares	9.568	16.604	6,61%	-42,38%
Participations in Investment Funds	23.317	4.921	16,11%	373,83%
Bonds	86.927	99.525	60,05%	-12,66%
Real Estate	14.073	15.705	9,72%	-10,39%
Deposits in Credit Institutions	8.776	14.950	6,06%	-41,30%
Ohters (Net of Liabilities)	2.086	1.448	1,44%	44,06%
Total of the Fund	**144.747**	**153.153**	100,00%	-5,49%

TOTAL OF THE PENSIONS FUNDS	**1.569.612**	**1.485.521**		**5,66%**

Exhibit 40 – Source: Annual Report 2010 CGD

Analysing the assets of CGD Pension Plan, the most significant variation from 2009 to 2010 regarded the Real Estate (+95%), the type of assets with the highest weight on the total. The company states that this variation was caused by the fund's purchase of the CGD headquarters building. However, this acquisition alerted the ISP, because of the percentage of assets of the fund related to CGD. So, in 2011, CGD Pensões will have to sell some real estate assets that are related to CGD in exchange for other types of assets from other companies outside the CGD group. Other relevant variations were the "participation in investment funds" (33%) and bonds (- 24%). The caption "Others" refers to sale transactions with repurchase agreements of equity instruments ("repo"[13]).

All the assets of the fund are recognized at Fair Value, namely at the first and second level. All the shares and participations in investment funds are quoted in active markets and market prices are therefore taken into consideration when measuring these assets.

Only a small percentage of bonds are negotiated over-the-counter. In these situations, CGD Pensões made an average of the daily bid prices provided by entities like J.P Morgan. This procedure is accepted and standardized by the supervisory entities.

CGD Pensões has a modern informatics system that updates the market values every day at 5 p.m., so the current Fair Value of the securities that are part of the fund is always known.

Real Estate is essentially composed of rented buildings and offices. These are also recognized at Fair Value, which means that they must be subject to revaluations by independent evaluators. The revaluations of real estate assets from closed pension plans (the case of the CGD's pension plan) are performed every three years by different evaluators. In the case of open pension plans, the buildings and offices are revaluated every year because of the higher volatility of these plans (due to the constant entry and exit of participants).

The deposits in credit institutions are composed of cash and some short term investments, low risk and high liquidity.

As the cost for past services is larger than the pensions paid during the last years and the investments return is positive, the value of the fund has been increasing (Exhibit 41). Considering the responsibilities of the CGD plan, it is possible to infer that the contribution amounts were constant over the last two years, but the pensions paid have increased. The revenue from the pension fund decreased from 84 million Euros to 27 million Euros, mainly due to the poor performance of capital markets that had a huge impact on investment return.

[13] CGD received the cash for the sale of an asset, but the company did not derecognize the respective asset, so it recognized a liability. It seems like a loan.

EVOLUTION OF THE FUND VALUE

	2009 AND 2010			
	CGD	**Caixa Seguros e Saúde**	**Others**	**Total**
Balance at 31st of December of 2008	**1.137.181**	**218.791**	**39.972**	**1.395.944**
Contributions paid				
In Regular Basis				
Made by empolyees	27.124	-	178	27.302
Made by the entity	69.803	14.295	307	84.405
In extraordinary basis	42.038	-	-	42.038
Variation in Mathematic Provisions	-	-	3.884	3.884
Variation Provision for Pensions and other similar expenses	-	-2.899	-	-2.899
Pensions Paid	-27.482	-15.902	-1.168	-44.552
Net revenue from Pension Fund	83.704	9.682	9	93.395
Other variations	-	-743	11.978	11.235
Balance at 31st of December of 2009	**1.332.368**	**223.224**	**55.160**	**1.610.752**
Contributions paid				
In Regular Basis				
Made by empolyees	26.364	840	175	27.379
Made by the entity	69.525	7.795	429	77.749
In extraordinary basis	-	-	-	-
Variation in Mathematic Provisions	-	-	214	214
Variation Provision for Pensions and other similar expenses	-	-2.944	-	-2.944
Pensions Paid	-30.058	-14.984	-1.188	-46.230
Net revenue from Pension Fund	26.665	-2.768	-4	23.893
Other variations	-	710	-113	-420
Balance at 31st of December of 2010	**1.424.864**	**211.873**	**54.673**	**1.690.393**

Exhibit 41 – Source: Annual Report 2010 CGD[14]

The ISP, as the supervisory of pension funds in Portugal, issues some investment policies that the companies must follow. These policies should fit the specific characteristics of the pension fund, namely the nature and duration of the responsibilities and population included in the plan. The investment policies must be in accordance to some principles (Bernardino Gabriel, ISP):

- Assets diversification and dispersion, avoiding dependence on the same asset, entity or activity sector;
- Limitations on exposure to assets with low liquidity;
- Limitations on exposure to assets with high risk;
- Solid selection of the assets taking into account the intrinsic and market risk.

The annual report of the pension plan of CGD's employees also lists some limits for their assets portfolio management:

[14] The column "Caixa Seguros e Saúde" does not match Exhibit 40, because it misses the mathematic provision present in the Exhibit 38.

Type of Assets	Minimum Limit	Central Allocation	Maximum Limit
Liability-matching assets	**60,00%**	**67,50%**	**75,00%**
Euro bonds of public debt of fix interest	15,00%	20,00%	25,00%
Euro bonds of private debt of fix interest	7,50%	10,00%	12,50%
Euro bonds of variable interest	12,50%	17,50%	22,50%
CGD Real Estate	n.a.	20,00%	n.a.
Return-seeking assets	**25,00%**	**32,50%**	**40,00%**
European Shares	10,00%	15,00%	20,00%
Non-European Shares	0,00%	5,00%	10,00%
Real Estate Investment Funds	7,50%	10,00%	12,50%
Alternative Investments	0,00%	2,50%	5,00%
Liquidity	0,00%	0,00%	5,00%

Exhibit 42 – Source: Annual Report 2010 of Pension Plan of CGD's employees

Considering the principles issued by ISP and their own investment policies, CGD Pensões manages their assets based on the ALM model explained below.

ASSET LIABILITY MANAGEMENT MODEL

The ALM model is usually used by pension fund management entities. It is an optimization model that manages the assets and liabilities of the fund in order to reduce the risk of interest, liquidity and financial performance. It is a model that also helps the managers to take decisions, mainly regarding the amount of contributions to the fund, to avoid unfavourable situations and the underfunding of the plan. “ALM modelling is thus a key method in strategic risk management. It involves developing mathematical scenarios of the future evolution of assets and liabilities, given certain assumptions about the statistical properties of the variables that affect the evolution of assets and liabilities.” (Kleynen, Ruud). It could be “formulated as a set of constraints and an objective function [... where] these constraints deal with the composition of the asset portfolio: the fraction of the assets invested in each class has to satisfy lower and upper bounds specified by the board or regulator.” (Drijver, 2005) (Exhibit 42).

The ALM model should also take into account the goals of the organization and their limits. Another important characteristic of the model is the duration matching of assets and liabilities, in order to avoid the risk of not having enough liquidity to pay the responsibilities at any given moment.

C. Responsibilities Present Value Analysis

The main responsibilities of the CGD group in relation to pension and medical benefits have already been addressed. Now we turn to the analysis of how they are determined.

The determination of responsibilities in 2009 and 2010 was carried out by specialized entities: Towers Watson and Mercer. CGD Pensões also has its own specialized actuaries, who work in the various pension funds it manages. CGD Pensões has a team of 6 actuaries, one of whom has a certificate that allows him to sign actuarial studies.

The responsibilities amount results from the actuarial calculations that are based on given data, assumptions and projected unit credit, as required by IAS 19:

Given Data	Assumptions
Age	Discount Rate
Salaries	Salaries Increase Rate
Years of service	Pensions Increase Rate
	Mortality tables
	Fund rate of return

Exhibit 43 – Given Data vs. Assumptions

I decided to benchmark the assumptions used by CGD with the assumptions used by the largest private Portuguese banks:

ASSUMPTIONS BENCHMARK

	2010				2009			
	CGD	BES	BCP	BPI	CGD	BES	BCP	BPI
Discount Rate	5,50%	5,50%	5,50%	5,25%	5,50%	5,50%	5,50%	5,25%
Salaries Increase Rate	2,50%	3,25%	2,50%	3,00%	3,50%	3%	2,50%	3%
Pensions Increase Rate	1,75%	1,75%	1,50%	1,75%	2,25%	1,75%	1,65%	1,75%
Mortality tables								
Men	TV 73/77 (-1 ano)	TV 73/77 (adjusted)	TV 73/77 (-1 ano)	TV 73/77 (-1 ano)	TV 73/77 (-1 ano)	TV 73/77 (adjusted)	TV 73/77 (-1 ano)	TV 73/77 (-1 ano)
Women	TV 88/90 (-1 ano)	TV 88/90	TV 88/90 (-2 anos)	TV 88/90 (-1 ano)	TV 88/90 (-1 ano)	TV 88/90	TV 88/90 (-2 anos)	TV 88/90 (-1 ano)
Fund rate of return	5,25%	5,50%	5,50%	5,50%	5,25%	6%	5,50%	5,50%

Exhibit 44 – Source: Annual Reports 2010 (BPI 2009)

The discount rate is consistent for the four banks (only BPI uses a different rate in 2009). According to the company, the audit firms pressures the banks to use a specific rate in order to standardize it across the board. The discount rate at CGD is determined by the iboxx index of the private debt bonds from the Euro Zone – high quality (AA) – with equivalent maturity of responsibilities (19 years) (CGD Annual Report). This concept is similar to duration – CGD needs, on average, 19 years to pay its current responsibilities.

On the other hand, the salaries and pensions growth rate are not constant for the four banks, since they depend on the future perspective conditions of their employees. CGD is the bank that has decreased these rates the most from 2009 to 2010, because of the impacts of the proposal to globally reduce the salaries of public companies included in the State budget for

2011. In 2009 and 2010, the real salaries growth was higher than the assumption; the opposite happened with the pensions' growth rate (Exhibit 45).

	2010			2009		
	Assumptions	Real	Difference	Assumptions	Real	Difference
Salaries Growth Rate	2,50%	3,13%	0,63%	3,50%	4,33%	0,83%
Pensions Gowth Rate	1,75%	1,10%	-0,65%	2,25%	1,56%	-0,69%
Fund rate of return	5,25%	1,93%	-3,32%	5,25%	7,09%	1,84%

Exhibit 45 – Source: Annual Report 2010 CGD

The funds projected rate of return is more or less constant across the Portuguese banks. Only BES stood out in 2009 (6%). The fund rate of return is determined by applying, to the benchmark structure of the fund portfolio, the forecasted annual rate of returns in medium and long term of each asset type that compose the portfolio. This value results from the Towers Watson's model that uses the historic returns and the perspectives of a set of financial analysts as inputs (CGD Annual Report).

The mortality tables used are similar across the banks except for BCP, which adjusts the women's table in two years instead of one (these adjustments mean that the companies increase the life expectancy registered in the table by one/two year(s), since it is outdated – the data are originally from 1977 and 1990, for men and women respectively. However, according to the company, they fit the CGD's population. The mortality table is a tabular model of population analysis that synthesizes a set of basic functions that allows the study of a given set of population, including the phenomenon of longevity, and makes judgments on the probable evolution of mortality. The mortality table is a statistical tool often used by demographers, actuaries, doctors and other researchers in the field of public health. (INE – National Portuguese Institute) (see Appendix 9).

Studies conducted for 2010 and 2009considered that retirement typically occurs at the age of 60 (CGD Annual Report), as CGD follows the General Statute Retirement of CGA.

When there are differences in the assumptions versus real rates and discrepancies between years, they must be recognized in the balance sheet as actuarial gains or losses (as has already been explained in the chapter "Pension Funds Accounting"). Considering the Exhibit 44 and 45, the actuarial gains and losses in 2009 and 2010 were:

ACTUARIAL GAINS AND LOSSES

	2010	2009
Discount Rate Change in 2009: 5,75% -> 5,50%	-	-57.334
Growth salaries rate change in 2010: 3,50% -> 2,50%	85.506	-
Growth pensions rate change: 2,50% -> 2,25% (2009) and 2,25% -> 1,75% (2010)	69.785	34.143
One year adjustment in mortality table for women	-	-15.426
One year adjustment in mortality table for men	-	-19.163
Other deviation in responsibilities	8.277	-7.110
	163.568	**-64.890**

Exhibit 46 – Source: Annual Report CGD 2010

The positive value for 2010 is the cause behind the overfunded situation this year, and it resulted from the decrease in the growth rates of salaries and pensions.

The actuarial gains and losses have a corridor limit that corresponds to the highest value of 10% of the total assets of the fund or present value of responsibilities:

CORRIDOR LIMITS

	2010	2009
10 % of Fair Value of the assets of the Fund	142.486	133.237
10 % of Present Value of the Responsabilities	130.821	133.237
Limit used (the highest amount)	**142.486**	**133.237**

Exhibit 47 – Corridor limits by IAS 19

Above the corridor limit, the actuarial gains/losses must be amortized by 14, 5 years, corresponding to the average period until all employees are retired. Thus, the actuarial gains/losses to be recognized are the following:

ACTUARIAL GAINS AND LOSSES TO RECOGNIZE

	Inside Corridor		Above corridor		
	Pensions	Health	Pensions	Health	Total
Balance at 31 of December of 2008	**113.718**	**42.783**	**29.618**	**41.532**	**227.651**
Actuarial gains/losses of the year	19.519	3.219	23.636	16.501	62.875
Amortization	0	0	-694	-2.634	-3.328
Balance at 31 of December of 2009	**133.237**	**46.002**	**52.560**	**55.399**	**287.198**
Actuarial gains/losses of the year	-67.967	-2.333	-49.973	-33.762	-154.035
Amortization	0	0	-2.587	-3.437	-6.024
Balance at 31 of December of 2010	**65.270**	**43.669**	**0**	**18.200**	**127.139**

Exhibit 48 – Source: Annual Report CGD 2010

The final value of 127.139 thousand Euros is recognized in "Other Assets" (see Appendix 7). The 6.024 thousand Euros is part of "Employee Costs" (see Appendix 5)

9. Pension Funds Supervision

The Fair Value of assets and the present value of the responsibilities have already been explained. Due to their intrinsic subjectivity, supervision is necessary to control and validity the recognition of the true and Fair Value. This function is performed by two main external entities: an audit firm (Deloitte) and a State institution specialized in insurance and pension funds (ISP). As part of the annual accounting supervision, Deloitte supervises pension funds accounting and their respective recognized values. This chapter focuses on the ISP supervision.

Exhibit 49 – ISP Logo

ISP supervises all the management entities that have social participations in pension fund management entities. This supervision demands the exchange of certain information between supervisory authorities operating in the financial system.

There are three main types of supervision that are strictly interconnected: on-site, off-site and conduct supervision. The off-site supervision has introduced new requirements for the documents accompanying the request for authorization for the establishment of new entrants or expansion of existing activity, namely:

- The development of systems aimed at increasing automation in the treatment and reporting of statistical information and accounting that, for supervision purposes, is sent by pension fund management entities;
- Reports sent by pension fund management entities about investment policies, derivatives products usage, intra-group operations and implementation of risk management internal systems (ISP Supervision Board, 2007).

New methodologies and analysis of individual entities were also introduced, as well as comparisons among pension fund management entities and business segments. These analyses are now the basis for the establishment of quantitative and qualitative benchmarks for the development of more accurate supervisions.

On-site supervision refers to the inspections regularly carried out by the ISP. The supervisions can be booked in specific and sporadic situations or set quarterly and programmed

annually. The inspection program is based on a rotation principle. According to the institution, CGD has only been targeted once for an ISP inspection in the last ten years.

The pension funds that are the main targets of high supervision are typically DB plans with low finance levels and open funds of individual adhesion. (ISP Supervision Board, 2007)

The remaining supervision type – conduct supervision – consists on the determination of appropriate rules of market conduct and information content, particularly on the characteristics of products whose verification must be an important part of the process supervision. The verification of requirements of market conduct and their disclosure to consumers contributes to the desirable strengthening of trust and credibility of the insurance market and the financial sector. (ISP Supervision Board, 2007)

10. Case-Study: Conclusions

The importance of Fair Value has been increasing during the last few years, and it is now applied in several accounting areas. Therefore, understanding its actual impact on financial statements is crucial. On the other hand, the current decrease of active workers in relation to retirees makes the issue of pension funds an equally relevant topic.

The company analysed in this case-study, CGD, was created 135 years ago and is Portugal's largest bank and the only one fully owned by the State. One of the main employers in the financial sector, it has a considerable pension fund; its size, impact on the Portuguese economy and use of Fair Value explain its interest as an object of research.

Greece, Iceland, Ireland and Portugal are some of the countries severely affected by the financial crisis that started in 2008 with the collapse of Lehman Brothers. However, the economic situation that we are living today does not affect negatively the pension funds, as it was possible to find out during the study. During an economic crisis, we expect everything to be negatively affected. What happens with the assets of the funds; however, is that any potential negative consequences are offset by the reduction of responsibilities, as a consequence of the decrease of salaries and pension growth rates. The current crisis is also responsible for the drop of the interest rates that decreases the level of responsibilities. In other words, the economic environment has an impact on the assets of the fund as well as on the responsibilities and, consequently, on the net income of CGD. In fact, the only negative effect of the current global economic situation in this context concerns the performance of the fund's assets, decreasing its effective rate of return, affecting the net income of the company through actuarial gains/losses that are only recognized as cost when they go over the corridor limit. The following scheme summarizes the impact of the economic factors on CGD:

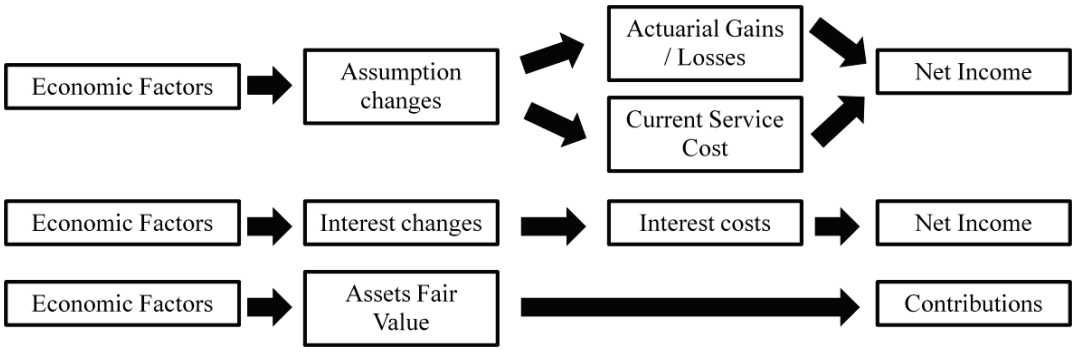

Exhibit 50 – Economic impacts summary

At CGD, the Fair Value of assets is updated on a daily basis, providing a constantly accurate knowledge regarding the status of the fund. More importantly, almost all of the assets belong to the level one of the Fair Value hierarchy, which means that the market value – hence,

its Fair Value – is easily obtained. . The current value of responsibilities is also regularly updated, in order to understand whether or not the company will need to make extraordinary contributions.

From the comparison based on the benchmarks used in the management of the pension funds of the three other biggest Portuguese banks it is possible to conclude that the banks use similar accounting assumptions. In this context, the main difference between these entities concerns the pension and salaries growth rates, dependent on each bank's specific policies. In other words, the discount rates and rates of return are usually similar among the biggest Portuguese banks, decreasing the possibility of competitive loss and increasing the relevance of Fair Value.

The actuarial valuations are performed by a renowned international company that specializes on this kind of valuations – Towers Watson. Despite that, CGD Pensões has 6 internal actuaries who also play an important role in ensuring the best possible estimation of the current value of responsibilities. Deloitte, the firm that audits CGD's finances, also ensures the credibility of the amount recognized. Deloitte pressures CGD to use assumptions similar to the ones used by the other big Portuguese banks. The firm is also responsible for auditing BPI; the remaining two competitors are audited by KPMG. However, the doubt remains about whether the maturity of the responsibilities across banks is also the same. If not, it does not make sense for the four banks to use the same discount rate. Having said that, and considering the sizeable population of the banks from the same activity sector, I believe that the maturities should be similar.

In addition to Deloitte and other auditing firms, national pension funds are the target of a tight supervisory control by the ISP. Overall, this supervision network contributes to obtaining the true Fair Value of CGD funds.

Since 2008, responsibilities have been totally covered by the assets of the fund, which is a good signal of the economic situation of the company; it increases the stakeholders' confidence and fosters a perception of stability, motivating employees to be more productive.

Taking into account all of the above, I conclude that Fair Value in Pension Funds works well, respecting precise rules and under a tight supervisory control. Assets are calculated at Fair Value and responsibilities are reliably calculated and reflect the true current value of the future liability.

IV. Conclusion

The object of this work is to study the increasingly meaningful concept and use of Fair Value in accounting. Specifically, it aims at exploring the link between Fair Value and pension funds, at a time when the ageing of the population in the developed world challenges the sustainability of social policies. Being one of the biggest Portuguese banks, fully State owned and the holder of a large pension fund, Caixa Geral de Depósitos (CGD) is an especially interesting case-study in this context.

In the particular case of the CGD pension funds, the Fair Value concept works very well and plays a significant role in the company's own control of the coverage of responsibilities. In fact, if the assets were not recognized at Fair Value, it would be impossible to know the real percentage of the fund's coverage. In a pension plan is essential to know the real and current value of the fund and to understand if it is necessary to make an extraordinary contribution or not.

Most of the assets run by CGD Pensões are measured according to the market approach, as they are listed securities and therefore object of quoted prices in active markets. This means that most of these assets fall under the level one category of the Fair Value Hierarchy, explained in the theoretical section of this work, which stresses the reliability of the values obtained.

Concerning responsibilities, although the international accounting standards (IAS 19) do not make an explicit reference to Fair Value, in reality they also have to be estimated on a regular basis and following a very precise forward-looking approach to beware of extraordinary contributions. We can therefore say that an adjusted "income approach" is followed for the measurement of liabilities. The present value of future responsibilities is calculated by discounting the future economic costs at a rate that represents the risks involved.

This is an area that requires a substantial amount of personal judgement and that therefore could potentially be disrupted by a higher degree of subjective missteps. At CGD, this risk is offset by the external audit of the work prepared by an equally external actuary and also to a larger extent by the national supervision by ISP. The analysis performed confirms that in this company responsibilities are calculated as accurately as possible, leading to true and reliable values.

Thanks to the rules issued by the IASB and the FASB, Fair Value is omnipresent in pension funds accounting. We can conclude from this study that the Fair Value concept is deeply present in the accounting rules for pension funds and that at the same time these accounting rules fully incorporate the main accounting principles: accrual basis are the base of the income statement. So, the cost is always recognized in the period the employee renders the

service instead of the in the moment of the contribution. Comparability is also confirmed by the case-study, since the assumptions across the biggest Portuguese banks are similar, making the values of pension funds comparable among them. Considering the tight level of supervisory control of pension funds, it is also possible to infer the reliability of the amounts recognized in the main pension Portuguese funds.

One of the drawbacks pointed to Fair Value is the pro-cyclicality. However, regarding pension funds accounting, this is not a disadvantage. The pro-cyclicality of the assets of the fund does not have a significant impact on the net income of the company, only on the contributions the company must do to cover the responsibilities. The only negative effect of an economic down turn is the loss of liquidity, since the firm needs to allocate resources to the fund through increased contributions. This means that the main disadvantage of the Fair Value concept is not relevant when analysing pension funds.

Other aspects concerning the evolution of pension funds' accounting could not be dealt with in this work given its nature and scope. It would have been interesting, for instance, to look into the effective maturity of responsibilities of the four biggest Portuguese banks in order to understand if the discount rates applied should effectively be the aligned.

Fair Value increases the usefulness and credibility of corporate financial statements and contributes to the employees' confidence on their future retirement pension payments, since they can be constantly aware of the real value of the fund. Overall and as a final conclusion, this thesis has demonstrated that the concept and usage of Fair Value has a relevant and positive effect on pension funds accounting.

V. Bibliography

BOYLAN, Bob; HOUMES, Robert (2010) – "Has the adoption of SFAS 158 Caused Firms to Underestimate Pension Liability? A Preliminary Study of the Financial Reporting Impact of SFAS 158". *Academy of Accounting and Financial Studies Journal*, October 2010.

CASCINI, Karen; DELFAVERO, Alan (2010) – "An Evolution of the Implementation of Fair Value Accounting: Impact on Financial Reporting". EABR & ETCL Conference Proceedings.

CATTY, James (2010) – *Guide to Fair Value under IFRS.* John Wiley & Sons, Inc. ISBN: 978-0-470-47708-3.

D'ADDIO, Anna Cristina; WHITEHOUSE, Edward (2010) – "Pension Systems and the Crisis: Weathering the storm". *Pensions: An International Journal*, Number 2, Volume 15, Palgrave Macmillan, May 2010.

DIANA, Cozman Ighian (2009) – "Historical Cost versus Fair Value". *The Journal of the Faculty of Economics*, University of Oradea, Volume (Year) 3, Issue (Month) 1.

EMERSEN, David; KARIM, Khondkar; RUTLEDGE, Robert (2010) – "Fair Value Accounting: A Historical Review of the Most Controversial Accounting Issue in Decades". *Journal of Business & Economics Research*, Number 4, Volume 8.

ENRIA, Andrea et. al. (2004) – *Fair Value Accounting and Financial Stability*. Occasional Paper Series, European Central Bank, Number 13, April 2004. ISBN: 1607-1484.

ERCHINGER, Holger; MELCHER, Winfried (2007) – "Convergence between US GAAP and IFRS: Acceptance of IFRS by the US Securities and Exchange Commission (SEC)". *Accounting in Europe*, Issue 2, Volume 4.

GUTHRIE, Katherine; IRVING, James; SOKOLOWSKY, (2009) – "Accounting Choice and the Fair Value Option". *Accounting Horizons*, January 2009.

HOLUB, Martin (2011) – "The Sustainability of Pension Systems through the Assessment of Pension Base Calculation". *ACTA VSFS Journal*, 1/2011, Volume 5.

HUIAN, Maria Carmen (2009) – "Some Aspects Regarding the Role of Fair Value Accounting During the Current Financial Crisis". Working Paper Series, Alexandru Ioan Cuza University of Iasi, March 31, 2009.

INTERNATIONAL ACCOUNTING STANDARD BOARD, 2009/05 – *Fair Value Measurement – Exposure Draft.* ISBN: 978-1-907026-11-9.

INTERNATIONAL ACCOUNTING STANDARD BOARD – IAS 19: Employee Benefits.

JAMES, Marianne (2008) – "The Effect of Changes in Accounting for Defined Benefit Pensions and Other Postretirement Benefit Plans on Companies' Financial Statements and Stakeholders". *Journal of the International Academy for Case Studies*, Volume 14, 1, 2008.

KORTLEVE, Niels; NIJMAN, Theo; PONDS, Eduard (2006) – *Fair Value and Pension Fund Management.* Elsevier. ISBN: 978-0-444-52245-0.

MAGNAN, Michael (2009) – "Fair Value Accounting and Financial Crisis: Messenger or Contributor?". CIRANO – Scientific Publications Paper, No. 2009s-27.

NOVOA, Alicia; SCARLATA, Jodi; SOLÉ, Juan (2009) – "*Procyclicality and Fair Value Accounting*". IMF Working Papers, Volume. 1, 2009.

ORLANDO, Albina; POLITANO, Massimiliano (2010) – "Managing the riskiness of defined contribution pension funds in a fair-valuation context". *Journal of Risk Management in Financial Institutions*, Volume 3, Number 2 (January – March 2010).

ORTEGA, William – "Retirement Planning: An Analysis of Defined-Benefit VERSUS Defined-Contribution Pension Plans". The Society for Case Research.

REIS, Ricardo F.; SOTCKEN, Phillip C. – "Strategic Consequences of Historical Cost and Fair Value Measurements". *Contemporary Accounting Research*, Volume 24, Number 2 (Summer 2007).

SAPRA, Haresh (2010) – "The Economic Trade-Offs in the Fair Value Debate". Chicago Booth Research Paper No. 09-35, 2010.

STICKEL, Scott; TUCKER, James (2007) – "New Accounting Rules for Defined-Benefit Pension Plans: Impact and Fallout". *Journal of Financial Service Professionals*, January 2007.

Portuguese Legislation

Decreto-Lei nº48953, *in Diário do Governo* – I Série, nº 81, April 5, 1969.

Decreto-Lei nº 142/73, *in Diário da República* – I Série, nº 77 – 1ºSuplemento, March 31, 1973.

Decreto-Lei nº277/93 *in Diário da República* – I Série, nº 186, August 10, 1993.

Decreto-Lei nº 287/93 *in Diário da República* – I Série, nº 195, August 20,1993.

Decreto-Lei nº 240-A *in Diário da República* – I Série, nº 303,December 29, 2004.

Decreto-Lei nº 240-A *in Diário da República* – I Série, nº 304, December 30, 2004.

Decreto-Lei nº12/2006 *in Diário da República* – I Série A, nº 15, January 20, 2006.

Decreto-Lei nº 54/2009 *in Diário da República* – I Série, nº 42, March 2, 2009.

Websites (last consulted May 27, 2011)

Associação Portuguesa de Bancos (APB) – Available at www.apb.pt

Banco Comercial Português (BCP) – Available at www.milleniumbcp.pt

Banco de Portugal – Available at www.bportugal.pt

Banco Espírito Santo (BES) – Available at www.bes.pt

Banco Português de Investimento (BPI) – Available at www.bancobpi.pt

Bloomberg – Available at www.bloomberg.pt

Brisa – Available at www.brisa.pt

Caixa Geral de Aposentações – Available at www.cga.pt

Caixa Geral de Depósitos – Available at www.cgd.pt

CGD Pensões – Available at www.cgdpensoes.pt

European Parliament – Available at www.europalrl.europa.eu

FASB – Available at www.fasb.com

IASB – Available at www.iasb.com

Instituto de Seguros de Portugal (ISP) – Available at www.isp.pt

Instituto Nacional de Estatística (INE) – Available at www.ine.pt

Journal of Accountancy – Available at www.journalofaccountacy.com

QFINANCE – Available at www.qfinance.com

Segurança Social – Available at www2.seg-social.pt

Towers Watson – Available at www.towerswatson.com

VI. Appendixes

Appendix 1: CGD GROUP

CAIXA GERAL DE DEPÓSITOS GROUP

	NATIONAL	%	INTERNACIONAL	%
COMMERCIAL	Caixa Geral de Depósitos, SA		Banco Caixa Geral (Espanha)	99,80%
BANKING			Banco Caixa Geral (Brasil)	100,00%
			BNU (Macau)	100,00%
			CGD Subsidiária Offshore Macau	100,00%
			B. Comercial do Atlântico (C.Verde)	59,30%
			B. Interatlântico (C.Verde)	70,00%
			Mercantile Bank Hold. (África do Sul)	91,80%
			Parbanca, SGPS	100,00%
			B. Com. Invest. (Moçambique)	51,00%
			Partang, SGPS	51,00%
			Banco Caixa Geral Totta (Angola)	26,00%
ASSETS	Caixa Gestão de Activos, SGPS	100,00%		
MANAGEMENT	CaixaGest	100,00%		
	CGD Pensões	100,00%		
	Fundimo	100,00%		
SPECIALIZED	Caixa Leasing e Factoring - IFIC	51,00%	BCI - ALD (Moçambique)	46,10%
CREDIT	Locarent	50,00%	A Promotora (Cabo Verde)	52,70%
	Credip - IFIC	80,00%		
	Gerbanca, SGPS	100,00%		
INVESTMENT BANKING	Caixa Banco de Investimento	99,70%	GCI - S.Capital Risco (Moçambique)	34,60%
AND RISK CAPITAL	Caixa Capital	99,70%	Banco Nacional Invest. (Moçambique)	50,00%
	Caixa Desenvolvimento, SGPS	99,70%		
INSURANCE AND HEALTH	Caixa Seguros e Saúde, SGPS	100,00%	Garantia (Cabo Verde)	65,40%
	Comp. Seg. Fidelidade Mundial	100,00%		
	Império Bonança. Comp. Seguros	100,00%		
	Via Directa Comp. De Seguros	100,00%		
	Cares Companhia de Seguros	100,00%		
	Companhia Port. de Resseguros	100,00%		
	Fidelidade Mundial, SGII	100,00%		
	GEP- Gestão de Perit. Automóveis	100,00%		
	EAPS - E. Análise, Prev. e Seg.	100,00%		
	HPP - Hosp. Privados Portugal, SGPS	100,00%		
	HPP - Lusíadas	100,00%		
	HPP - Boavista	100,00%		
	HPP - Algarve	100,00%		
	HPP Saúde - Parcerias Cascais	100,00%		
	HPP Viseu, SA	65,00%		
	LCS - Linha de Cuidados de Saúde	100,00%		
	Multicare - Seguros de Saúde	100,00%		
	EPS - Gestão de Sistemas de Saúde	100,00%		
AUXILIARY	Caixatec- Tecnologias de Informação	100,00%	SISP (Cabo Verde)	12,90%
SERVICES	Imocaixa	100,00%	Inmobiliaria Caixa Geral (Espanha)	99,80%
	Sogrupo Sistema Informação ACE	100,00%		
	Sogrupo Compras e Serv. Partilh. ACE	100,00%		
	Sogrupo IV Gestão de Imóveis ACE	100,00%		
	Caixa Imobiliário	100,00%		
	CaixaNet	80,00%		
	ESegur	50,00%		
	SIBS	21,60%		
	Trionis	2,20%		
OTHER FINANCE PARTICIPATIONS				
	Parcaixa, SGPS	51,00%	La Seda Barcelona	14,80%
OTHER	Caixa Participações, SGPS	100,00%		
PARTICIPATIONS	Wolfpart, SGPS	100,00%		
	Banco Comercial Português	2,70%		
	Banco Inter. São Tomé e Príncipe	27,00%		
	Portugal Telecom	6,30%		
	EDP	0,40%		
	REN - Redes Energéticas Nacionais	1,20%		
	GALP Energia	1,40%		
	ZON Multimédia	10,90%		
	TagusParque	10,00%		
	AdP Águas de Portugal, SGPS	9,70%		
	SOFID Soc. Financ.Desenv. IFIC	10,00%		
	Turismo Fundos, SGFII	33,50%		
	Floresta Atlântica, SGFII	11,90%		
	Brisa	1,60%		
	Cimpor	9,60%		
	VAA - Vista Alegre Atlantis	4,50%		

Appendix 2: RANKING OF PORTUGUESE BANKS

RANKING OF PORTUGUESE BANKS 2009 (Thousand Euros)

		Assets		Credit from Clients		Resources Capted		Equity		Net Income	
		Amount	Order	Amount	Order	Amount	Order	Amount	Order	Amount	Order
CGD		120.984.842	1	79.627.233	1	64.255.685	1	7.156.850	2	278.899	4
BCP		95.550.410	2	77.348.210	2	46.307.233	2	7.220.801	1	225.217	5
BES		82.297.200	3	50.531.154	3	25.446.450	3	6.938.883	3	522.114	2
BST	a)	51.488.162	4	28.345.755	6	15.253.588	5	2.102.201	6	439.048	3
SANTANDER TOTTA, SGPS		48.590.430	5	32.905.807	4	15.081.297	6	3.211.573	4	523.263	1
BANCO BPI		47.449.179	6	30.485.950	5	22.617.852	4	2.302.690	5	175.034	6
MG		17.244.767	7	15.176.295	7	9.180.858	8	986.214	9	44.476	10
BARCLAYS		16.978.415	8	8.895.897	10	3.605.162	11	74.838	26	14.747	14
BANIF SGPS		14.442.205	9	12.005.063	8	6.801.474	9	1.179.926	7	54.075	7
CCCAM	a)	12.096.922	10	8.858.793	11	10.070.053	7	999.691	8	42.334	11
BANIF	a)	11.568.615	11	9.838.755	9	6.606.394	10	647.650	11	23.669	12
POPULAR		8.833.191	12	6.436.201	12	3.523.063	12	716.282	10	3.444	30
BBVA		6.941.048	13	5.809.891	13	3.030.020	13	243.876	16	7.329	21
BESI		5.926.469	14	2.121.218	16	833.456	17	526.756	13	50.384	8
BII	a)	4.246.407	15	3.332.680	14	13	42	176.525	18	-26.326	44
ITAÚ	a)	4.038.951	16	1.198.982	21	13.457	38	599.335	12	9.507	18
DEUTSCHE BANK		3.396.858	17	2.087.592	17	1.392.350	16	165.533	20	8.454	20
FINIBANCO		3.155.237	18	2.554.740	15	2.162.933	14	236.158	17	9.462	19
FINANTIA		3.105.680	19	2.070.059	18	260.228	23	35.323	14	12.096	16
BPI	a)	2.345.543	20	146.019	33	2.000.656	15	62.282	28	4.323	26
CBI		1.930.507	21	916.569	22	139.125	26	258.573	15	45.607	9
BNP PARIBAS	a)	1.527.459	22	745.287	24	195.204	25	10.530	41	5.165	23
CETELEM		1.366.973	23	1.401.860	19	7.188	40	115.530	23	1.652	34
SANTANDER CONSUMER		1.343.949	24	1.307.586	20	4.578	41	120.615	22	10.410	17
BSN	a)	1.033.118	25	91.549	35	653.776	18	101.860	24	18.122	13
BAI	a)	996.824	26	94.187	34	94.468	29	45.693	30	4.176	28
BANIF INV		986.850	27	429.092	28	278.440	22	74.374	27	3.714	29
FORTIS BANK	a)	899.140	28	317.834	30	57.570	33	25.925	36	3.182	32
BANIF MAIS	a)	787.623	29	765.329	23	20.495	37	173.541	19	3.430	31
CAIXA VIGO	a)	775.730	30	683.220	26	58.291	32	41.348	31	6.084	22
CAIXA GALICIA	a)	756.888	31	724.123	25	87.334	30	-5.443	44	2.566	33
BIG		703.350	32	56.891	38	304.985	21	128.686	21	12.329	15
CREDIFIN	a)	659.048	33	678.944	27	38.590	35	83.883	25	-1.347	41
BAC	a)	575.410	34	392.278	29	313.793	20	36.958	34	4.232	27
BANCO INVEST		548.216	35	316.681	31	99.099	27	55.933	29	5.115	24
BEST	a)	451.409	36	60.694	37	315.221	19	27.723	35	4.576	25
BANCO BIC	a)	419.104	37	153.314	32	97.622	28	24.513	39	204	38
ACTIVO BANK	a)	239.610	38	26.871	41	211.396	24	25.278	38	-665	40
B. BRASIL	a)	123.315	39	9.507	43	79.601	31	21.274	40	79	39
ABN	a)	116.479	40	42.046	40	41.718	34	-5.268	43	-5.268	43
BPG	a)	105.370	41	65.035	36	32.634	36	37.202	32	212	37
BNP PRIVATE	a)	96.660	42	47.079	39	7.442	39	-2.711	42	-4.177	42
RURAL	a)	47.065	43	11.159	42	0	43	37.097	33	1.396	35
IMIBANK	a)	25.733	44	0	44	0	44	25.467	37	854	36

(a) Non Consolidated Accounts

Appendix 3: CGD FINANCIAL STATEMENTS – BALANCE SHEET

(Euros)

CGD CONSOLIDATED BALANCE SHEET

	2010	2009		2010	2009
ASSETS	**Net Assets**	**Net Assets**	**LIABILITIES**		
Cash and cash equivalents at central banks	1.468.751.616	1.926.260.193	Resources of central banks and credit institutions	14.603.669.257	6.478.633.482
Cash balances at other credit institutions	1.264.973.198	1.238.202.409			
Financial assets held for trading	3.424.241.930	8.353.213.955	Customer resources	67.680.044.524	64.255.684.982
	6.157.966.744	**11.517.676.557**	Responsabilidades para com subscritores de produtos "Unit-linked"	732.511.643	867.966.716
			Debt securities	19.306.747.511	25.182.312.789
Other financial assets at fair value through profit or loss	5.066.406.778	6.209.572.540		**87.719.303.678**	**90.305.964.487**
Available-for-sale financial assets	24.748.550.805	18.851.152.139			
Associate Investments to products "Unit-linked"	732.511.643	867.966.717	Passivos financeiros ao justo valor através de resultados	1.712.117.274	1.901.977.385
Hedging derivatives	114.866.963	179.622.760	Hedging derivatives with negative realvaluation	166.047.660	270.773.352
Investments held until maturity	2.836	3.048	Provisions for employees' benefits	530.191.951	556.971.293
	30.662.339.025	**26.108.317.204**	Provisions for other risks	273.227.156	239.409.251
			Provisions for insurance contracts	5.742.936.344	6.439.224.865
Loans and advances to customers	81.907.204.111	77.222.008.268	Current tax liabilities	57.827.737	58.982.381
Non-current assets held for sale	423.388.652	349.677.646	Deferred tax liabilities	180.917.514	169.803.702
Investment property	396.440.513	354.257.620	Other subordinated liabilities	2.800.164.159	3.201.597.691
Other tangible assets	1.149.998.019	1.184.057.646	Other liabilities	4.235.575.941	4.204.653.802
Intangible assets	419.386.093	406.067.399	**TOTAL LIABLITIES**	**118.021.978.671**	**113.827.991.691**
Investments in associates, subsidiaries and joint ventures	28.463.595	26.171.674			
Current tax assets	90.269.525	127.886.055	Share capital	5.050.000.000	4.500.000.000
Deferred tax assets	1.088.679.963	950.600.970	Revaluation reserves	-507.360.163	-331.153.551
Provisões técnicas de resseguro cedido	264.564.342	258.378.805	Other reserves and retained earnings	1.516.423.994	1.454.730.693
Other assets	3.273.273.895	2.479.742.302	Income of shareholders	250.581.934	278.899.370
			Equity attributable to shareholders	6.309.645.765	5.902.476.512
			Minority Interests	1.530.350.041	1.254.373.943
			TOTAL EQUITY	**7.839.995.806**	**7.156.850.455**
TOTAL ASSETS	**125.861.974.477**	**120.984.842.146**	**TOTAL LIABLITIES AND EQUITY**	**125.861.974.477**	**120.984.842.146**

Appendix 4: CGD FINANCIAL STATEMENTS – INCOME STATEMENT

(Euros)

CGD CONSOLIDATED INCOME STATEMENT

	2010	2009
Interest and similar income	4.388.088.884	5.317.030.003
Interest and similar costs	-2.972.831.017	-3.784.086.960
Income from equity instruments	197.476.680	108.401.937
NET INTEREST INCOME	**1.612.734.547**	**1.641.344.980**
Income from services and commissions	648.628.263	592.462.610
Costs of services and commissions	-146.313.001	-144.694.768
Income from financial operations	124.387.923	199.496.583
Other operating income	350.962.737	219.628.830
NET OPERATING INCOME	**2.590.400.469**	**2.508.238.235**
TECHNICAL MARGIN ON INSURANCE OPERATIONS		
Premiums net of reinsurance	1.323.352.472	1.774.167.325
Result of investments relating to insurance contracts	206.766.596	250.124.578
Cost of claims net of reinsurance	-931.660.148	-1.425.806.306
Commissions and other income and cost relating to insurance contracts	-89.461.407	-107.250.308
	508.997.513	491.235.289
INSURANCE AND BANKING INCOME	**3.099.397.982**	**2.999.473.524**
Staff costs	-1.047.134.334	-1.040.370.452
Other administrative costs	-721.196.946	-698.079.988
Depreciation and amortisation	-198.848.549	-197.980.611
Provisions net of reversals	-51.130.457	-8.059.296
Impairment of other financial assets net of reversals	-369.101.806	-416.846.034
Impairment of other assets net of reversals	-354.660.208	-259.280.023
Income from associates	7.100.309	-4.404.140
INCOME BEFORE TAXES AND MINORITY INTERESTS	**364.425.991**	**374.452.980**
Currents	-129.219.647	8.562.265
Deferred	64.181.122	-78.772.636
	-65.038.525	-70.210.371
Total comprehensive income for year, of which:	299.387.466	304.242.609
Minority interest	-48.805.532	-25.343.239
Total comprehensive income attributable to the shareholder of CGD	250.581.934	278.899.370
Average number of shares	900.000.000	819.452.000
Income per share	0,28	0,34

Appendix 5: STAFF COSTS DETAIL

(Thousand Euros)

STAFF COSTS DETAIL	2010	2009
Remuneration of the management and supervisory bodies	17.397	18.064
Remuneration of the staff	747.364	751.935
Provision for suspension of labour agreements	816	-1.343
	765.577	**768.656**
Other charges relating to remuneration	77.033	71.981
Healthcare - CGD		
Normal cost	33.979	32.493
Contributions relating to current stafF	30.813	30.367
Amortisation of deviations exceeding the corridor	3.437	2.634
Pension liability - CGD		
Normal cost	71.931	68.231
Retirements before the normal retirement age	-1.117	455
Amortisation of deviations exceeding the corridor	2.587	694
Other pension costs		
Caixa Seguros e Saúde	1.969	1.820
Other	6.681	7.217
Other mandatory social charges	26.248	25.205
	253.561	**241.097**
Other staff costs	27.996	30.618
TOTAL STAFF COSTS	**1.047.134**	**1.040.370**

Appendix 6: RANKING OF PENSION FUNDS MANAGEMENT COMPANIES

RANKING OF PENSION FUNDS MANAGEMENT COMPANIES

(Thousand Euros)

		Number of Funds	Amounts Managed	Market Share (%)
	Entidades Gestoras	**236**	**21.917.465**	**100,00%**
1º	PensõesGere	38	7.092.642	32,36%
2º	BPI Pensões	33	3.178.876	14,50%
3º	ESAF SGFP	30	2.582.420	11,78%
4º	CGD Pensões	19	2.100.060	9,58%
5º	Previsão SGFP	5	1.952.369	8,91%
6º	Santander Pensões	3	1.397.688	6,38%
7º	SGFP do Banco de Portugal	1	1.262.326	5,76%
8º	Futuro SGFP	15	1.119.555	5,11%
9º	BBVA Fundos	9	391.948	1,79%
10º	Banif Açor Pensões	14	269.386	1,23%
11º	Real Vida	6	134.050	0,61%
12º	Eurovida	2	116.009	0,53%
13º	SGF SGFP	15	84.034	0,38%
14º	AXA Vida	5	54.605	0,25%
15º	Crédito Agrícola Vida	4	46.768	0,21%
16º	Allianz SGFP	5	34.551	0,16%
17º	Victoria Vida	6	24.982	0,11%
18º	Lusitania Vida	5	19.585	0,09%
19º	Global Vida	1	15.269	0,07%
20º	American Life	7	13.448	0,06%
21º	Liberty	1	7.034	0,03%
22º	BPI Vida	1	6.486	0,03%
23º	Generali Vida	2	5.908	0,03%
24º	Groupama Vida	4	5.368	0,02%
25º	Zurich Vida	2	1.553	0,01%
26º	Fidelidade Mundial	1	480	0,00%
27º	Pedro Arroja SGFP	1	62	0,00%
28º	BES Vida	1	4	0,00%

Appendix 7: OTHER ASSETS DETAIL

(Thousand Euros)

OTHER ASSETS DETAIL

	2010	2009
OTHER ASSETS		
Debt certificates of the Territory of Macau	274.633	227.856
Other	58.324	2.823
Debtors and other applications:		
Premiums receivable - Insurance	102.773	114.648
Other debtors	724.939	617.559
Central and local government	1.222	7.859
Shareholders' loans	123.428	130.392
Debtors - futures contracts	36.307	42.245
Amount receivable from the sale of REN	-	64.561
Amount receivable from the sale of EDP	460.724	-
Grants receivable from:		
The State	17.135	39.938
Other entities	12.018	12.815
Amount receivable from the sale of assets received as settlement of defaulting loans	23.415	2.344
Other	530.856	614.241
Liability for pensions and other benefits (Excess coverage):		
Caixa Geral de Depósitos	116.651	-
Caixa Seguros e Saúde	6.491	1.419
Insufficient coverage of liabilities:		
Other	-501	-352
Actuarial gains and losses:		
CGD (Note 37)	127.139	287.198
Caixa Seguros e Saúde	16.194	18.798
Other	3.479	7.701
Income receivable	60.565	53.688
Deferred costs:		
Rent	8.079	602
Other	32.865	34.252
Deferred income	-4.702	-3.168
Asset operations pending settlement	684.105	269.702
Stock exchange operations	1.941	25.127
	3.429.078	**2.624.171**
Impairment (Note 39.)	-155.804	-144.429
TOTAL OTHER ASSETS	**3.273.274**	**2.479.742**

Appendix 8: CGD FINANCIAL INDICATORS

(Million Euros)

	2007	2008	2009	2010
Balance Sheet				
Loans and advances to customers (gross)	69.636	77.432	79.627	84.517
Customer resources	54.039	60.128	64.256	67.680
Debt securities	16.231	19.929	25.182	19.307
Shareholders' equity	5.541	5.484	7.157	7.840
Assets (net)	103.554	111.060	120.985	125.862
Operating Income				
Finance Margin	2.032	2.201	1.641	1.613
Technical income from insurance operations	549	515	491	509
Activity Product	3.149	3.561	2.999	3.099
Net operating income	1.414	1.722	1.063	1.132
Income before taxation	1.075	662	374	364
Net income	856	459	279	251
RATIOS				
Solvency ratio (Bank of Portugal)	10,10%	10,70%	12,60%	12,30%
TIER I (Bank of Portugal)	6,20%	7,00%	8,50%	8,90%
Non-performing credit / total credit (a)	2,07%	2,33%	3,00%	3,13%
Overdue credit / total credit	2,05%	2,38%	2,87%	2,93%
Accumulated impairment / overdue credit	121,40%	115,10%	105,30%	105,30%
Accumulated impairment / credit overdue for 90 days	137,90%	137,30%	122,40%	117,40%
Cost-to-income (actividade consolidada) (1)	55,10%	51,20%	64,70%	63,30%
Cost-to-income (actividade individual) (1)	50,00%	41,90%	59,60%	58,50%
Rendibilidade bruta dos capitais próprios - ROE (1)	20,50%	12,60%	5,90%	5,00%
ROE (after tax)	17,10%	9,60%	4,80%	4,10%
Rendibilidade bruta dos activos - ROA (1)	1,09%	0,61%	0,32%	0,29%
ROA (after tax)	0,91%	0,47%	0,26%	0,24%
Other indicators				
Number of bank branches	1.187	1.223	1.273	1.332
Portugal	811	831	848	869
Abroad	376	392	425	463
Number of representative offices	12	12	12	12
Employees (b)	20.464	20.869	22.237	23.083
CGD Portugal	9.695	9.727	9.791	9.672
Other banking institutions	3.953	4.170	4.495	5.029
Insurance companies	3.503	3.433	3.458	3.384
Financial companies	338	314	357	368
Other activities	2.975	3.225	4.136	4.630
Ratings (long/short term)				
Moody's	Aa1/P-1	Aa1/P-1	Aa2/P-1	A1/P-1
Standard & Poor's	A+/A-1	A+/A-1	A+/A-1	A-/A-2
Fitch Ratings	AA-/F1+	AA-/F1+	AA-/F1+	A/F1

Appendix 9: Mortality table – TV 73/77

x	lx	Dx	Nx	dx	Cx	Mx
0	100.000,0000	100.000,000000	3.018.435,127125	1.168	1.150,864597	12.264,340497
1	98.832,0000	95.953,398050	2.918.435,127125	96	91,836515	11.113,475900
2	98.736,0000	93.068,149680	2.822.481,729075	59	54,797273	11.021,639385
3	98.677,0000	90.303,433510	2.729.413,579395	46	41,478930	10.966,842111
4	98.631,0000	87.632,366020	2.639.110,145885	38	33,267187	10.925,363181
5	98.593,0000	85.047,187870	2.551.477,779865	34	28,898425	10.892,095994
6	98.559,0000	82.541,610850	2.466.430,591995	31	25,581131	10.863,197568
7	98.528,0000	80.112,280420	2.383.888,981145	29	23,233723	10.837,616438
8	98.499,0000	77.756,020170	2.303.776,700725	27	21,001357	10.814,382714
9	98.472,0000	75.470,588460	2.226.020,680555	25	18,879321	10.793,381358
10	98.447,0000	73.253,813630	2.150.550,092095	23	16,863083	10.774,502036
11	98.424,0000	71.103,591720	2.077.296,278465	23	16,371925	10.757,638954
12	98.401,0000	69.016,481590	2.006.192,686745	22	15,203983	10.741,267028
13	98.379,0000	66.991,311870	1.937.176,205155	25	16,774032	10.726,063045
14	98.354,0000	65.023,580670	1.870.184,893285	30	19,542562	10.709,289013
15	98.324,0000	63.110,434110	1.805.161,312615	38	24,032924	10.689,746451
16	98.286,0000	61.248,585780	1.742.050,878505	47	28,859158	10.665,713527
17	98.239,0000	59.436,210623	1.680.802,292725	57	33,980004	10.636,854370
18	98.182,0000	57.671,577364	1.621.366,082102	63	36,462958	10.602,874366
19	98.119,0000	55.955,894664	1.563.694,504738	64	35,962849	10.566,411408
20	98.055,0000	54.290,676076	1.507.738,610074	62	33,824282	10.530,448559
21	97.993,0000	52.676,066194	1.453.447,933998	61	32,309445	10.496,624277
22	97.932,0000	51.109,976396	1.400.771,867804	59	30,339922	10.464,314832
23	97.873,0000	49.591,441494	1.349.661,891408	58	28,956976	10.433,974910
24	97.815,0000	48.118,498420	1.300.070,449914	60	29,083003	10.405,017934
25	97.755,0000	46.688,332423	1.251.951,951494	59	27,765326	10.375,934931
26	97.696,0000	45.301,120091	1.205.263,619071	60	27,413519	10.348,169604
27	97.636,0000	43.954,658648	1.159.962,498980	61	27,058652	10.320,756085
28	97.575,0000	42.647,764190	1.116.007,840332	66	28,423858	10.293,697433
29	97.509,0000	41.377,589441	1.073.360,076142	70	29,268463	10.265,273575
30	97.439,0000	40.143,577860	1.031.982,486701	72	29,227868	10.236,005112
31	97.367,0000	38.945,548362	991.838,908841	77	30,347166	10.206,777244
32	97.290,0000	37.781,310051	952.893,360479	82	31,376468	10.176,430077
33	97.208,0000	36.649,967392	915.112,050428	88	32,691560	10.145,053610
34	97.120,0000	35.550,280663	878.462,083036	95	34,264102	10.112,362050
35	97.025,0000	34.481,074172	842.911,802373	103	36,067476	10.078,097948
36	96.922,0000	33.441,232701	808.430,728201	110	37,396761	10.042,030472
37	96.812,0000	32.430,368091	774.989,495500	121	39,938288	10.004,633711
38	96.691,0000	31.446,441899	742.559,127409	130	41,659130	9.964,695423
39	96.561,0000	30.489,478155	711.112,685510	142	44,179212	9.923,036293
40	96.419,0000	29.557,904030	680.623,207355	156	47,121271	9.878,857081
41	96.263,0000	28.650,564236	651.065,303325	169	49,561208	9.831,735809
42	96.094,0000	27.767,247673	622.414,739089	184	52,388477	9.782,174602
43	95.910,0000	26.906,872987	594.647,491416	203	56,114715	9.729,786125
44	95.707,0000	26.067,886185	567.740,618429	222	59,579448	9.673,671410
45	95.485,0000	25.249,921990	541.672,732244	240	62,534188	9.614,091962

46	95.245,0000	24.452,870602	516.422,810254	262	66,278145	9.551.557773
47	94.983,0000	23.675,345273	491.969,939652	285	69,996558	9.485.279629
48	94.698,0000	22.916,802452	468.294,594379	310	73,919036	9.415.283070
49	94.388,0000	22.176,488178	445.377,791927	332	76,859129	9.341,364034
50	94.056,0000	21.454,839496	423.201,303749	354	79,565247	9.264,504905
51	93.702,0000	20.751,543291	401.746,464253	380	82,921381	9.184,939658
52	93.322,0000	20.065,424545	380.994,920962	412	87,285664	9.102,018277
53	92.910,0000	19.394,989584	360.929,496417	445	91,531059	9.014,732614
54	92.465,0000	18.739,898742	341.534,506833	478	95,455103	8.923,201554
55	91.987,0000	18.100,021741	322.794,608091	509	98,685151	8.827,746451
56	91.478,0000	17.475,599272	304.694,586350	540	101,646063	8.729,061300
57	90.938,0000	16.866,446393	287.218,987078	574	104,899030	8.627,415236
58	90.364,0000	16.271,830587	270.352,540685	610	108,231129	8.522,516207
59	89.754,0000	15.691,250474	254.080,710098	648	111,624657	8.414,285077
60	89.106,0000	15.124,236719	238.389,459624	689	115,230415	8.302,660421
61	88.417,0000	14.570,185067	223.265,222905	743	120,642268	8.187,430005
62	87.674,0000	14.026,938386	208.695,037838	812	128,005752	8.066,787737
63	86.862,0000	13.492,258967	194.668,099452	885	135,450154	7.938,781985
64	85.977,0000	12.965,817549	181.175,840485	962	142,946682	7.803,331831
65	85.015,0000	12.447,322826	168.210,022936	1.049	151,334264	7.660,385150
66	83.966,0000	11.935,665362	155.762,700110	1.148	160,792743	7.509,050885
67	82.818,0000	11.429,590825	143.827,034748	1.257	170,931699	7.348,258142
68	81.561,0000	10.928,266114	132.397,443923	1.380	182,191954	7.177,326443
69	80.181,0000	10.430,448034	121.469,177809	1.522	195,086643	6.995,134488
70	78.659,0000	9.934,423996	111.038,729775	1.677	208,693403	6.800,047845
71	76.982,0000	9.439,440120	101.104,305779	1.843	222,671056	6.591,354442
72	75.139,0000	8.945,100660	91.664,865659	2.019	236,830443	6.368,683386
73	73.120,0000	8.451,207778	82.719,764999	2.206	251,228840	6.131,852943
74	70.914,0000	7.957,512964	74.268,557221	2.412	266,688361	5.880,624104
75	68.502,0000	7.462,964891	66.311,044257	2.642	283,610528	5.613,935742
76	65.860,0000	6.966,147225	58.848,079366	2.879	300,050238	5.330,325214
77	62.981,0000	6.467,601449	51.881,932141	3.114	315,089328	5.030,274977
78	59.867,0000	5.968,757968	45.414,330692	3.343	328,408385	4.715,185649
79	56.524,0000	5.471,320251	39.445,572724	3.550	338,585994	4.386,777264
80	52.974,0000	4.978,342716	33.974,252473	3.728	345,206778	4.048,191270
81	49.246,0000	4.493,200097	28.995,909757	3.883	349,086920	3.702,984492
82	45.363,0000	4.018,364628	24.502,709660	4.012	350,178829	3.353,897571
83	41.351,0000	3.556,283429	20.484,345032	4.095	347,012919	3.003,718742
84	37.256,0000	3.110,780369	16.928,061603	4.096	336,988019	2.656,705823
85	33.160,0000	2.688,130954	13.817,281234	4.024	321,421749	2.319,717805
86	29.136,0000	2.293,129618	11.129,150280	3.907	302,986637	1.998,296056
87	25.229,0000	1.927,797831	8.836,020662	3.738	281,437611	1.695,309419
88	21.491,0000	1.594,339662	6.908,222831	3.512	256,720246	1.413,871808
89	17.979,0000	1.294,948609	5.313,883169	3.236	229,655527	1.157,151562
90	14.743,0000	1.030,945345	4.018,934560	2.891	199,195377	927,496035
91	11.852,0000	804,644773	2.987,989215	2.490	166,568658	728,300657
92	9.362,0000	617,083542	2.183,344442	2.082	135,218913	561,731999
93	7.280,0000	465,875081	1.566,260900	1.709	107,760985	426,513087
94	5.571,0000	346,125850	1.100,385819	1.381	84,542667	318,752102
95	4.190,0000	252,742150	754,259969	1.098	65,260047	234,209435
96	3.092,0000	181,078093	501,517819	854	49,279431	168,949388
97	2.238,0000	127,247507	320,439726	653	36,583375	119,669957
98	1.585,0000	87,494599	193,192219	487	26,488803	83,086581
99	1.098,0000	58,846019	105,697620	567	29,941889	56,597779
100	531,0000	27,629437	46,851601	294	15,073227	26,655889
101	237,0000	11,972604	19,222164	140	6,968667	11,582662
102	97,0000	4,757456	7,249560	61	2,947911	4,613995
103	36,0000	1,714227	2,492104	24	1,126052	1,666084
104	12,0000	0,554766	0,777877	8	0,364418	0,540032
105	4,0000	0,179535	0,223111	3	0,132677	0,175614
106	1,0000	0,043576	0,043576	1	0,042937	0,042937

Column 1 (x) – Age

Column 2 (q_x) – probability of a man that has x years old, die before achieving x + 1 years old

Column 3 (l_x) – Number of men of initial generation that survive until the start of each age interval (until age x)

Column 4 (d_x) – Number of deaths between x and x + 1 years old

Column 5 (L_x) – Number of total completed years lived by l_x survivors of the initial generation between the age x and x + 1

Column 6 (T_x) – Number of total completed years lived by l_x survivors after the age x

Column 7 (e_x) – Number of life expectancy years for a man that lived until x years old.