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EMPRESARIAIS

Equity Research: Portugal Telecom

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i. Abstract

In the distinct fields of valuation, and in particular in Equity Research, theory and practice should be accurately combined as way to obtain the most consistent outcome which adheres to reality. The present dissertation aims at answering this need through bridging the review of relevant literature with the valuation of the leading telecommunications operator Portugal Telecom in practical terms. The year-end 2012 price target derived from the company's stock is 5,01Euro per share, implying a Buy recommendation. Caixa Banco de Investimento's research is additionally analyzed and used as basis for comparison for both the methodologies followed and results yielded.

ii. Preface

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1. Introduction

It is the purpose of this dissertation to value Portugal Telecom, a leading operator on the telecommunications industry in Portugal, holding an increasing international exposure in distinct geographic areas. Aiming at fulfilling this task, some guidance is provided resorting to a DCF-based Sum-Of-The-Parts valuation, as well as a year-end 2012 recommendation on the stock price.

This dissertation is structured into two main parts referring to its two main objectives: reviewing the fundamentals of the state of the art through a careful but comprehensive literature selection; and combining this theoretical knowledge with the methods that best fit the company profile and thus allow for a robust valuation.

In this sense I have tailored the necessary research to what I pursued as the most valuable from a scientific perspective, and as the most significant for the equity research process, taking into account the company's type of assets, the international investments, the industry specificities, and the nature of its business model.

Accounting for all the details, the dissertation proposal is as follows. It begins with the literature review (chapter 2) and its followed by an overview of the macroeconomic environment (chap. 3). In chapter 4 the main characteristics of the telecommunications industry are presented, trends and competitive structure are analyzed, as well as the key drivers for the sector. The business profile and the company's strategy (chap.5) are then presented into an attempt to make an overview on PT. In chapter 6 the main risks and uncertainties related to PT's operational and financial performance are covered, followed by a description of the regulatory background in force (chap.7).

Chapter 8 -Portugal Telecom Valuation- exposes the assumptions and its linkage to the main value drivers. The approach is presented, the sensitivity analysis is described, and the IB valuation comparison and the derived final conclusions are also among the topic addressed under this title. The valuation results are derived in this chapter and a multiples valuation is also performed. Finally, the Investment Case for PT is built, based on the strengths, weaknesses, opportunities, and threats that influence the stock performance.

Chapter 9 presents the conclusions. Additional information on the company, including the financial statements forecasts, is compounded on the Appendix (chap. 10). The overall work is completed by the information detailed on the Glossary (chap.11), followed by the used References (chap.12).

2. Literature Review

2.1 Comprehensive Framework

In corporate finance it is explicitly assumed that managers' primary concern is to create value for the shareholders (Neves, 2002). Since the 1980's that the enterprises' financial reports increasingly reflect this desideratum, and more often the business managers publicly assume for that to be their role.

In this sense, company valuation, corporate strategy's valuation and managers' performance valuation in creating value for the shareholders are matters that continuously occupy the agenda of general business and demand for the mastery of the respective financial instruments.

The firm valuation techniques in Portugal have also gained prominence as a result of the changes occurred in the corporate structure in various fields, including the privatizations, the development of the capital market, by the creation and development of a market for mergers and acquisitions, the processes of recovery and liquidation of companies with equity participation of third parties, the dissent among shareholders, by the participation of venture capital funds in companies, agreements to repurchase shares to companies of venture capital and private equity funds, the projects of creation of companies (start-up) and for its financing, among others.

In addition, the valuation and simulation techniques can be used in the evaluation of the strategies to be adopted. Operating companies and companies being created (start-ups) need to adopt criteria for the selection of their strategies, and value creation is the most consistent criterion with financial theory, economic efficiency and the interests of the shareholders (Copeland, 2000). The explosion of companies from the called "new economy" with high growth expectations, stressed more the paradigm of the insufficiency of discounted cash flows in the presence of real options.

In the same line of thought, Fernandez (2007) argues that valuation is a key component of corporate finance literature, recognizing the importance of valuation as a mean to identify sources of economic value creation and destruction within the company. Furthermore, Damodaran (2006) utters that valuing companies is at the heart of what is done in finance, recognizing the importance of valuation to ensure efficient markets, effective corporate governance and appropriate capital budgeting decisions.

2.2 Introduction

Since great importance is attributed to valuation within the financial world, it could be expected that there was a simple and well-structured way to follow and in the end the desired outcome would be easily obtained. In reality, the broader scenario involves a greater deal of complexity. There are several different methods carrying their own advantages and disadvantages.

Managers, investors, owners and researchers of corporate finance are looking for several decades to provide a technical answer to determine the value of a company. However, the results are not totally satisfactory, since the value of a company or an asset is the result of the balance between what buyers are willing to pay for the purchase and what the sellers accept as the sale price as before the alternatives they have. Thus, in the valuation process intervene not only objective factors but also subjective and contingent phenomena. In this way, by seeking to streamline the process of calculating the value through specific techniques, the analyst should look forward to know the environment in which the valuation takes place.

Under Luehrman's (1997) view, every valuation method includes three fundamental factors – cash, timing, and risk – although each specific situation presents different challenges.

Virtually all the valuation approaches are similar in the sense that every single one is no more than a different way of expressing the same underlying model (Young, 1999).

As stated by Modigliani & Miller (1958), "though different in outward appearance, the various formulas can be shown to be equivalent in all essential aspects."

According to Young and Sullivan (1999), there is not one single theoretically correct model and no single approach is likely to be consistently more reliable. Moreover, it should be the robustness to data imperfections governing the choice between approaches. In the end, the solution could go through considering many approaches and not just one.

Another relevant issue to be taken into account in choosing a model concerns the adoption of the one that better addresses the scenario under analysis. In the same line of thought, it is argued by Young (1999), that a possible reason for the existence of numerous approaches to valuation is related to the fact that different models enhance different aspects of the valuation at the expense of obscuring other aspects.

2.3 Valuation models

It is consensual that the spectrum of approaches to valuation is vast and it would be of no practical use to treat them all extensively in this section. In this sense, the following discussion of valuation approaches will be narrowed to the most relevant ones under the topic-related specificities.

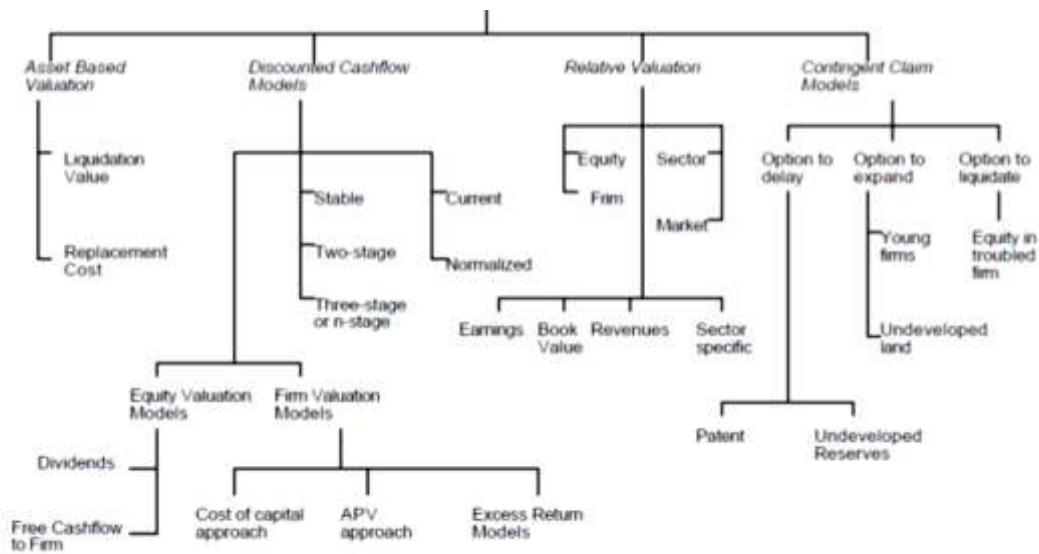
Bringing some structure, (Damodaran, 2002) and (Fernandez, 2007) propose a clear segmentation to valuation models. In broad terms, there are four main approaches to valuation.

The Discounted Cash Flow (DCF) valuation, relates the value of an asset to the present value of expected future cash flows on that same asset. The Relative Valuation estimates the value of a company or group of assets by using comparable firms' common variables like earnings, cash flows, book value or sales. The Asset-Based Valuation is built through valuing existing assets of a firm, considering the accounting estimates of value or book value often used as a starting point. And finally, the Contingent Claim valuation or Real Option valuation, which takes into consideration option pricing models to measure the value of assets that contain option characteristics.

Notwithstanding, the relevance of the last two approaches is limited in the context of this dissertation. In what takes to the Asset-Based Valuation, the choice to disregard it is based on the fact that usually this approach does not reflect the value of expected growth potential. As Damodaran (2005) defends, "liquidation valuation is likely to yield more realistic estimates of value for firms that are distressed, where the going concern assumption underlying conventional discounted cash flow valuation is clearly violated. For healthy firms with significant growth opportunities, it will provide estimates of value that are far too conservative."

Regarding Contingent Claim Valuation, it derives from the DCF model and is especially valuable to estimate the value of operating and strategic flexibility, which includes for instance, abandoning operations, opening and/or closing plants, or natural resources exploration and development (Copeland, 2000), which does not reflect PT's reality. Furthermore, as advocated by Keenan and Copeland (1998), the majority of attempts to apply the mentioned method have been too simplistic to address the complexity of the decisions faced by managers.

Figure 1 : Valuation Models



Source: Damodaran, 2002

2.3.1 Discounted Cash Flow Valuation

The DCF is generally regarded as the best technique to estimate the value of corporate assets (Luehrman, 1997). According to Vernimmen (2005), the DCF valuation consists of applying the investment decision techniques regarding Net Present Value (NPV) to the estimation of the firm's value. It basically states that the value of an asset as of today equals the expected future cash flows that the asset is expected to generate, discounted back at a rate that properly reflects the riskiness of those streams.

Valuing a company resorting to the DCF may presume the use of different expected cash flows, which carry different risks and, therefore demand different discount rates. Since we are making a valuation of the same firm, we should get the same result, independently of the expected cash flows in use (Fernandez, 2004). Moreover, another aspect shared by all the DCF approaches is related to the existence of two distinct periods that compose the analysis: the explicit forecast period, when the cash flows are estimated and discounted accordingly; and the period characterized by the cash flows stabilization, giving rise to the basis to predict a stable growth rate that stands in the essence of the terminal value concept.

According to Damodaran (2002) DCF analysis can be sectioned in three main types: the Adjusted Present Value model, which uses the unlevered cost of assets as the discount rate; the Free Cash Flow to the Firm, using WACC as the appropriate discount rate, and the Free Cash Flow to the Equity model using as discount rate the K_e .

2.3.1.1 Firm Valuation

2.3.1.1.1 Free Cash Flow to the Firm (FCFF)

The FCFF is the most commonly accepted version of the discounted cash flow method.

In the words of Damodaran (2005), “The value of the firm is obtained by discounting the free cash flow to the firm at the weighted average cost of capital. Embedded in this valuation are the tax benefits of debt (in the use of after-tax cost of debt in the cost of capital) and expected additional risk associated with debt (in the form of higher costs of equity and debt at higher debt ratios).”

The weighted average cost of capital (WACC) is the minimum rate required by the firm’s sources of funding (Vernimmen, 2005). In other words, it is the cost of capital to the firm. Furthermore, it assumes that, the risk involving the tax shields and debt is the same. It can be calculated through the use of the Capital Asset Pricing Model (CAPM), which determines the value of the needed components.

The CAPM builds on the model of portfolio choice developed by Harry Markowitz (1959). It is the most commonly accepted model dealing with the relationship of risk and return, which measures the market risk through the company’s beta measured relative to a market portfolio (Fama and French, 2004). This model is based on the assumption of a well-diversified investor whom requires a compensation for the risk added to his portfolio, which is calculated through the company’s beta (Damodaran, 2002).

This is regarded as one of the most frequently used valuation methods, mainly due to the simplicity associated with the WACC concept. As stated by Graham and Harvey (2001), one of the reasons it has been so consensual and rottenly adopted is that it works without significant disruption in a target debt-to-equity ratio scenario, representing the case of most companies.

On the other hand, and supported on a similar reason, its effectiveness has been widely criticized by several academics and practitioners due to the model’s inflexibility when faced with a changing capital structure. Though applicable, the company value would need to be constantly revised, since the WACC depends on value weights, further hindering the WACC estimation (Ruback, 2002).

If the capital structure changes, the WACC will change to, through the debt-to-equity ratio and, consequently, the cost of equity. Accordingly, an increase in leverage will increase the risk faced by equity-holders given the priority of debt payments over cash flows to equity.

Consequently, the cost of equity will increase, since the company's levered beta reflects the company's risk (Koller, 2005).

It should also be noted that FCFE is an indirect valuation method, meaning that non-equity claims shall be subtracted to the enterprise value to know how much equity is worth (Koller, 2005).

2.3.1.1.1.1 Beta (β)

The calculation of the beta is a major obstacle in the use of the CAPM model. In an efficient portfolio, a diversified one, what is left in terms of risk (the "non-diversifiable risk) is commonly known as systematic risk. It is exactly this part that is measured by beta (MacQueen).

In the process of obtaining the appropriate beta it should be considered that "for well diversified investors, it is not the isolated equity risk of the individual corporation that counts, but rather its contribution to the risk of a diversified equity portfolio. The risk of almost all managed equity portfolios looks very much like the risk of the market portfolio of all equities; that is, their risk is very highly correlated with the risk of a market index." (Rosenberg and Rudd, 1982). Since there is no such thing as an index that encloses all the equities, a proxy like S&P500, a broad stock market index, is employed.

Several methods can be applied on estimating the accurate value for the beta. Within those the Method of Similarity can be counted. It is one of the most used, and is basically the result of a weighted average of the betas from companies that operate in the same business and have an overlap of characteristics. Relying on such premises, this method encloses some limitations, being the most evident, the arbitrariness and possible inconsistency in attaining a solid group of comparable firms. Farther, the criticism does not stop here, with some voices arguing that this approach is unduly dependent on the historical behaviour. Even if the leverage or the business mix remains unaltered, firms tend to grow across time, which creates the basis for operating structures to change, implying a different beta (Damodaran, 2002). For that very reason, the Bayesian approaches presents itself as a valid alternative for estimating the beta, being achieved through a weighted average of the historical beta and a beta of 1.0.

Adding to the list, it is proposed by Rosenberg and Rudd that the beta movements are correlated mainly with four factors, these being, growth, earnings variability, financial leverage, and size.

2.3.1.1.1.2 Equity Risk Premium (ERP)

The risk premium is a fundamental and critical component in valuation. It can be influenced by a set of determinates enclosing: investor risk aversion, behavioural components and macroeconomic volatility (Damodaran, 2008).

Three approaches that can be used to estimate risk premiums shall be presented, these being: “the survey approach, where investors or managers are asked to provide estimates of the equity risk premium for the future, the historical return approach, where the premium is based upon how well equities have done in the past and the implied approach, where we use future cash flows or observed bond default spreads to estimate the current equity risk premium” (Damodaran, 2008). Hence, the estimated premium can vary widely across approaches.

Some theorists hold a different view over these matters, and they argue that the country risk should be reflected in the cash flows projections and not in the discount rate, by considering different scenarios. As developed above, Damodaran (2008) disagrees with this perspective advocating that creating different scenarios for the cash-flows will lead the expected cash-flow outcome to be riskier and thereby, claiming for an extra risk adjustment.

Goedhart (2003), considers that there is not a single correct method that has proven to be appropriate for every scenario, and in this sense the choice depends on the valuation at issue and its specificities, given that what is valid on the short-term may not be in a longer run.

Damodaran (2002) suggests using a market risk premium for developed economies that ranges between 5 and 5.5 per cent, value that is commonly used by analysts.

2.3.1.1.1.3 Risk-free Rate (Rf)

For an investment to be considered as being risk-free, it has to fulfil two conditions. The first is that the cash flows should carry no risk of default with them. The second presupposes the nonexistence of reinvestment risk in the investment. Accordingly, the actual return is always equivalent to the expected return in such an investment.

The significance of the risk-free rate in what takes to valuation rests on the cost of equity and cost of debt estimation.

Based upon the previously described criteria, the effective risk-free rate to be used in order to attain the expected returns should be a default-free zero coupon rate that is matched when

the cash flows that are being discounted occur. In the words of Damodaran (2008), “in practice, however, it is usually appropriate to match up the duration of the risk-free asset to the duration of the cash flows being analysed. In corporate finance and valuation, this will lead us towards long-term government bond rates as risk-free rates”.

Aligned with the described view, Copeland (2000) advises the use of a 10-year Treasury bond, mainly for three reasons. The first is that when compared with a 30-year bond, it has a lower liquidity premium, being less sensitive to inflation. The second is that, the 10-year Treasury bond is preferred to a short-term Treasury Bill, given that it is a long-term rate that frequently gets near the duration of the cash flow of the firm into consideration. And the third, this rate approximates the duration of the stock market index portfolio, reinforcing its consistency when bringing to the formula the beta and market premiums accounted.

However, problems contemplating the risk-free rate estimation can arise, and may these undergo the cases when long-term government bonds are not traded, or whenever these bond rates have some default risk affiliated. In order to quell these problems, Damodaran (2008) proposes doing the valuation in a different currency or still estimating the risk-free rate from forward markets or fundamentals. As for the second issue, the default spread should be deducted from the risk-free rate.

2.3.1.1.2 Adjusted Present Value (APV)

APV has its foundations on the work performed by Modigliani and Miller (1958), and it has been further developed by Myers (1974), following a consistent rationale.

As Luehrman (1997) advocates, the APV model enforces a separation between the intrinsic value of the assets-in-place, and the value created by a favourable financial structure. The real strength of this approach lies in the relevant information it can provide, given that it allows not only to see how much an asset is worth but also whence the value comes from. The APV disaggregates the value of operations from the value of the financing side effects.

Aligned with the above perspective, Damodaran (2006) utters that in opposition to typical DCF valuations, which reflect in the discount rate the effects of debt financing, APV initially values the company excluding debt and adding afterwards the benefits (tax shields) and costs of borrowing.

In this sense, the choice for the APV method in place of the WACC should essentially rely on a firm's capital structure. When this crucial attribute is expected to change substantially over time, the APV appears as the most credible solution, the solution to be adopted, since this method permits to decompose the value of the firm into different parts, value them separately and sum them in a final phase, thus providing a clean and more informative value metric (Kottler, 2005).

Establishing a link with other approaches, Luehrman (1997) advances that, the DCF method, which adopts the WACC as the discount rate is deprecated, mainly because APV works when WACC does, and sometimes when WACC does not, since the APV does not require such restrictive assumptions as WACC. WACC is suitable only for the simplest and most static capital structures. In other cases (that is, in most real situations), it needs to be adjusted extensively.

On the other hand, and stating that either the WACC equation or the equity cost has to be consistent with the assumed APV model, Booth (2007) argues that "it is a judgement call whether WACC is "better" than a particular APV model, but knowing one, we can always get the other".

It should be noted that when a company opts for funding its operations resorting to debt it is making use of the tax deductibility of interest expenses, incorporating a tax benefit. However, on the other hand, by increasing the level of debt, the firm is also increasing the risk of bankruptcy.

One of the most difficult aspects to circumvent when adopting this methodology has to deal with agreeing on the most accurate discount rate, the one that better reflects the riskiness of the tax shields as well as the remaining components of the financing side effects.

2.3.1.1.2.1 Tax Shields

This topic is regarded as controversial within the existing literature, in the sense that there is no consensus around the right way to compute the value of tax shields.

Brought to discussion by Modigliani and Miller (1963), the first authors considering the benefit from debt financing, it was initially proposed to be obtained through discounting the tax savings at the risk-free rate, when looking at a no growth scenario.

Developing on this early work, several different approaches were presented. Harry and Pringle (1980), assuming that interest tax shields have the same systematic risk as the firm's cash flows, suggested the use of the unlevered cost of equity, whereas Miles and Ezzell (1980) recommended a firm with a fixed debt-to-equity ratio to use the cost of debt in the first year and the unlevered cost of equity in the following periods.

Offering a different perspective, Myers (1974) and Damodaran (2006), building on the assumption that the risk of the tax savings is equal to the one of debt, suggested using the cost of debt as the appropriate discount rate.

Ultimately, the estimation of the value of the tax shields can be seen as depending on the debt policy appropriated by the firm.

2.3.1.1.2 Bankruptcy Costs

Damodaran (2006) is pointed out as pioneer in what takes to considering the effects of bankruptcy costs in the final value of the firm. Subsequently, he divides this costs into two categories: the direct costs, those related with liquidation costs when the firm approaches bankruptcy, and the indirect costs, including the continual costs which are not related to bankruptcy but derive from the firm leverage.

The trouble in estimating those costs stems from the difficulty identifying the costs itself and its associated probability of occurrence.

According to Vernimmen (2005) the historical default rates supplied by the rating agencies, which associate a probability of default for each debt level, can be used to obtain the probability at issue.

Another possible approach, as advocated by Damodaran (2006) can go through at each level of debt, estimating a bond rating and use the empirical estimates of default probabilities for each rating, which is computed with recourse to the interest coverage ratio.

The expected bankruptcy costs can be determinant on the definition of the capital structure of a firm.

2.3.1.1.3 Excess Return Models

Excess return models have their roots in capital budgeting and the net present value rule. Actually, an incurred investment only add value if its NPV is higher than zero, what may imply

that cash flow growth as well as earnings are only valuable when they are escorted by excess returns, meaning this, returns on equity capital that surpass the cost of equity. Those models assimilate this conclusion further exploiting it and calculating the value of a firm as a function of the excess returns (Damodaran 2005).

Excess Return Models' primary idea is to interpret the value of a business as being the sum of the invested capital and the excess return from both existing and future projects. This trait permits analysts to savvy whether the company is creating or destroying value.

It can be condensed into two main approaches, the Economic Value Added (EVA) and the Dynamic ROE.

2.3.1.1.3.1 EVA

"EVA is the financial performance measure that comes closer than any other to capturing the true economic profit of an enterprise. EVA also is the performance measure most directly linked to the creation of shareholder wealth over time" (Stewart, 1991). The Economic Value Added measures the excess return raised by an investment or by a set of investments (Damodaran, 2002). In order to make this model viable, it requires the articulation of three main building blocks: the return on capital, the capital invested, and the cost of capital (Burksaitiene, 2009).

Damodaran (2005) as many other authors, assert that the NPV and EVA are related.

2.3.1.1.3.2 Dynamic ROE

The Dynamic ROE is nourished by the same premises in which the EVA model builds. Its main difference is that it focuses on the equity side, being the excess returns the result of the difference between returns and cost of equity. Hence, this model enables us to verify when the company generates value for the shareholders (Damodaran, 2002).

2.3.1.2 Equity Valuation

2.3.1.2.1 Free Cash Flow to the Equity (FCFE)

The Free Cash Flow to the Equity is a direct valuation method which values the equity stake of the company. It consists in discounting the expected cash flows to shareholders (the cash flow

from assets after debt repayments and reinvestment needs), at a rate of return (cost of equity) applicable to the level of risk in the firm (Damodaran, 2006).

This model is aligned with the FCFF in what takes to its main handicaps. In both cases, the cost of equity will be influenced by changes in the capital structure through the company's levered beta.

However and according to Damodaran (2006), when compared to FCFF, the FCFE model is more prone to errors. In fact, the FCFE is a pre-debt cash flow whereas the FCFF takes into account debt repayments and new issuances, being more vulnerable to the effects of the financial structure. As the author advocates, those components are harder to foresee than an optimal debt-to-equity ratio, crucial to perform the WACC calculations.

Nonetheless, in theoretical terms, and considering consistent assumptions in respect to debt financing, it can be asserted that both methods are equivalent (Fernandez, 2004).

2.3.1.2.2 Dividend Discount Model (DDM)

The Dividend Discount Model rests on the assumption that through the acquisition of shares, an investor aims to receive a selling price at the end of the holding period, and another type of cash flow, dividends (Damodaran, 2006).

This particular model reaches the value of equity through calculating the present value of the expected dividends, delineating consistent assumptions on the earnings future growth and payout ratio. If so, it can fail to be truly representative in situations where the company instead of distributing as much dividends as they can, opt to hold cash, which originate a scenario of misestimating the actual equity value (Damodaran, 2002)

DDM is widely appreciated by investors if we consider the dividends high level of tangibility when compared to distinct cash flows. Ultimately, and respecting all the enunciated premises, this could constitute one of the most accurate DCF models.

Despite all this, this approach can give rise to scenarios of overestimation of the results, particularly in cases where companies fund themselves to distribute dividends or, on the other hand, when holding cash that was available to be distributed to stockholders (Damodaran, 2006).

2.3.2 Contingent Claim Valuation

The Contingent Claim Valuation, or Option Valuation, is particularly relevant for its ability to value flexibility. It is also relevant when valuing projects or individual businesses that entail substantial levels of uncertainty and opportunities associated (Vernimmen, 2005). Even though it is not a regularly used method to value the entire business, it yields concrete advantages when applied to companies that only commercialize one type of product, that are in financial distress, or in a commodity based industry (Koller, 2005).

Option valuation is often used to make decisions such as whether or not to explore an opportunity, regarding for instance, natural resources, new technologies or, R&D investments. It is therefore a crucial component in some businesses' decision-making process (Luehrman, 1997).

Reinforcing the previous observation Damodaran (2002) states that "real options offer the right but not the obligation, to change an investment project and, in particular, when information on its prospective returns becomes available".

There are several valuation models, including the binomial model or, the Black-Scholes model, which derives from the first.

2.3.3 Relative Valuation

In regard to relative valuation, an asset is valued taking into account the way other assets with similar characteristics are priced in the market. According to Damodaran (2006) this process is composed by three connected steps. First, one should look for similar assets which are priced in the market; second, it is important to scale the market prices to a common variable in order to obtain comparable standardized prices; and the third calls for adjusting for differences across assets when collating the standardized values.

The use of multiples yields some advantages when compared to other valuation methods. It overpasses the inherent difficulty in determining in an independent way the future cash flows, since when the basis of substitutability can be accurately determined; there are verily comparable publicly traded transactions available and; when the multiple can be estimated reliably, this particular method would end up being superior to other valuation metrics, such as the discounted cash flow. It also avoids the issues associated with applying the discounted cash flow method of picking a theoretical-based model of the proper discount rate, which uses

historical data to estimate it, since the method of multiples adopts current market measures of industry growth rates and required returns (Baker and Ruback, 1999).

Following the same authors' view, the relative valuation also contemplates some handicaps. One problem related to its implementation as to deal with finding the best basis of substitutability, which varies from industry to industry because the underlying value drivers also differ across industries. This is commonly chosen on a qualitative way as a measure of financial performance (including revenues, earnings before interest taxes and depreciation, or cash flow), or as a measure of operating performance (like established reserves or subscribers). Another one, regards measuring the multiple, what is typically done through the use of the simple mean or median of the multiples implicit in the market pricing of a group of publicly traded comparable firms or transactions. The last handicap, relates to the choice of a consistent peer group, including truly comparable firms.

If by one side, through the use of multiples as a valuation metric, the practitioners may forfeit some of the benefits associated to the use a complete pro-forma analysis; on the other, they get a handy valuation heuristic that provides accurate results without incurring extensive time and effort costs. In fact, in accordance to Bhojraj and Lee (2002), it is possible to overcome the limitations in terms of information evidenced by this approach through a careful and consistent selection of comparable firms. It is further argued that the composition of such group should be a function of the variables that drive cross-sectional variation in a given valuation multiple.

Hence, Cheng and McNamara (2000), Bhojraj and Lee (2002) and Bhojraj et al. (2003) argue that "picking comparables using a combination of industry categorization and fundamentals such as total assets yields more precise valuations than using just the industry classification". Furthermore, this selection should include that apart from competing in the same market, those companies are subject to the same macroeconomic forces, and have similar profitability, growth, and returns on capital (Foushee, Koller and Mehta, 2012).

In what comes to deciding which type of multiples to use in performing the valuation, it is a fact that some multiples are considered better than others when comparing performance is the goal. In Foushee, Koller and Metha's (2012) words, and by way of example, the P/E ratio is affected by differences in capital structures and non-operating items (such as write-offs and one-time events), which can be responsible for ambiguous conclusions if no adjustments are performed. Therefore, and by the fact that they are not by distortions affecting earnings, many analysts use other multiples like EV/EBITDA. In general, asset based multiples tend to be more

accurate and less biased in estimating the final values than sales and earnings multiples. The appropriateness and consequent superiority of enterprise-value multiples is advocated given the fact that both equity and debt are valued and in this sense, are less vulnerable to changes in capital structure.

Taking an opposite, supported by several studies, Liu (2002,2007) utters that the choice on the right multiple to use should lie on earnings multiples given that the resulting valuations are more accurate for the majority of the companies, supported by the increased availability of earnings forecasts. The same author advises the use of forward earnings instead of historical ones, since those explain stock prices well for a considerable number of firms.

Reconciling relative valuation with the discounted cash flows ones, it is relevant to stress that the difference in value from those methods arise from market inefficiency. In relative valuation it is assumed that the markets are correct on average, even if making mistakes on individual stocks, whereas in discounted cash flow valuation it is assumed that the market makes mistakes, which are corrected over time, and that these mistakes can occur across sectors or even the entire market (Damodaran, 2005).

Moreover, the discounted cash flow and the relative valuation, when used separately, can yield convergent results if the market is correct.

2.3.4 Cross Border and Emerging Markets' Valuation

The rationale behind the deepening of this topic relates to the Portugal Telecom's international expression.

It is of great relevance to begin by declaring that the major principles of valuation that apply to the conventional domestic capital budgeting are on their essence, equal to those conducting cross border valuations. Hence, the only applicable change concerns the application of the widely used standard valuation techniques.

Though, currency conversion is a great concern embodied on those types of valuation and therefore, should be incorporated into the analysis. This issue can be overcome by "explicitly forecasting exchange rates, converting foreign-currency cash flows, and then discounting at an appropriate home-country discount rate; or by appropriately incorporating the expected rate of change in exchange rates in the discount rate when discounting foreign currency cash flows" (Kester and Morley, 1997).

Apart from the exchange rate there are other components deserving some attention when dealing with such valuations, counting within many others: the choice of which cash flows, earned or remitted, to discount; possible divergence of the reporting standards; adjusting for foreign currency; the relevant tax rate and the amount of taxable income; capturing special financial benefits and costs associated with cross-border investments; and adjusting for various types of country risk (Kester and Morley, 1997).

As previously mentioned, the basic procedures used to estimate future cash flows discounted at the appropriate rate, are basically equal in every case. Yet, when emerging markets are equated, the amplexness of the involved risks may be considerably higher. According to Koller and Timothy (2000), not only the methods need to be adapted but also often require making arbitrary adjustments that are sustained by limited empirical evidence and even by gut feel.

As pronouncedly stressed by Goedhart and Haden (2003), emerging markets are characterized by their exposure to some additional risks, among which are included, high levels of inflation; macroeconomic volatility; political distress; exchange rate fluctuation; regulatory change and; adverse fiscal laws. These set of factors influence decision making and involve changes to the traditional format of business valuation. However, “while individual risks in each country may be high, it is important to keep in mind that they have low correlations with each other. As a result, the overall performance of an emerging-market portfolio can be quite stable if investments are spread out over several countries”(Goedhart and Haden, 2003).

Commonly accepted is the fact that country-specific risks might affect different businesses differently, leading to very different valuations.

2.4 Conclusion

After presenting the main valuation methods and approaches it is crucial to identify the one that best suits the purpose of this dissertation. In this sense, it is of great importance to determine the company’s characteristics and frame it on the referring industry as a way to get the sense of the entire picture.

Aligning these thoughts with empirical evidence, the choice will relapse on an explicit multiperiod DCF method. Furthermore, since Portugal Telecom holds several investments in distinct geographical areas and has more than one business, a Sum-Of-The-Parts (SOTP) valuation should be used.

Exercising its influence on the decision-making process is also, among other factors, the available data and the adopted financial policy. Once more, taking into account the relevant academic research, the DCF technique based on the WACC is largely preferred when dealing with stable, large, and not really high growth companies, which detain a defined dividend policy and a sustained target capital structure. Additionally, since this an acknowledged methodology within managers and other type of practitioners, it becomes considerably easier and at some extent less complex to established value added comparisons between company's valuation outputs in broad terms, and more specifically in what takes to its main drivers and fundamentals.

Complementing the developed reasoning, it is worth noticing that despite the fact that multiples valuation is most of the times, and counting on the yielded advantages over other methods, the one adopted by practitioners, DCF can provide accurate results with a higher degree of adherence to reality, depending on the consistency of its fundamentals.

However, the multiples valuation will also be utilized as a way to validate the results obtained through the discounted cash flow approach, and to value the international investments hold by PT. The chosen multiple -EV/EBITDA- is one of the most commonly used valuation metrics and, among other reasons, it as an Enterprise Value multiple allow for direct comparison of different firms, opposing to the Equity multiples which are influenced by leverage.

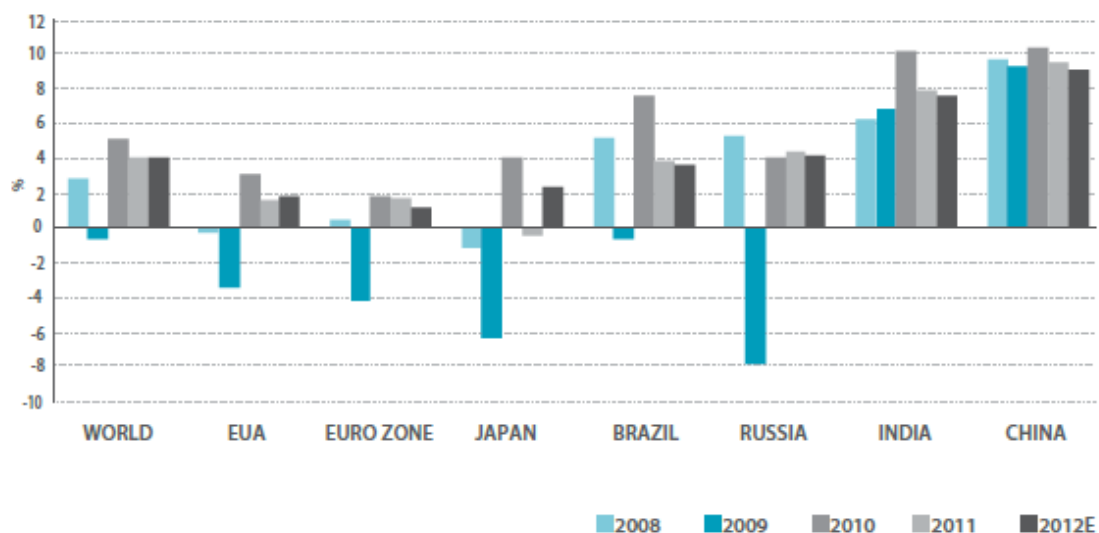
3. Macroeconomic Environment

3.1 International Economic Background

Eurozone, over the last past years, has been clearly distressed by the sovereign debt crisis, which has severely affected the Southern European regions, in particular. Several developments arise directly from this problematic phenomenon, such as the need from some countries like Greece, Ireland and posteriorly Portugal, of financial external support from the European Union (EU) through the commonly denominated "Troika", composed by the European Central Bank (ECB), the International Monetary Fund (IMF), and the European Commission (EC). The dissemination and collateral effects of this crisis also affected other more peripheral economies such as Spain and Italy, and even though in minor proportions, some economies regarded as core, like France or Austria. This sovereign debt crisis not only contributed to a devastating reduction in liquidity in monetary and credit markets, as it

increased the risk aversion within the investors' frame, which materialized in (a.) a decrease on the yields of some healthy economies like the German (ten-year bond declined from 2,963% in 2010 to 1,829% in the end of 2011), (b.) on the Euro's depreciation against the US dollar (-3% in 2011), and (c.) on the increase of spreads of sovereigns considered to be riskier against the German Bond ; pronouncedly modifying the market trends.

Figure 2: GDP Growth (%)



Source: IMF

As a way of responding to the described situation, the ECB embraced a less restrictive policy, made effective through a reduction on the reference interest rate (two cuts of 25bp in the last quarter of 2011) and an injection of liquidity on the financial system, whereas the distinct European policy setters betted on budget control and fiscal consolidation.

Equity markets through reporting generalized losses throughout the main European indexes also evidence the importance attributed to this crisis. Portuguese Index, PSI20, was penalised by a 27,6% decrease. Less impacted were the US markets, given their better future economic prospects, and the ability to put into practice a more expansionary monetary policy by the hands of the Federal Reserve (FED). In other non-European markets such as the Brazilian, the declining pattern was once more followed, mainly due to their focus on inflation and price's control (Bovespa declined 18,1%).

Accounting for other indicators such as inflation, it is possible to identify a declining pattern in late 2011, supported by a continuous fall in raw materials' prices. Other indicator, the Brent oil price, increased from 94,91US dollars on the end of 2010 to 106,3 US dollars on the end of 2011, thanks to lower expectations on the global demand (see Appendix 1.1).

Figure 3: Main Economic Indicators

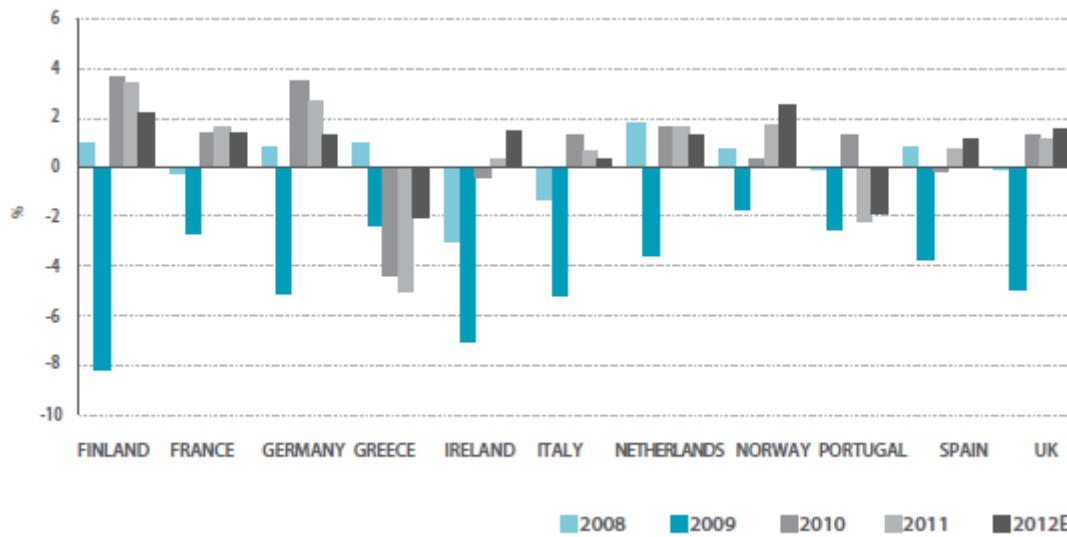
Main Indicators		2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Portugal:	GDP	1,38	-1,47	-3,25	0,35	2,1	1,9	1,9	1,5
	Inflation	2,16	3,79	2,65	1,30	1,55	1,47	1,47	1,47
	Unemployment Rate	10,8	12,74	14,43	13,96	13,16	12,38	11,7	11,1
Eurozone:	GDP	1,87	1,44	-0,32	0,89	1,4	1,6	1,66	1,67
	Inflation	2,21	2,75	1,86	1,46	1,65	1,72	1,76	1,81
	Unemployment Rate	10,12	10,13	10,87	10,82	10,47	10,10	9,60	9,10
Brazil:	GDP	7,53	2,73	3,03	4,15	4,00	4,12	4,10	4,10
	Inflation	5,91	6,50	4,96	5,02	4,50	4,50	4,50	4,50
	Unemployment Rate	6,74	5,97	6,00	6,50	7,00	7,00	7,00	7,00
Angola:	GDP	3,41	3,40	9,66	6,75	6,67	6,63	6,06	6,16
	Inflation	15,33	11,39	10,00	7,00	6,00	6,00	4,50	4,50

Source: IMF

3.1.1 Economic and Monetary Union – EUROZONE

After a period characterized by strong investment, which translated into an economy's acceleration, the Eurozone faced a gradual slow down throughout the year, resulting in a contraction of the activity in the last quarter of 2011. Even though facing this scenario, the annual GDP growth in European economic area was 1,5%, registering a slight decrease when compared with the previous year's of 1,9%. For this fact contributed a constant spectrum of heterogeneity that characterized this particular geographic area. In fact, if by one side the strongest economy in the Eurozone - Germany - kept growing at a 3% pace, on the other, the Southern European countries did not perform that good as a result of a strong fiscal consolidation effort, registering negative GDP growth in cases like Portugal or Greece, and dejected growth in Italy and Spain. In fact, this deceleration in growth and activity contraction are due to a tightening of fiscal policy and inherent fiscal consolidation (deficit decreased from 6,2% in 2010 to 4,1% of GDP in 2011); a break in the exports trend, given the lack of demand in emerging economies; and the deterioration of other GDP components such as the private consumption and investment that succumb to higher levels of unemployment and to a more restrictive policy in what takes to credit access.

Figure 4: Eurozone GDP Growth (%)



Source: IMF

Despite of this tardy growth, the core inflation in the Euro area was 1,4%. As for the annual average inflation rate, it increased from 2,2% in 2010 to 2,7% in 2011, mainly due to an increase in the energy and food prices. In line with this, the European Central Bank decreased the reference interest rates to 1% in the second half of 2011. In addition, the European monetary authority as response to the low levels of liquidity in the interbank markets and the lack of confidence evidenced by the various economic agents, took further action under the shape of acquisition of sovereign debt securities with resort to the secondary market and injection of liquidity in the banking system.

Embracing this overall situation, the Euro ended the year of 2011 devaluing against the US dollar, closing at 1,296 US dollars, after a period (first half of the year) when it strengthened.

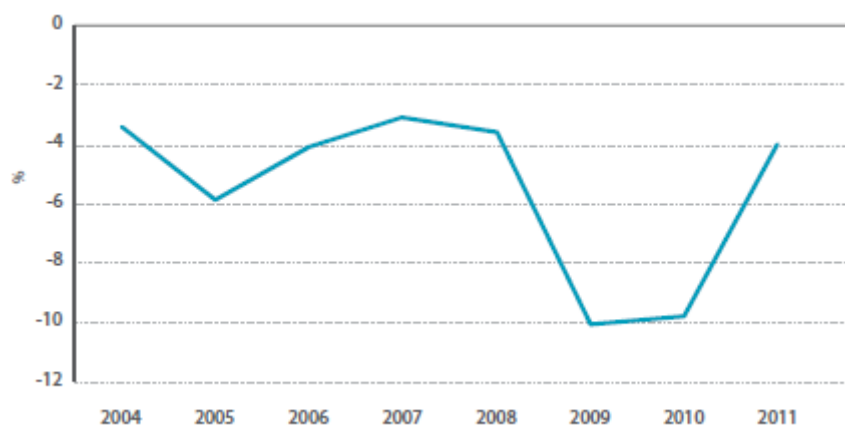
3.2 Economic Activity in PT's Main Geographies

3.2.1 Portugal

Deeply immersed in the economic and financial crisis, in 2011 Portugal faced the effects of declining economic growth and a costly financial external assistance program, the last resort to sustain the difficult period that the country is going through after the worsening of the funding conditions in the primary markets and an unstable environment well expressed by an increasing risk aversion among investors in respect to the Portuguese sovereign debt. Align with the described scenario, the rating agencies have spoken out, downgrading the Portuguese sovereign debt, leading to a huge increase (from 6,6% in 2010 to 13,36% in 2011) in the yield

of the Portuguese sovereign 10-year bonds, reaching a spread of 11,54% against the 10-year German bund.

Figure 5: Portuguese Deficit as percentage of GDP



Source: Portuguese Ministry of Finance

Managing its 78 billion bailout, the Portuguese government had to impose some severe measures in order to reach a set of pre-determined objectives. Following its implementation in May 2011 the financial adjustment program has been subject to several positive reviews by the Troika, composed by European Central Bank, the International Monetary Fund and the European Commission. In what concerns fiscal consolidation the process is being relatively well driven with the deficit numbers declining from 9,8% of GDP in 2010 to around 4 % in 2011. Aside from a group of extraordinary measures that were implemented (particularly the transfer of pension funds from banks), the fiscal consolidation process rests on a sustained effort to reduce expenditures, and a favorable tax revenue, respecting the forecasts. It is the government conviction that Portugal will return to the markets in over 2014.

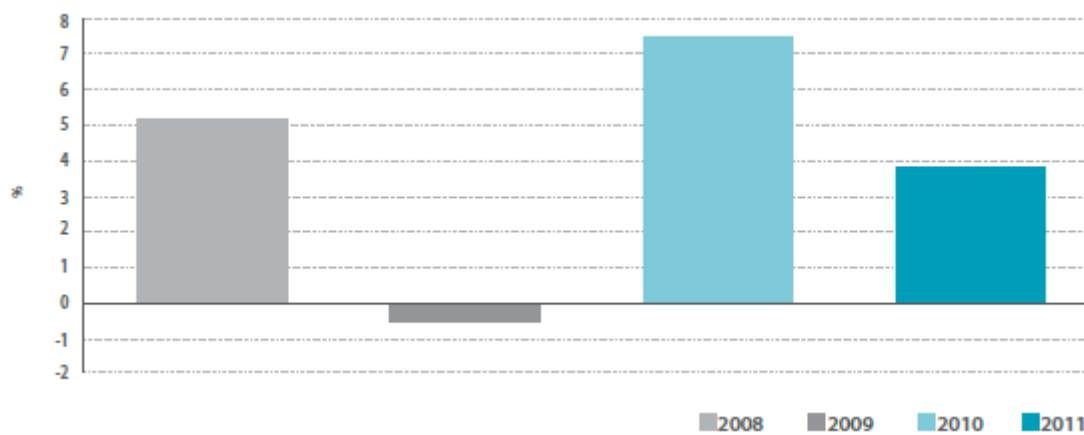
Some structural reforms have also been carried into practice namely those involving the rental and the labor markets, as others targeted to stimulate competition in various markets.

This general process headed by the fiscal consolidation measures allied to a worsening of credit conditions resulted in a shrinking demand and consequently to a decline in the consumption patterns (public and private, of approximately 3% on average in 2011) and investment (around 11%). In what takes to the trade balance the deleveraging process continued, with the exports leading the process by registering a sustained growth of around 7% (in real terms) in the trading volume concerning the emerging markets, with emphasis on Africa, Asia and Latin America; and the imports lowering, what contributes to mitigate the external deficit.

3.2.2 Brazil

After growing 7,5% in 2010 the Brazilian economy showed a consistent performance despite the difficult environment affecting the international landscape, growing at 3% in 2011 as a result of a soaring middle-income class that has been gaining influence, and an effective effort targeting an income redistribution. In fact, the overall panorama in Brazil continues to be marked by a set of favorable conditions ravaging different aspects of the economy as it is the case of the labor market, which registered a low unemployment rate of about 6%, and at the same time saw the wages increasing by 5,2% in real terms.

Figure 6: Brazil GDP Growth (%)



Source: IMF

Taking advantage of the willingness to buy of the emerging economies together with the developed countries' liquidity injection on their central banks, the Brazilian economy was also able to enhance its exports (increasing by 26,8% and reaching record figures), favoring in this way its external trade balance (increase in trade surplus of around 47,8%) which mirrored higher commodities prices. Such attractive scenery can be even sounder if considering the future prospects driven by hosting major sporting events and the inherent dynamism linked to the necessary infrastructures, which will generate more opportunities and have a positive impact on the economy by attracting foreign investment.

Trying to take full advantage of this positive economic cycle the Brazilian Central Bank changed strategy incurring in an expansionary policy, decreasing the SELIC reference rate to 9,75%, as a way of defending the economic activity. Reflecting the strengthening process, inflation respected the later projections, reaching the 6,5% target for the year.

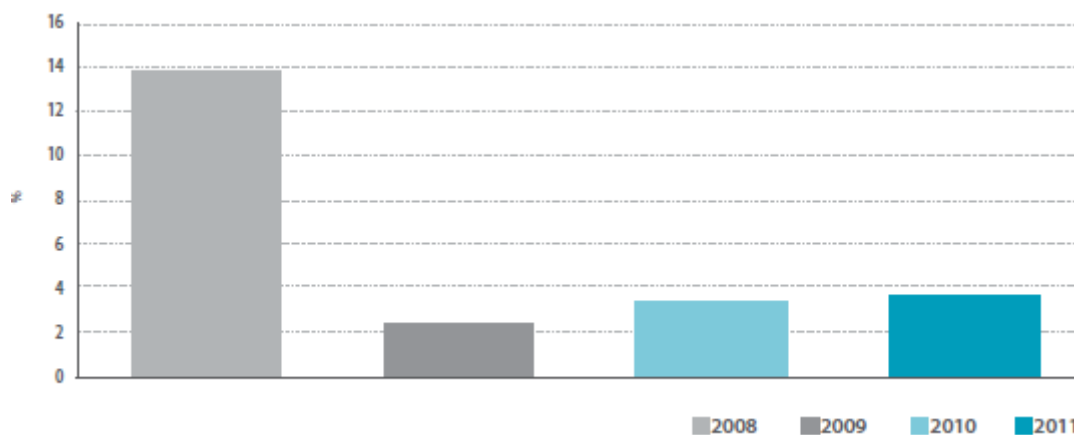
3.2.3 Africa

African economies in general have responded quickly and effectively to the slowdown caused by the international crisis and are expected to grow at approximately 3,7% in 2011. A particular region deserves to be extolled for its consistent economic performance, the Sub-Saharan Africa. Many countries within this geography are showing solid recoveries sustained by growing rates that are practically the same as the pre-crisis figures, however, some downside risks are making themselves more visible, namely the increasing exposure to commodity price swings and inflation.

3.2.3.1 Angola

As one of the forerunners of the African continent in terms of growth, Angola presents a growing economic activity (grew about 3,7% in 2011) sustained by a quality performance of the oil sector, being Angola the second largest player in Sub-Saharan Africa, which is possible primarily because of an expressive recovery in what takes to prices and its demand.

Figure 7: Angola GDP Growth (%)



Source: IMF

Responsible for this economic growth is also the component of investments, mainly directed to building infrastructures in many distinct areas. Angola is nowadays one of the biggest receivers of foreign investment in Africa.

This overall picture aligned with improvement on the credit front, contributed to enhance the confidence in such country, which was translated in upgrades on the sovereign rating by the main rating agencies.

In what concerns other macroeconomic indicators, inflation kept its high figures in 2011, registering a considerable increase, which is due to prices of food and beverages (mainly

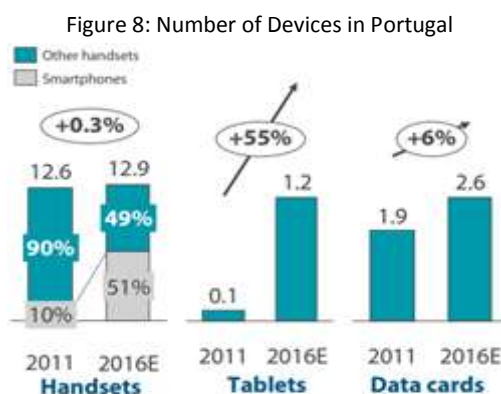
affected by difficulties in logistics and distribution). Regarding the currency, the Kwanza has valued against the Euro and did not oscillate much against the US dollar. Departing from this framing, the monetary authorities as a way of boosting the economy adopted an expansionary policy based on a discount rate reduction (see Appendix 1 for additional information).

4. Industry

4.1 Global Telecommunications Sector

The global telecommunications sector is characterized by a set of well-defined trends that constitute the basis for a changing environment.

Within these trends we count a considerable transformation of consumer habits which is mainly driven by technology. This event is the result of an increasing number of players in areas like telecommunications, media or technology that bet on internationalization and innovation. The focus of their strategy allows for a wider spectrum of intervention as well as greater offer in terms of products and applications forcing the appearance of new needs. This is further enhanced by the inherent promotion of interactivity materialized through the social networks, fostering the use of new and more devices.



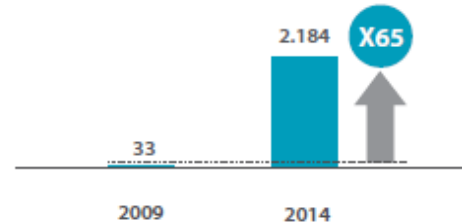
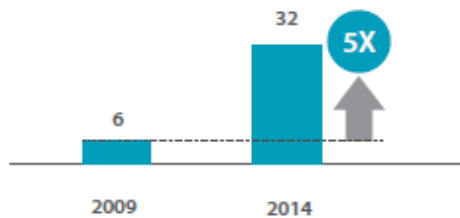
Source: PT Innovation Conference, 2012

The development of new networks and access technologies is only possible through considerable investments. Such investments are carried in specific plans contemplating technologies that are known to be more efficient in data transmission (allowing for higher access speed with lower costs associated), the New Generation Access Networks (NGAN), which include on the side of fixed business, the Fiber-To-The-Home networks (FTTH), and the Long Term Evolution (LTE/4G) on the mobile business side. These prospects are originating exponential data consumptions through various types of equipment (compatible with video,

data and voice) that call for new services. It is forecasted that globally the consumption of data will drastically increase in the medium term (5 times in the wireline and 65 times in the wireless, until 2014).

Figure 9: Worldwide Data Consumption: Fixed Accesses

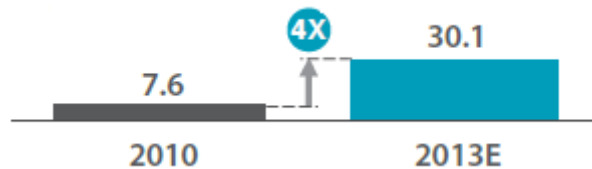
Figure 10 : Worldwide Data Consumption: Mobile Accesses



Source: PT Consolidated Annual Report,2011

The consumption patterns are in this way being driven under new premises. The fast pace assumed in the technological world allied with the increasing availability of new devices is contributing to incremental internet users and linked usage, which is responsible for a higher bandwidth consumption, enhanced by the convergence of devices like TV, PC and mobile handset. This conjoint reality permits the brake through of the triple-play multi-screen concept in this industry, increasing the ability to be much of the time connected to the internet.

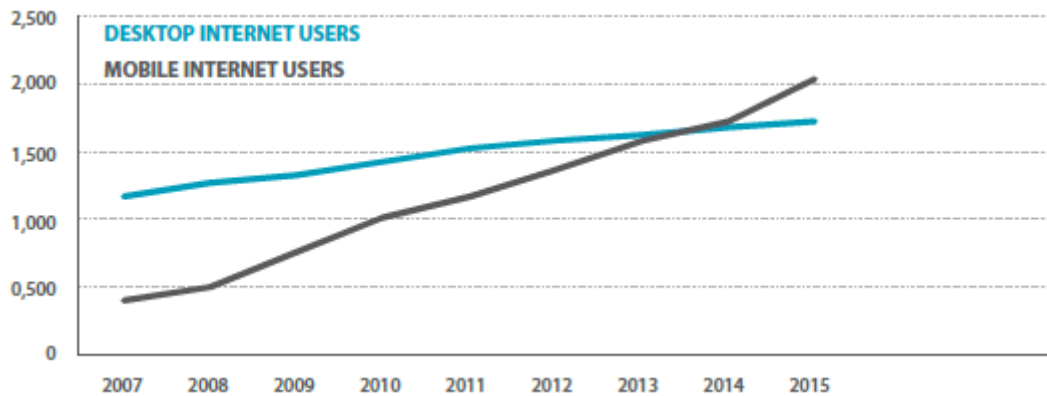
Figure 11: Worldwide Connected TV Penetration



Source: PT Consolidated Annual Report,2010

The telecommunications sector is expected to keep its growing patterns and in this way to set new competitive boundaries. Connectivity is therefore a key term in this new shape assumed by the sector, realized through the emergence of cloud-based services which join players from different areas that contributed for the same output (internet providers, equipment manufacturers, and media). Notwithstanding the solid emergence of this trend allowing for the creation of new brands and players in the personal and residential services, and also covering the corporate (SMEs and SOHOs), the bet on traditional services is to keep.

Figure 12: Internet Users (in Millions)



Source: PT Consolidated Annual Report, 2011

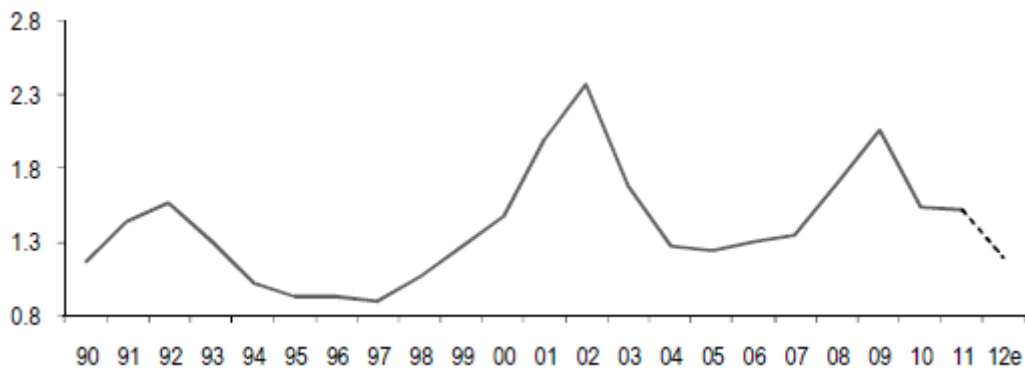
4.2 European Telcos at a glance: Cash Flow and Dividends Under Pressure

The European Telecommunications sector has underperformed the wider European equity market by around 7%, positioning itself as the third worst performing sector in Europe, just behind Mining and Oil&Gas. This poor performance can be attributed mainly to two key factors. Firstly the European Telco sector suffered from a poor last quarter of 2011 reporting season with outlook commentaries from a number of incumbents implying meaningful downward forecasts to most of the players. This sector has on average seen EPS estimates falling 6% YTD, which constitute a much severe scenario than that from the wider market.

With competitive pressures in some core mobile markets having intensified meaningfully, this has raised understandable concerns that deflationary pressures will continue to weigh on the sector to a great extent. Additionally, the possible forecasts downgrades combined with credit rating pressures, have forced some of the incumbent operators to lower their shareholder return commitments in 2011 and 2012.

It is regarded as a fact that the Telecommunications sector's financial leverage is significantly higher than that of the wider market, which together with considerable off balance sheet adjustments, such as pensions and leases, leaves several players close to breaching their current ratings criteria and hence being subject to credit rating downgrades. This can have an immense effect on the companies' strategies (including revising their dividend policy).

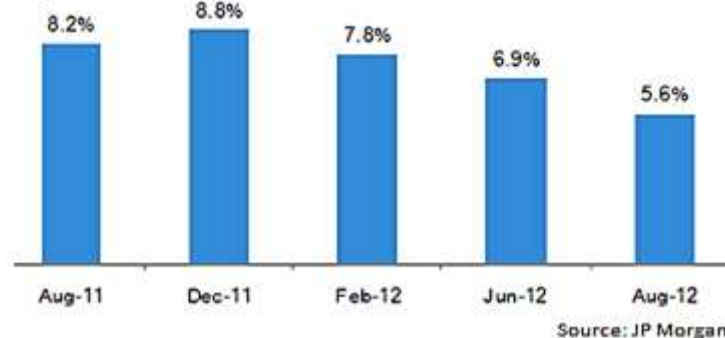
Figure 13: European Telecommunication Leverage Evolution: Net Debt/EBITDA



Source: JP Morgan

Another relevant trend that raged the sector has to deal with EBITDA declines and its compounding effect on the impact of credit rating risks. After the recent dividend cuts, pay-out ratios tend to be more sensible, which over time would seem to allow for some modest reductions in net debt. However, what actually happens is that for most companies a resulting benefit on reported leverage ratios is completely neutralized by ongoing EBITDA decreases.

Figure 14: European Telecommunication Sector Dividend Yield



Source: JP Morgan

The cash flows associated to the Telecommunications sector have fallen by circa 20% since their 2007 peak, including a 6% decline in 2012. As a consequence, the sector's EFCF yield has decreased from a historical level of between 12 to 13% to 10%, as of September 2012.

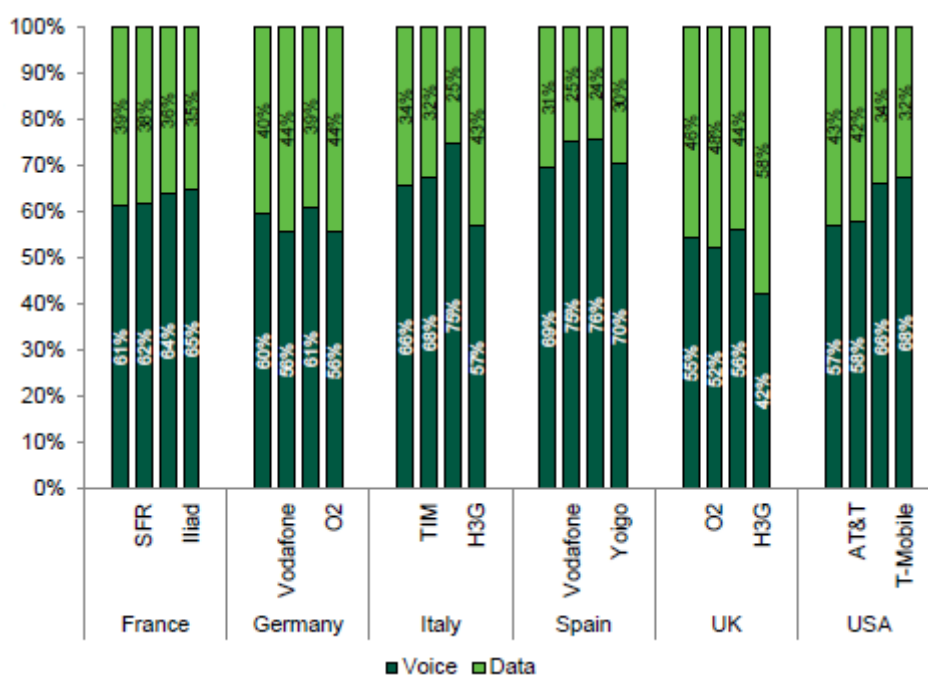
4.3 Telecommunications Context in Portugal

The telecommunications sector in Portugal is being marked by a continuous consolidation of bundled offers. The last four years were craved by a bet on the bundled offers by the majority of the players performing in this market, which are increasingly turning attentions to the joint reality of broadband, TV and voice, the so called triple-play. This action is mainly characterized by the presence of copper operators in TV segment, and the exploitation of the voice segment by cable operators. As a response to these new necessities, the main operators in Portugal

focused part of their efforts in improving the business related to data and voice, where PT stands as one of the most successful cases, achieving co-leadership in the pay-TV market.

The Portuguese telecommunications reality does not distune from the trends evidenced throughout Europe, adapting its landscape with resort to investments directed towards fiber. In this field, Portugal Telecom, benefiting from a changed regulation (geographical segmentation approach), should be highlighted since it covers around 1,6 million households with its FTTH service (refer to Appendix 2 for PT's Positioning).

Figure 15: Service Revenue Composition for Leading European and US Mobile Operators



Source: Espirito Santo Investment Bank

4.4 Competition

PT competes in a sector that since 2000 (year when it was fully opened to competition) characterized as challenging and highly competitive. Detailed information comprising all business areas where PT act will be presented below.

4.4.1 Competition Facing Portugal Telecom's Portuguese Operations

As a player inserted in the telecommunications world, PT faces intense competition from diverse operators. The main competitors in Portuguese soil enclose ZON, Vodafone (the Portuguese subsidiary), Sonaecom (more than half owned by Sonae, SGPS), Cabovisão (owned by a private equity group), Oni Telecom- InfoComunicações, SA, AR Telecom, and Colt.

As verified at a global level, in Portugal the telecommunications sector has also followed the trend and became more challenging and aggressive in what takes to competition. This is mainly due to the entrance of mobile operators on the fixed market business, and inversely to the emergence of fixed services providers within the mobile's domain. Other factors like the increasing bet on diversification through the adoption of the bundled offers centered on the triple play (3P) services, have also contribute to the entrench of such environment. This has been adopted as a core part of most players' strategy, with emphasis to PT (registered an increase of around 32,9% from 2010) and ZON (10,3% growth in relation to 2010), which record a membership of 36,9% and 60,1% of their fixed-line customers to 3P, respectively. Note that PT drives its competition based on price.

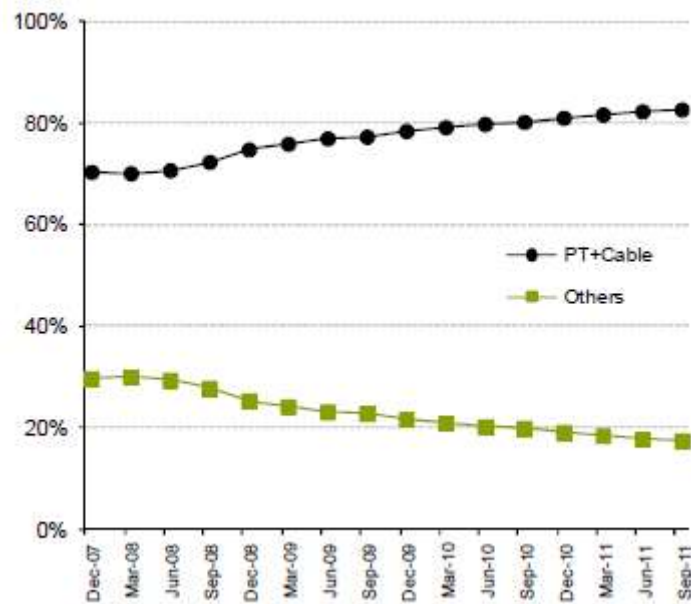
Residential Customers. This particular segment does not constitute an exception in the sense that competition is fierce and tends to intensify, thanks to the fact that it comes from both sides, fixed and mobile services providers. Nowadays, as a result of the convergence in the existing offers, mobile network operators are able to match PT's fixed line telephone offer and in this way target the same group of customers. Those operators have already gone further and are in position to practice lower prices through the creation of low-cost brands, which will not only impact the fixed-line business, as it will also attempt to reach the lower end of the market.

One end leads to the other, and as a response to the increase in competition, operators come up with new solutions. In what concerns the international telephone service, which has been watching its revenues being damaged owing to, for instance, competition from calling cards, and declining call prices, the answer goes through providing unlimited communications to all national numbers and to a large range of international fixed locations. This overall framing keeps pushing PT towards an international fixed line telephone price reduction.

The Portuguese fixed voice market is traditionally a direct access market and this trend is well consolidated as ANACOM's figures show, pre-selection has registered the lowest number of lines in this configuration of the past ten years. According to the same source, PT has a 58,7% market share in this market, a slight decrease from 2010 (60,4%). PT also has around 56,7% market share in what concerns the outgoing traffic.

Based on the same source's estimations, in 2011 PT has approximately 49,4% market share, and is the number one provider of fixed broadband Internet services, a sector with visible potential (more than 2 million users) that is already growing.

Figure 16: Portugal Fixed Broadband Market Share



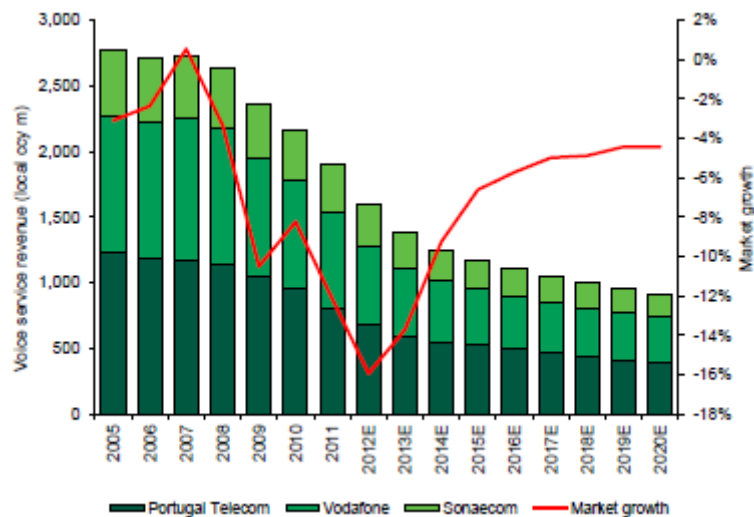
Source: Bernstein Research

PT also performs well in other viable markets as it is the case of Pay-TV. This is an especially good example of a market that is characterized by a fierce competition which contributed to a recent change in strategies. It was initially regarded as a high-value market, but nowadays the strategy goes through creating new low-end offers, and opting for a price skimming tactic making it affordable to all the market segments, and at the same time, in order to keep the high-value customers, offering new free quality content (such as video-on-demand). This is a market which enclose around 3 million customers (around 51,7% of the total households), where PT detains a 35% market share (meaning a 5,1% increase from 2010), being the second player in this market just behind ZON who keeps being the market leader despite its decrease of 4% in market share from 2010 (current market share of 53,9%). The remaining direct competition has been struggling to keep its residual scores.

The figures presented above are the result of different strategies carried out by the various players. In PT's case there has been a clear bet on a strategy based on a FTTH roll-out which proved effective enough to reach a number around 1 million households in 2011. ZON embarked on a different path turning its efforts towards its coaxial networks, aiming at upgrading those. Cabovisão assume a similar strategy whereas Sonaecom abreast Vodafone focused on developing their IPTV (leasing PT's lines), centering their actions on fiber based networks in Lisbon and Oporto. The main common ambition transverse to all the players concerns retaining and in some cases acquiring customers at the expense of providing higher speed Internet.

Personal Customers. Portugal has one of the most dynamic markets in what takes to the mobile business. With more than 150 active mobile cards per each group of 100 habitants, this market performance has been remarkable as a result of the innumerous offers available which cover most of the customer needs in this field. In this market PT competes through its mobile operator -TMN- with two major opponents: Vodafone and Optimus which benefit from their multinational status that translates into higher resources availability, a set of well spread best practices, and cost synergies, to make tuff competition to TMN, on the mobile market, and broadly to PT thanks their capacity to improve performance in fixed-line services. There are also two recently founded Mobile Virtual Networks Operators (MVNO), named ZON Mobile (tutored by Vodafone), and Phone-ix (launched by the CTT and supported by TMN).

Figure 17: Voice Revenue Forecast per Operator

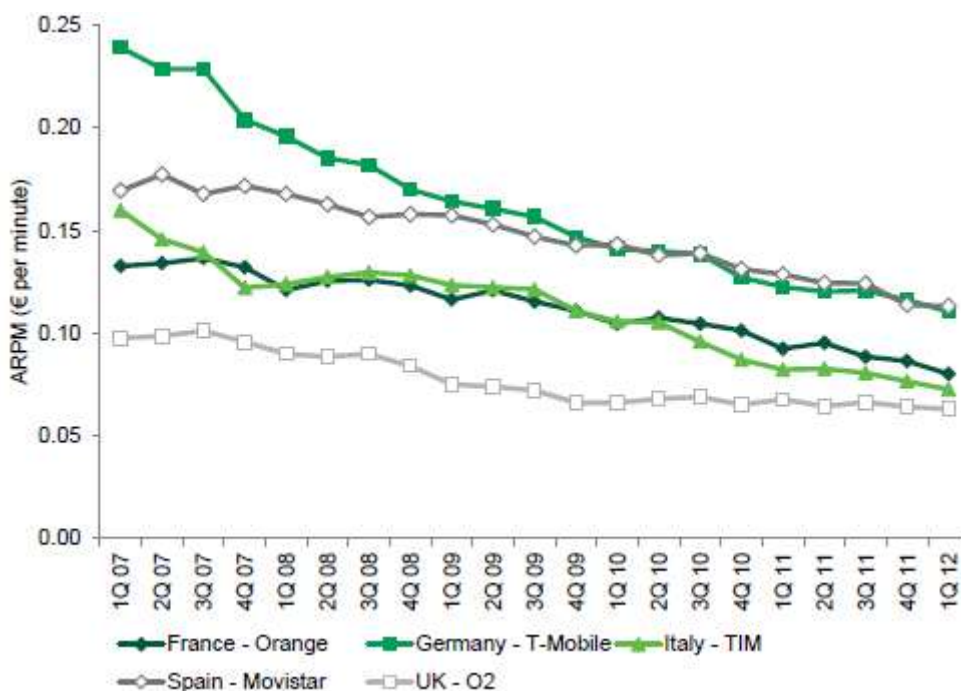


Source: Espirito Santo Investment Bank

In 2011, TMN assumes a leadership position with around 44% market share as a result of a strategy focused on strengthening its share, even more when its main competitors are betted on gaining territory in a near future, marketing its services belligerently.

A revolutionary development that transformed this market in an even more competitive reality is linked to the introduction of the called “tribal plans” (introduced by Optmius first and followed by the remaining operators). Those plans consist of on-net pricing plans adaptable to each type of customers’ reality (TMN’s plan is known as “Moche”). Other innovative plans followed under the form of post-paid services and bundles including Internet. In TMN’s case this trend was materialized under the name of “e- e nunca mais acaba”, which allowed for all customers to adhere, increasing the number of minutes of usage on one hand, and negatively impacting per minute revenues on the other.

Figure 18: Voice Pricing Trends in Leading European Markets



Source: Espirito Santo Investment Bank

The same landscape fits the mobile broadband services. It presents constant evidence of declining revenues not only resulting from the high level of competition but also by the tight regulation imposed in the telecommunications industry. An illustrative example is the constant terminations rates reduction, which has been a trend since 2007 (68,2% decline in the past four years), and will still be decreased on upcoming periods. Other examples comprise roaming and retail data.

Figure 19: MTR Trends in Leading European Markets

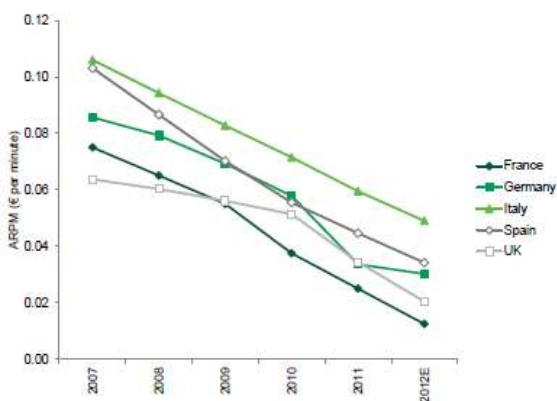
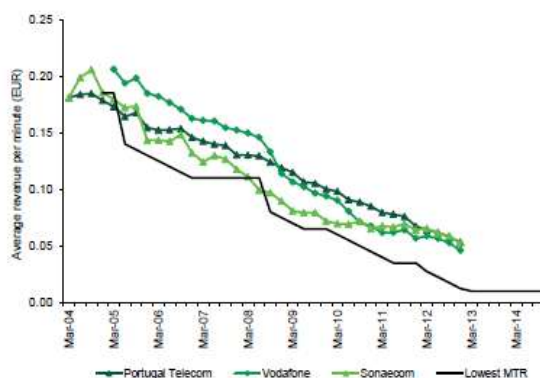


Figure 20: ARPM versus MTR Trends in Portugal



Source: Espirito Santo Investment Bank

Similarly, a great deal of relevance has been attributed to marketing, driving consumption in terms of usage but injuring retail revenues. A considerable spectrum auction (800MHz, 1,8GHz and 2,6GHz) targeting the launch and further expansion of the 4G LTE networks (for

smartphones and modems), was placed in Portugal and consumed by the three major operators in the market. TMN is expected to reach as far as 80% of the consumers.

Enterprise Customers. Seemingly to what happens on other segments, PT faces an intense competition derived mainly from ZON, Vodafone, Sonaecom, AR Telecom, Oni Telecom and Colt. The aim of such interaction relates to the intention of consolidating interesting positions in market share within the business world (which is by standard a heavy and high volume user), through providing voice, data and Internet services. As a result of such competitive environment, PT was forced to decrease leased line prices.

PT bases its activity in this business area on the use of leased lines, but competition can be made by using many other alternatives such as, the company's own infrastructure, network infrastructure leased lines, or satellite-based networks. As a way to leverage performance in this particular branch, PT is turning its attention to efficient solutions linked to the IP VPN (Internet Protocol Virtual Private Networks).

Additionally, PT's strategy goes through potentiating its past investments and canalize the output towards providing efficient services on a field in which it is pioneer – cloud services. This type of services is very much appreciated by business customers and constitutes a good opportunity to successfully reach a wider group of customers allowing for a higher retention and consequently for an increase in revenues. This is a way of developing a service that is expected to register a considerable growth in a near future, making use of its modern Data Center and its extensive FTTH network.

Wholesale Services. Now that most operators are adopting new alternatives to the use of PT's network, direct competition in wholesale services segment is increasing, thus negatively impacting PT's revenues. Most internal operators (both mobile and fixed) are using foreign providers of international connections to enhance their performance on this business area. The strongest operators are also adopting new courses of action with the same results to PT, they are installing their own wireline networks.

4.4.2 Competition Facing Oi in Brazil

Looking at the Brazilian Telecommunications landscape, Vivo, which has been acquired from PT by the largest Spanish telecommunications company, is Oi's (PT's presence in the Brazilian market) biggest competitor. Within the rest of the competition we count Claro, GVT and TIM (almost all part of multinational groups). Accordingly, Oi faces intense competition

exacerbated by the fact that most of its competitors are able to internalize important benefits arising from belonging to large groups.

4.4.2.1 Residential Services Segment

Local Fixed-Line Services. As in Europe, the local fixed-line services market has been shaken by growing trends that contribute to the intensification of the competition climate. Mobile telecommunication services are making themselves more visible, leading to a constant transfer of customers from the fixed-line reality to the mobile one. This trend has been magnified by their ability to price their services on a really low base, further stimulating customers to substitute the fixe-line services for the mobile ones. The mitigation of such market is not only the result of the described factors but also by a change in patterns regarding the type of customers to involve. This is historically a market directed to corporate customers, in which most companies have focused their attention in. But even this has changed, and competitors started adapting their strategies to the low-income market end, investing on economic bundles. Adding to this, there was a flow of price decreases in telecommunications services led by a decrease in the interconnection rates. This rate decrease was an incentive for new players to use the other providers' existing networks instead of investing in the construction of their owns, allowing them to practice more competitive prices than the incumbent players.

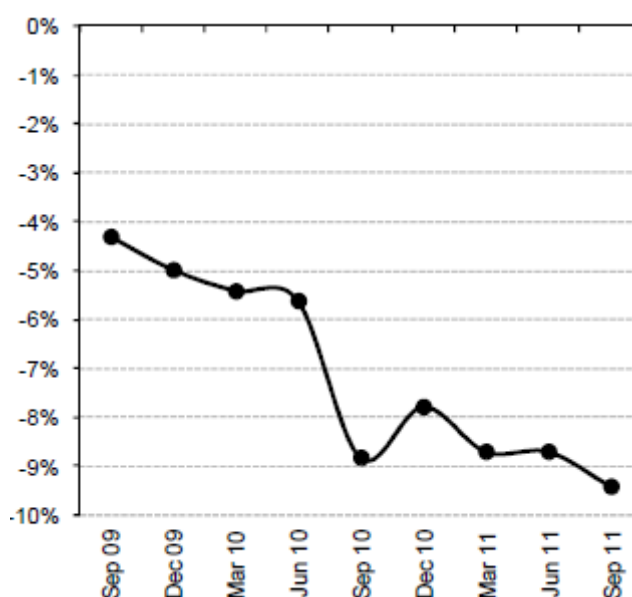
The Brazilian market is divided in three different regions that follow a different market share structure, resulting from different performances from the various players. According to ANATEL (data from 2011), Oi is the market leader in the fixed-line business with an estimated market share of around 72,7%, followed by Embratel with 17,4% and GVT, which has been investing in this area, with approximately 5%. Considering region 2, Oi keeps its leading position accounting for roughly 66,4% of the market, compared to the 18,5% detained by GVT, and the 11% of Embratel, company from which Oi expects an increasingly intense competition in a near future. This belief is sustained by the capacity of Embratel to provide a competitive price bundle which includes cable television that is made accessible to the audience in regions 1 and 2 through NET's widespread cable network, a Embratel's subsidiary. Another development that is meant to threaten Oi's reign is linked to GVT and Embratel's recent bet on expanding fixed-line network in some of the largest cities in Brazil, such as Rio de Janeiro.

Other players aim at figuring within the top positions on this market, constituting examples, Vivo and TIM (has a 1,2% market share). Those companies make their presence felt through the offering of wireless fixed-line services which are only operational when associated to a specific radio base station.

Competition is expected to come from other points such as mobile service operators which are gaining territory. The number of mobile subscribers in region 1 increased by almost 18% from 2010 to 2011, in region 2 grew by 14%, and in region 3 by 16% in the same period. This occurrence allied to the low rates associated to mobile services is expected to have a continuing negative impact in the number of fixed-line users and consequently on the traffic volume too. Traffic migration from fixed-lines is a consolidating process that is probable to be amplified by the difference in prices within the mobile network when compared to the fixed-line one. Oi expects a decrease in revenues from this market as a result of the use of mobile devices over the fixed-line ones.

Heading against the above predicted scenario, PT believes that other innovative services such as instant messaging will deepen the fixed-line declining trend.

Figure 21: Oi Wireline Net Revenue Growth



Source: Bernstein Research

Long-Distance Services. The long-distance services market is not an exception in what takes to the high level of competition registered. Historically Oi's main competitor in this market has been Embratel, but more recently due to an intense discount policy, TIM assumed that position. Under ANATEL's estimates of the number of long-distance minutes (data from 2011), in region 1 the top player is TIM with a market share of 57,4%, followed by Embratel with 29,8%. Oi only accounts for around 9,1%. Regarding region 2 the same ranking prevails, with TIM registering a 48% market share, Embratel a 26,1%, and Oi having a market share of 17,4%. The same framing characterizes region 3. This time TIM has approximately 34,5% market

share, Embratel has around 29%, Telesp (the incumbent player in this region) has a considerable 20,3% market share, and Oi registers a 10,1% mark.

As in many other geographies, in Brazil the communication rates generally drive consumption, this is true for long-distance calls as well. Together with the increasing offer of plans that include free minutes in calls to other subscribers, this may enhance customer migration and thus affecting Oi's revenues. On the other hand, many customers started buying more than one SIM card tied to different operators in order to maximize the number of calls to all the operators with the least possible cost associated, which can be exploited by Oi in order to expand its customer base.

Other countries need to add to the list of possible threats to these market new technologies such as VoIP, but this is not the case in Brazil. Long-distance calls are not supposed to suffer the impact of such services since the existence of broadband is limited making these alternatives unviable.

Data Transmission Services. When compared to previously presented markets like the fixed-line, the data transmission one is considerably less regulated, allowing in this way to less significant barriers to entry which translates into higher competition from other services (emphasis on the fixed-line communications). Oi's main competitors in this market are Embratel, Intelig and GVT.

In what concerns the broadband market, the cable television providers make their influence felt mainly through the offer of integrated packages including broadband, television and voice services to the cable television subscribers. Moreover, Oi's predicts a continuous bet on the expansion of networks incurred by its competitors which will promote a price reduction and the subsequent margin shrink.

DTH services. In Brazil, subscription television has low penetration (20,8%) and limited growth prospects as a result of the high quality services provided by television broadcasters.

The main subscription television suppliers in regions 1 and 2 are NET, which provides this service through the use of coaxial cable, and Embratel (under the "Claro TV" brand) and SKY that provide DTH service. Oi has only recently expanded this service to all states of regions 1 and 2 following a staged process.

4.4.2.2 Personal Services Segment

Oi faces a tremendous competition on the mobile telecommunications services market, especially from Vivo, Telecom Americas (through the brand named “Claro”), and TIM.

Competition is based on promotions offered to both pre-paid (under the form of traffic subsidies) and post-paid (traffic and handset subsidies) customers, and is targeted at reaching as much market share as possible.

According to ANATEL, in 2011 the market share structure was as follows: in region 1 Oi was ranked in third place with 23,2% market share, after registering an addition of mobile subscribers during 2011, behind Vivo (27,2%) and TIM (26,7%), but in front of Claro which has a 22,5% share. In region 2, Vivo kept the leader position with a 30,8% share, followed by Claro, accounting for 28,6%, and TIM with 26,3% market share. Oi in turn has around 14,2% market share in this region. In what takes to region 3, the hierarchy is the same as in region 2, with pretty close figures. Vivo is the number one player with 33% of the market, followed by Claro with approximately 26,1%, and TIM with 26,3%. Oi has circa 14,5%.

4.5 Telecommunications Context in Africa

Recently, Africa has surpassed Asia in what concerns to growth in number of mobile connections. Following this trend, the continent is expected to reach the 700 million mark by the middle of 2012. Recent data about the market (which counts with more than 1 billion people, roughly 14% of the world’s population) points to a penetration rate of more than 62%. It should be noted that the average growth of the continent was of about 19% in 2011, which meant a 26 million connections increase in the first half of 2012.

Even though the remarkable growth is a reality throughout the continent, different areas evidence different rhythms. The southern region of Africa, which has a 113% penetration, keeps a growth record of 21% a year, whereas the eastern part, with a 42% penetration rate, responds for a 26% growth. At the same time, the northern market, namely Egypt, counting on a 101% penetration rate, gives no sign of saturation.

The African market is pulled by the large increase on the pre-paid connections, representing more than 95% of the total connections. This is one of the main factors contributing for the ARPU in Europe to be of about 27Dollars, and in Africa, of only 8Dollars. However, it should be

included onto this analysis that according to the World Bank in 2010, the European GDP per capita was more than 25 thousand Dollars, whereas, in Africa it was around 1500 Dollars.

In what takes to the EBITDA margin, it varies from 27% in Europe to 45% in Africa. The first has been registering a slowly decrease, whilst it has been increasing in Africa (in 2001 the margin was of 34%). These trends can be explained by one side, by the high costs associated to the considerable amount of regulation in Europe, and on the other, the reduce costs of operating in large scale into the African continent.

Even if setting apart the great potential to enlarge the services scale, the African market has considerable room for important investments, since 89% of the connections is 2G, and only 1% corresponds to LTE technology. Moreover, the annual growth of 2G is of 14%, while the 3G technology grows at 44%, representing the projected future of convergence.

On the eyes of investors, the telecommunications represent an attractive market to invest in, considering the low risks associated, especially in markets with low penetration and reduced number of players. In this sense, the incumbent investments tend to be the most rewarding, allowing for higher returns. Allied to all that, a market supported on the pre-paid business has to deal with reduced problems of credit. The attractiveness of such scenario justifies the fact that four of the five main investor groups in this market are from outside the continent.

4.5.1 Angola's Case

Following the Angolan's economy growth rhythm, the telecommunications sector has been boosting its activity in quality and quantity in terms of its offer, counting with more sophisticated instruments of communication.

However, the challenges towards the sector's development are sundry. There is the need to create conditions to the natural development of this dynamic sector on its several formats (fixe, mobile, Internet, and other services), and an additional effort resulting from the process of social and economic reconstruction faced by the country, a reality generative of specific opportunities and challenges.

Wireline business. The fixed communications are not just phone lines, namely in Luanda. There are also a cable television (TV Cabo) infrastructure operating since 2003, which has been enriching its portfolio of channels and services provided. Furthermore, this is being converted to fiber, making way for the emergence of new voice, image and data services. As an example, Angola Telecom has in hands an investment plan of more than 2,4 thousand US Dollars, until

2013, targeted at promoting the wireline business. It stands, the installation of 500 thousand phone lines and, 7 thousand Kms of fiber.

Mobile business. The mobile communications market was opened to competition in 2001, with the launching of the GSM network by Unitel. Since then, the mobile business has registered remarkable growth rates and the number of mobile subscriptions overpassed the one from fixed communications in less than one year, representing a current 30 to 1 proportion.

Both networks, Movitel (belonging to Angola Telecom) and Unitel, operate in broadband offering 3G services. It is estimated the existence of more than 10 million of mobile communications subscribers, representing a penetration rate of 57%. The prices charged are still relatively high, mainly due to the absence of competition. The lower economic growth pace from 2009 and the improvement of the services rendered on behalf of the fixed communications and Internet are the elements responsible for a slowdown to be registered in this market. However, the increase on the ongoing geographical coverage, allied to the higher competition expected with the entrance of the third player, will continue to stimulate the Angolan market for mobile communications.

5. Portugal Telecom's Overview

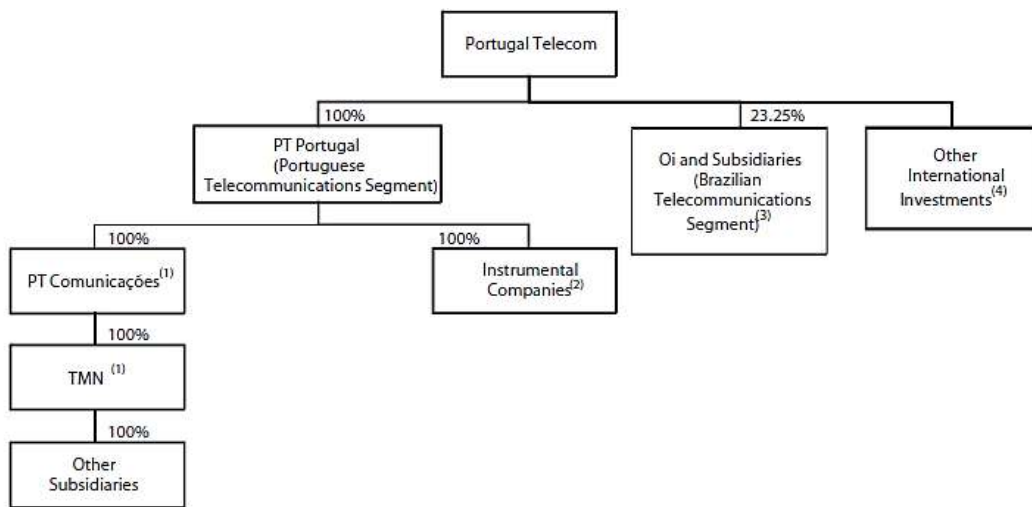
5.1 Business Profile

PT operates in many geographies in a market characterized by a rapid technological change in a highly competitive environment. The Company is positioned as a holding, contemplating a set of direct and indirectly held subsidiaries. The main companies which belong to PT are as follows: (1) PT Comunicações, which operates in the wireline market. It has the largest telecommunications infrastructure in Portugal, the biggest client base in the sector, comprising more than 4 million telephone connections and a team driven by experience and know-how. It also offers an integrated service of voice, internet and television, through its brand Meo, representing a key driver for success in what takes to the residential segment. Meo assimilates the company's value proposition allowing for every customer to access the intended content through different interfaces. (2) TMN (Telecomunicações Móveis Nacionais, S.A.) operating on the mobile telecommunications sector, being the market leader in Portugal. And, in what takes to the operations in Brazil, (3) Oi. The idea is to expand PT's success in the European telecommunications market to Brazil, as PT's mobile business is well positioned, thanks to is

continuous innovation-based strategy. This is made possible through valuable partnerships, and important investments, mainly on innovation and technology. Taking into consideration the weigh of Oi in the Brazilian market and its high future growth potential, this is considered to be crucial for the group’s financial and operational performance.

Additionally, PT has integrated certain functions across the company, in particular research and development capabilities (PT Inovação), information systems (PT Sistemas de Informação), central purchasing capabilities (PT Compras), back office activities (PT Pro), and call centre operations (PT Contact).

Figure 22: PT’s Businesses

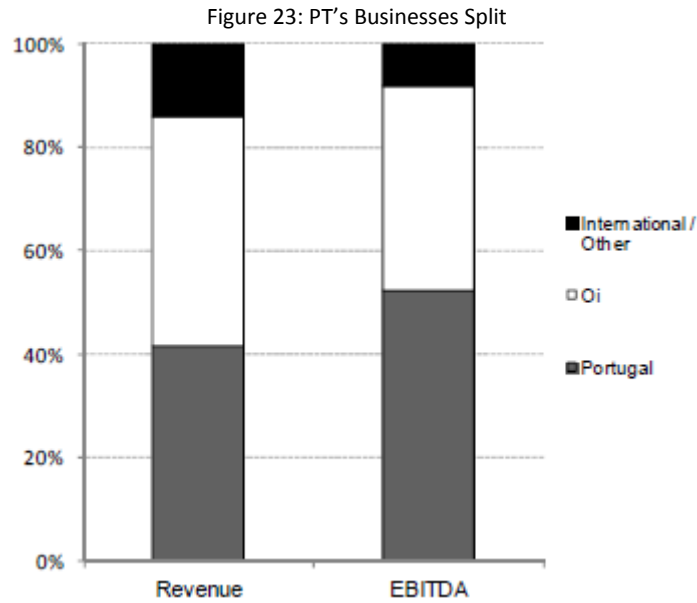


- (1) PTC, TMN and their subsidiaries provide residential, personal and enterprise services as part of PT’s Portuguese telecommunications business.
- (2) Various companies providing services to PT group companies, including PT Sistemas de Informação (information systems), PT Inovação (research and development), PT Pro (shared services), PT Compras (central purchasing) and PT Contact (call centers).
- (3) Oi S.A. and its subsidiaries provide telecommunications services in Brazil. PT proportionally consolidates the results of operations of Oi S.A.
- (4) Includes PT’s investment in Contax, its investments in global telecommunications operators in the Cape Verde, São Tomé and Príncipe and Macau, mobile operators in Namibia and Angola, and other investments.

Source: PT Offering Circular, 2012

The main markets where PT operates are Portugal and Brazil, reporting revenues in four different segments, the residential, personal, enterprise, and wholesale. It still has some relevant interests in other telecommunications companies in Africa and Asia, namely in Angola, Namibia, Cape Verde, São Tomé & Príncipe, East Timor and Macau.

In 2011, around 42% of the Company’s consolidated revenues were from its Portuguese operations, whereas the remaining 58% came from the international ones.



Source: Bernstein Research

Operations in Portugal. In Portuguese territory the services are made available depending on the need of the group of customers in question. When dealing with the Residential category, the services at issue are in most cases provided by PT Comunicações. The type of services involved include integrated networks inside the customers' home, which permit for multiple devices to be connected, such as TV, Internet, fixed-line telephone and a sort of technological tools.

Figure 24: Mobile Service Revenue Growth

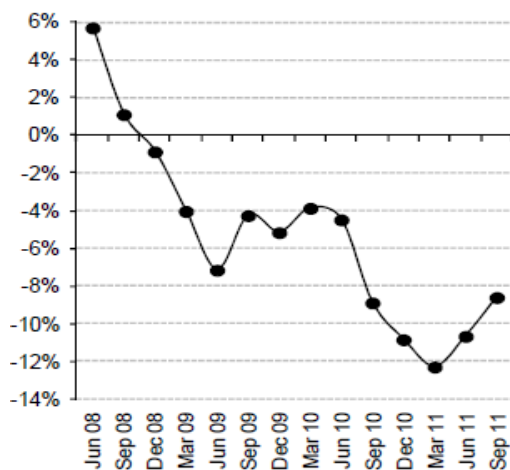
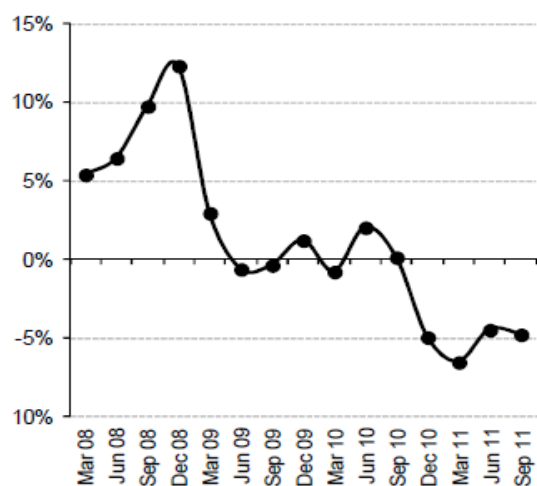


Figure 25: Wireline Revenue Growth



Source: Bernstein Research

Personal category involves mobile services provided to individuals through the group's subsidiary TMN. Those include voice, data, and Internet-related multi-media services.

The Enterprise sector comprises the supply of integrated data and business solutions to corporates and medium to small size business customers. It also include the purveyance of IT/IS and BPO (business process outsourcing) services.

Finally, the wholesale category involves whole sale telecommunications services, the production and distribution of telephone directories, public pay telephones, and other services.

Operations in Brazil. PT operates in the Brazilian Telecommunications sector through one of its largest players, Oi. PT detains a 23,25% economic interest in this company as of after the corporate reorganization that it has been submitted to. In 2011, Portugal Telecom consolidated a 25,6% ownership interest in Oi S.A.'s parent company, TmarPart.

Figure 26: Oi's Net Revenue Growth

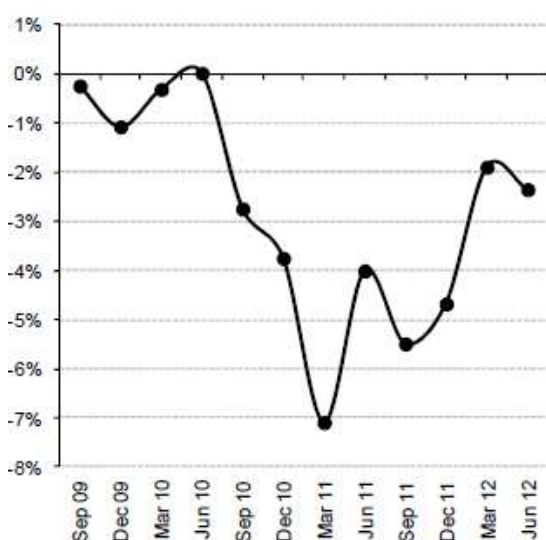
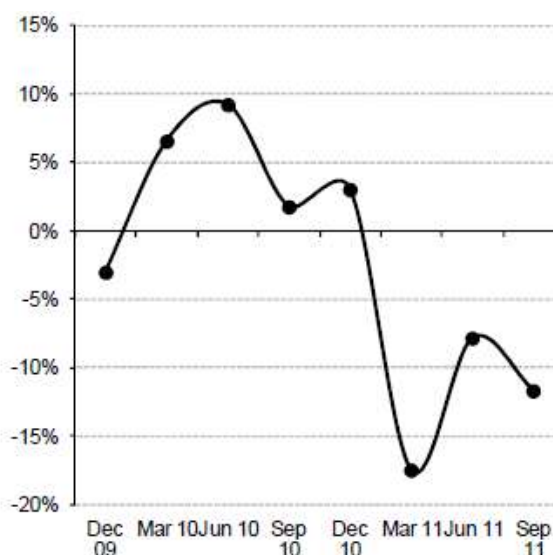


Figure 27: Oi's EBITDA Growth



Source: Bernstein Research

Oi is responsible for providing telecommunications services to the same segments adopted in Portugal. Thus, those services can be of the Residential type, which include domestic long-distance services (mainly in Regions 1 and 2), local fixed-line services, fixed-line interconnection (connect different operator's calls with Oi's network) and data transmission services. The Personal ones are mainly related to the provision of mobile telecommunication services. Those include interconnection services, as well as , data and voice services made available under 2G and 3G technologies. Designed for corporate and medium to small size businesses, the Enterprise services comprise mobile and fixed-line telecommunications services, advanced data centers, storage capacity and advanced voice services. Other services

are also offered counting among these, subscription television (cable and DTH), ISP services, a call center and a payment system for mobile devices.

PT also holds a 16,2% economic interest in the parent company of Contax (S.A. and Participações), CTX Participações S.A., for usufruct of contact center services. For the purpose of accessing call center and telemarketing services, PT holds a 44,4% participation in Contax.

Operations in Africa. PT is present in Africa through a strategic partnership held with a private equity company that has a great influence in the sub-Saharan part of Africa, Helios Investors LP. Helios detains 25% of Africatel, a holding company created to manage all the participations of PT in the African market, namely in Angola, Cape Verde, Namibia, and São Tomé & Príncipe.

In what concerns Angola, PT has 25% of Unitel. Unitel is a GSM mobile operator counting with a total of 7,454 million subscribers, most of them opting for a prepaid solution (98,7% as of 2011). The company has been betting on enhancing the quality of its network, and on the expansion of its voice and mobile broadband market.

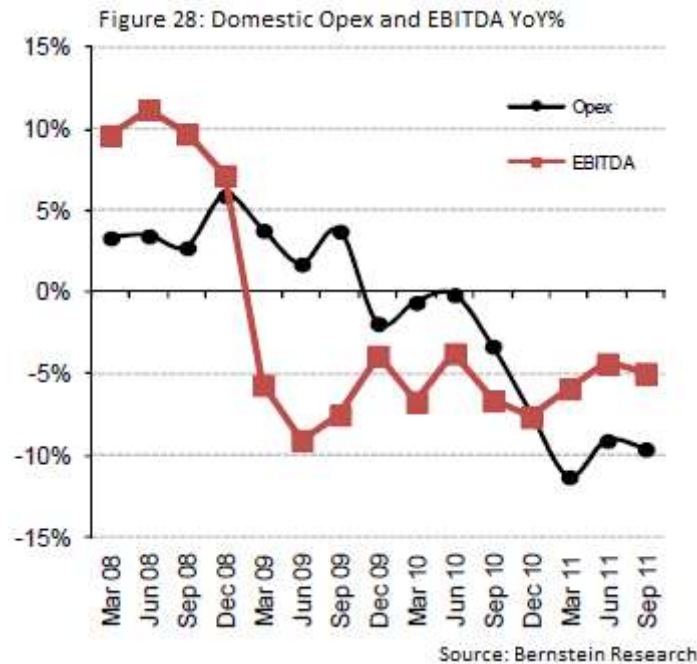
Data from 2011 points at a 1,784 million US dollar gross operating revenues, an increase when compared to the previous two years (see Appendix 3.1).

5.2 Strategy

Portugal Telecom has delineated a strategy for the coming years sustained on discipline and commitment. It is based on the improvement of financial, operational, and cost performance, and is directed to its core assets in business and geographical terms.

The main driver of such strategy is innovation. PT has adopted a structured approach towards innovation and its execution, becoming really selective in which projects to take and which partnerships to get involved in. Projects are selected taking into account two main variables, risk and maturity, whereas partnerships are established in order to add value, and those can be of technological (to develop new services and solutions) or best practices-sharing-based nature. This is only viable when setting target goals, and PT has its own well defined. PT aims at enlarging its customer base to 100 million clients; enhancing its international exposure and in this way increasing the weight of international revenues over the total; becoming one of the top European companies in operating and financial results, and also in shareholders' return; reinforcing leadership in the market sectors where it operates (mainly through offering integrated and convergent services); and allying all those efforts to a resilient sustainability.

Focusing on the Portuguese landscape, PT is betted on taking the best out of the recent functional merger of its mobile and wireline businesses which was designed to privilege a sustained operational efficiency, being focused on customers. For this to be possible PT incurred in several cost cuts reducing part of its layers and changed its organizational structure to one divided into four main segments (residential, personal, enterprise and wholesale), centered on its specific needs, promoting a trust-based relationship which allow for customer retention and respective increase in consumption of the brand's products and services.



It is also focused on taking forward the execution of projects linked to next generation networks and customer care. In this sense, PT intends to keep making the difference in a particular front where it is already the leader in Portugal and responsible for the highest levels of penetration in Europe, FTTH rollout. FTTH plays a central role on the company's intentions to provide better quality and faster data and video services (especially to its residential and corporate customers), and also to include the mobile business in this fiber network in order for its customers to benefit from higher speed traffic. PT is also intended to monetize this investment to make the way to the LTE (Long Term Evolution) services, which are a 2012 reality and the company is looking forward to increase its coverage level to more than 90% in no more than one year. Additionally, PT aims at improving performance in responding to more complex IT and television services. It also owns an expressive and global Wi-Fi network (see Appendix 3.2 for information by segment).

6. Risks and Uncertainties

PT competes on a highly competitive industry subject to several risks and uncertainties of several origins. Those risks can be grouped into three main classes given its specificities: the Environmental; Financial, and Operational risks.

Regarding the Environment risks, the first that has direct impact on PT's performance has to deal with the industry's regulation. On this subject, Portugal Telecom is under a tight set of regulatory measures which can have a great impact on the company. Changes promoted at national or international level by the competent entities may enhance the competitive pattern, increasing pressure and modifying the game terms with direct influence on the business results. Regulation might affect some key areas with particular incidence in the mobile business, digital television, next generation networks, broadband markets, and in more detail, on the type of offer and pricing.

Another risk factor is related to competition. An increase in competition driven by other players or new operators in the market can compromise the PT's estimated revenues. The intensification of competition can make itself felt through the introduction of new products and services, the use of economies of scale allowing for an increase in efficiency and cost reduction, aggressive marketing efforts, or through the bet on quality and differentiation.

Aware of such threats, PT is focused on innovation and execution as a way of seizing best opportunities and addressing each segment individual needs.

It should be noted that innovation, of the technological type, can also constitute a risk which has to be considered by the operators within the telecommunications industry. This is a fast-paced business which demands for the additional effort of keeping trace of the technological advances and continuously adapting to changing environments. It is a challenging industry that calls for a constant follow up of the most recent developments if the company wants to maintain its competitive advantages. This becomes even harder when managed under an unfavorable economic scenario. PT has kept itself on the top of the wave thanks to its regular policy of R&D investment to support the process.

As referred to in the last paragraph, the economic recession context may impact the company's financial and operational performance. The constant delay of economic recovery may cause the level of demand to decline and in this way having a direct impact on PT's margins. PT has been seizing the best opportunities and diversifying its asset portfolio in order to foster growth and profitability.

In what takes to the Financial risks, those can be related to exchange and interest rates, and credit and liquidity risks.

Since PT detains several international investments, which are hold in different currencies that not the Euro, it is exposed to an exchange rate risk. The fluctuations of foreign currencies against the Euro can impact the results consolidated on the Group's results. PT is also subject to risk arising from debt issued in other currencies.

Interest rate risk is also a constant namely in what concerns financial expenses involving floating rate debt. This situation is further relevant in a scenario of uncertainty and recurrent volatility which characterizes the actual financial markets. This risk is amplified by the difficult situation experienced by the country which translates into an increase in the Portuguese sovereign debt's interest rates. As a way to circumvent the overall picture, PT has been investing in derivative financial instruments. However, the financial crisis may difficult the company's access to the needed capital to boost growth.

PT is always subject to financial losses coming from third party infringement of its contractual obligations towards the Group. This is commonly called credit risk and can be felt in PT's treasury and operating activities. As for the first, these risks can be linked to cash investments, and in order to mitigate them PT opts for diversifying and investing its cash for short periods of time. Operational credit risk is mainly related to outstanding receivables, and the management tries to dilute the risk by proceeding to a careful risk analysis comprising a detailed credit profile, constant monitoring and performance tracking, limiting the credit granted to customers.

Regarding the last of the financial risks, the liquidity risk, it contemplates the mismatch between the company's sources of funding and its financing needs, which can be of different types, like investments, debt repayments or dividend payments, among others. As a way to control this risk, PT intends to manage its capital structure accordingly, controlling its debt structure (seeking a maturity that allow for matching its obligations) and looking forward to attain more financial flexibility. It is the company's intention to reduce debt and extend its maturity in order to reach the proposed goals.

The last risk's class includes three kinds of Operational risks. The risk associated with the obtainment of valuable strategic partnerships is amplified when considering an industry with the specificities of the telecommunications' one. In this industry one of the key drivers for future growth is directly linked to establishing the best partnerships possible in order to seize

and take advantage of the existing opportunities. Partnerships can cover different fields such as, content developers, R&D efforts, and technology and equipment suppliers, within many other types.

There are also risks associated with the Group's infrastructure capacity. This is a crucial point to meet high quality standards and provide customers with the required treatment, always matching the regulatory settings. Owning a network of infrastructures (which makes part of the core business and can not be avoided) is even more prone to be penalized by risks under the form of incidents and/or breakdowns when those are located into public areas. Given those facts, planning and contingency action plans assume a great deal of importance in PT's management.

In order to mitigate the possibilities of being affected by environmental damages, PT has been looking for the best course of action in what takes to obtaining the appropriate environmental policy. This comprises action to be taken in areas such as resource consumptions, controlling waste and emissions, noise constraints, and the development of awareness initiatives.

7. Regulatory Background

In an industry like the Portuguese telecommunication one, regulation plays a central role being very much felt in many aspects of the business. The landscape under analysis comprises a challenging and highly competitive environment, turning regulation into a crucial matter.

The regulatory background set in Portugal affects PT's financial and operational performance in many ways, with emphasis on the following ones: restrictions applicable to PT's product and services offer and consequent pricing, mostly noted on fixed line voice services and broadband products; control on the MTR's with direct implications on the mobile business revenues; several procedures which are simplified in order to make it easier for competitors to gain share through the acquisition of other operators clients, namely through number portability, carrier pre-selection, or unbundling of the local loop; the universal service obligation, under which PT is obliged to provide certain services to the general public; the terms under which are negotiated the company's concession and licenses; and the obligation to permit the use of PT's fixed line networks by other operators.

For the purpose of this dissertation, it should be highlighted the exerted influence by the changes on MTR policy. Following repeated recommendations from European Commission, ANACOM went even further and pressured the operators on the Portuguese market to reduce

the MTRs in force. This gesture has direct impact on the ARPU, which will tend to adopt a pattern of continuous decrease, affecting PT's revenues. It is also likely to intensify competition through a pronounced bet on differentiation, harming once more the company's revenues.

For complete and detailed information on the regulatory background please refer to the Appendix 4.

8. Portugal Telecom Valuation

In face of what has been presented on the literature review the valuation technique adopted to value Portugal Telecom was a Sum-of-the-parts (SOTP) valuation resulting from a WACC based DCF methodology. The DCF methodology used was applied to the two main geographies where PT operates- Portugal and Brazil. The valuation in Portugal was divided into the central business units – wireline and mobile businesses- allowing for a better perception of each area's contribution to the holding company.

At this stage an important remark should be made, since from 3Q11 PT started reporting its Portuguese telecommunications businesses, where it is included the Mobile and Wireline, as newly organized operating segment. As part of this new operating report format, PT also reports revenues of the Portuguese telecommunication businesses on a per customer segment basis, as addressed during the review chapters, including the Residential, Personal, Enterprise, and Wholesale classes. Those new segments mirror the exact same information as the previous model but allocating the Mobile and Wireline units' figures through these segments.

As a way of using a representative framework it was decided to perform the present valuation resorting to the old notation. In this way it is possible to take into account as part of the basis for the forecasts, data from 2007 until the end of 2011, whereas opting for the current notation the valuation would be biased given that there was only complete data for the years 2010 and 2011 (and for the first two quarters of 2012). Furthermore, below revenues figures are less detailed: costs, depreciations, EBITDA and Capex are only provided for the whole Portuguese segment and not for each customer segment; and reading the information on the new reporting format and then translating into the old one is a much reliable and accurate exercise than trying to perform the opposite one. Information for 2012 was taken into account on the projections for that year.

In what concerns the Brazilian operations, the valuation was performed as one and the inherent stake was consolidated into the Group financial statements. As a way to achieve that, the FCFF calculation was performed separately for the two geographical markets, being discounted at the appropriate Weighted Average Cost of Capital, adjusted for each reality.

It is also relevant to mention that in what regards Brazilian operations, its Enterprise Value was computed in the local currency (Reais) and afterwards converted into Euros, using the appropriate BRL/EUR exchange rate for the present year, provided by the Central Bank of Portugal (BdP).

Regarding the remaining international investments hold by PT, those were valued resorting to the use of relative valuation techniques (using the average sector multiple for Africa and Asia), and each participation taken into account for the EV of the Company. It should be enhanced that Contax was valued based on its market value at the time of the valuation.

The final steps involved accounting for net debt and pension liabilities in order to obtain the Group's equity value and the implicit share price for the year 2012.

It should be noted that the valuation in question only incorporated the information obtained and not consider possible changes only visible for the management. Not having full access to information is one of the limitations evidenced by the model.

8.1 Model: Opacity and Uncertainty

As mentioned before, the adopted model assumes some drawbacks which should be taken into account when looking at the analysis in question.

In this sense, the used method does not entirely capture the effects of opacity and uncertainty since the valuation assumes a fiscal year perspective and not one of value-to-day. Additionally, not having full access to the company's experience, aspect that becomes so more important as one move from an individual membership to the other extreme, an international business group.

Other aspects, more of the technical kinds, impacting the final output of this process comprise the existence of several different accounting and fiscal models for the investments hold by Portugal Telecom throughout the world.

Moreover, the minor or no knowledge over the new projects to be incurred by the company, given that the Management defends itself from competition only presenting them at a later stage than its take-off phase. The weight of the perpetuity into a valuation within a sector facing constant innovation should also be considered.

8.2 Methodology Approach

The purpose of this section is to address the adopted approach to value Portugal Telecom. Given the complexity and degree of detail employed into the process, the following descriptive analysis will focus on the general framing and not in treating each business unit and its individual contribution to the final results. Notwithstanding, as mentioned in the previous sections, each business was treated separately and incorporating its specific drivers.

As in any other case, a valuation within the telecommunications industry should start by a careful analysis of the company's financial statements and operating data. Understood the business characteristics and past trends it was possible to perform a detailed revenue forecast, which started by the identification of the most relevant factors that would impact directly or indirectly the projected values.

In this sense, the valuation process starts by analyzing each specific business unit and forecasting the relevant drivers for the explicit period (until 2018), which may include number of customers, MTRs, or number of lines, within others.

After a thorough evaluation based on a detailed research on the industry and PT's performance it was possible to identify the future trends that will drive revenues along the explicit period which combined with the ARPU estimates allowed for the obtainment of the final figures. Great relevance has been attributed to future expectations adjusted to my perceptions.

The following step regards calculating the operating costs while never forgetting about the EBITDA margins. The margins are a crucial profitability indicator and have been analyzed taking into account its behavior and the performance of the market where PT operates. Accordingly, the operating costs were forecasted in relation to the operating costs, assimilating future expectations and gazing the margins' evolution.

The operating costs projections incorporate the restructuring plan implemented at the end of 2010 which was targeted at diminishing the overall cost structure mainly through promoting

efficiency in certain internal processes, taking advantage of the established economies of scale and scope, and cutting costs related to personnel and other items with indirect impact on the company's base operations.

The following step involves determining the amount of depreciation to be recognized, using for this end a relation to the reported balance of tangible assets. At the same stage, capital expenditures were analyzed. For this purpose it has been brought to the equation the company's investment plan, which was put together with its assets, both tangible and intangible, allowing to estimate the outflows regarding the direct investing activity.

Ending the income statements' projections, other expenses were estimated given its proportion to the relevant IS item, and financial costs using as main determinant the debt level. For that, cash inflows and outflows had to be determined.

In line with the last step, the working capital needs were computed reckoning for the difference between current assets (accounts receivable, cash and equivalents, and inventories) and current liabilities (accounts payable), which in its turn needed to be previously projected (in this case assuming the evolution registered on the operating revenues and the cash ratio in what takes to the cash and equivalents item) as part of the balance sheet forecasts. Those items have been estimated taking into account the evolution registered on the operating revenues which is reflected on the reference percentage used on the key liquidity ratios employed.

Considering the target leverage ratio for the company, what remained was the FCF map development as a way to get to the final value. For that purposed the company was regarded as if it was unlevered the path was followed all over from the EBITDA to the cash flow from operations, going through EBIT and the operating profit calculations in the middle. The resulting free cash flows were then discounted at the appropriate WACC.

Once the EV was estimated, the net debt and pension liabilities were deducted as a way to obtain the company's equity value, which divided by the number of outstanding shares provides PT's share price.

8.3 Valuation Process

8.3.1 Operating Revenues

Portugal Telecom encloses different business units which represent distinct realities, deserving in this sense to be treated separately.

In what concerns the operating revenues, and given the structure followed to value the company, its projections were submitted to a common principle of disaggregation between its main sources but analyzed under different perspectives comprising distinct key drivers, in what constitutes an attempt to reach credible and realistic forecasts. Furthermore, it was taken into account that the company is subject to different growth paces regarding the type of business and the geographical location at stake.

As a way to build a scenario based on realistic and consistent forecasts it has been analyzed the past trends of each business unit as well as its current stage in terms of growth. The Portuguese telecommunications market exhibits a higher maturity level when compared to the Brazilian one, resulting in less space for organic growth for the operations developed in the first location. In Brazil the reality is quite different with the existence of several opportunities to grow, and Oi is taking advantage of it, keeping its expansion parallel to the overall country's development. It was taken into account the continuous improvement pattern evidenced in Brazil in the past, and its potential to maintain such trend even in a worldwide troubled economic environment. The economy pace plays a central role in the company performance.

For the purpose of simplicity, each business' revenues forecast will be presented separately accompanied by the respective reasoning.

Figure 29: Consolidated Operating Revenues by Business Area

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating revenues	6.147	6.278	6.119	6.071	6.086	6.095	6.157	6.382
Wireline	1.843	1.826	1.815	1.824	1.847	1.882	1.916	1.954
Mobile TMN	1.245	1.160	1.128	1.161	1.187	1.214	1.234	1.251
Brazil - Oi	2.412	2.604	2.444	2.307	2.224	2.118	2.069	2.180
Other and eliminations	646	688	732	778	828	881	937	997

Looking at the Portuguese operations, those can be split into two main areas: Mobile business, and the Wireline business.

As for the first, its operating revenues were computed as the sum of three different sources: services rendered, sales, and other operating revenues.

The revenues coming from the services rendered arise from different sources. Focusing on the customer branch its revenues come from both the data and voice market, which show different patterns in terms of future prospects. Utilizing operating data from ANACOM it was possible to estimate the revenue figures combining the total number of customers with the ARPU for the business.

Figure 30: Domestic Mobile Business (TMN) Services Rendered Revenues from Customer segment

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Customer: Data market	319,5	336,5	356,6	377,9	397,6	416,9	430,3	441,5
Δ	2,9%	5,3%	6,0%	6,0%	5,2%	4,9%	3,2%	2,6%
Customer: Voice market	687,1	654,6	641,0	640,0	644,0	649,1	653,5	657,3
Δ	-12,8%	-4,7%	-2,1%	-0,2%	0,6%	0,8%	0,7%	0,6%
ARPU (customer: data)	14,4	15,1	15,9	16,5	17,0	17,5	17,9	18,3
ARPU (customer: voice)	31,0	29,5	28,6	28,0	27,6	27,3	27,2	27,2

The operating data was worked up in order to obtain the total number of TMN customers. According to ANACOM the group of operators in the Portuguese mobile market comprise: TMN (44,1% MS), Vodafone (38,9%), Optimus (15,7%), Zon (0,8%), and CTT (0,4%). For that to be possible it was created a proxy based on the company's penetration rate, which was assumed to grow thanks to the high accession to tribal plans, and the projected Portuguese population, by INE. Having the proxy developed and its growth measured, the annual growth of total subscriptions is assumed to equal these of the proxy. Additionally, the percentage of TMN subscribers was assumed to be constant, given the market characteristics which encompass a highly competitive environment where the innovative offers are easily matched, at 2011 levels, allowing in this way to obtain the number of customers belonging to TMN.

Figure 31: TMN Customers forecasted

Operating Data (from ANACOM)	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
TMN Customers (k)	7.444	7.407	7.477	7.618	7.782	7.923	8.016	8.063
% of TMN subscribers	44,0%	44,0%	44,0%	44,0%	44,0%	44,0%	44,0%	44,0%

Following the number of customers forecast, it was needed to compute another driver of the revenues' figures, the ARPU. The average revenues per unit were projected taking into account its historical behavior and most important, the future expectations regarding each type of market. The ARPU for the data market was assumed to have positive growth, contributing for the data revenues to increase as this is the part of the mobile market in higher expansion (data consumption is the main income source). On the other hand, voice market revenues are expected to continue declining given the increasing offer of tribal plan solutions, which represent competition in pricing, leading to lower prices and lower revenues. In 2011 pre-paid plans were about 70% of total plans. The percentage of tribal plans as of the total pre-paid plans is increasing, being around 50% in 2010 and 58% in 2011 and predicted to keep

increasing in the following years. The minutes of use also tend to have a negative impact on the mobile revenues since a slowdown is expected. As a way to incorporate all the mentioned information, ARPU from the voice business is estimated to decline and to follow the Portuguese GDP and private consumption trends.

The second largest item of the revenues arising from the services rendered is the interconnection. The main driver regarding interconnection revenues is the Mobile Termination Rate (MTR), which have a clear impact on the mobile business revenues. In PT's case it is amplified by the fact of being the operator with the highest share in the market, becoming more penalized by a decrease in this rate when compared to competition. Following the regulator's indications, MTR has been adopting a constant decrease pattern. It was assumed to stay stable from 2014 (last period covered by data from OECD) onwards, and it was computed through a monthly series from OECD. As it was thought as the main determinant, the interconnection revenues were forecasted to follow the MTR growth patterns.

Figure 32: Domestic Mobile Business (TMN) Interconnection revenues, Estimated MTRs

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Interconnection	100	70	44	30	30	30	30	30
MTR (per Q)	4,10	2,90	1,82	1,25	1,25	1,25	1,25	1,25

After analyzing the roaming market, it was noted that its prices have been declining contributing to a revenue decrease. In this sense, revenues were projected as a decreasing percentage of the customer revenues.

The total revenues from the services rendered were forecasted as the sum of the customer, interconnection, and roamers' revenues.

In what takes to the sales revenues, those were projected as a percentage of the services rendered (the most important item from revenues, representing over 90% of its total), given its reduced contribution to the total revenues. It was assumed to decrease on the first two years following analysts' predictions, and then returning to values of 2010. The same process was adopted to estimate other operating revenues, but using as growth numbers the average of the weight in 2010 and 2011 on services rendered revenues.

Figure 33: Domestic Mobile Business (TMN) Operating Revenues by source

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating revenues	1.245	1.160	1.128	1.161	1.187	1.214	1.234	1.251
Services rendered	1.132	1.081	1.052	1.058	1.082	1.107	1.125	1.140
Customer	1.007	991	998	1.018	1.042	1.066	1.084	1.099
Interconnection	100	70	44	30	30	30	30	30
Roamers	26	20	10	10	10	11	11	11
Sales	90	70	68	94	96	98	100	101
Other operating revenues	11	9	9	9	9	9	9	9

As in the wireline business, the economic cycle is a central factor, affecting the company's performance, which is made visible on the expressive unemployment rates and inherently on customer's available income.

The wireline operating revenues were forecasted as the sum of the projections for its four main segments: retail, wholesale, data and corporate, and other revenues.

The retail business was divided into two main categories: voice and non-voice. In order to estimate each segment revenues it was assumed a weight over the total retail revenues, capturing past tendencies and future expectations regarding the telecommunications industry. Over the years the main source of revenues from the wireline business has been related to the voice offers, but this trend is changing due to the increasing offer of triple-play solutions. This is a more competitive and resilient offer in periods of economic downturn as the one faced in present times.

Revenues until the end of 2011 were estimated as a percentage of total retail revenues. The percentage was assumed as a way of incorporating market trends and prospects of triple-play considerable growth against voice (alone).

In the particular case regarding voice revenues, those were computed combining the ARPU for the business with the number of accesses through Public-Switched Telephone Networks and the Integrated Services Digital Networks (PSTN/ISDN), which according to ANACOM's data for 2011, had an higher exposure to the residential segment (67%) than to the enterprise one (33%). The ARPU was calculated using a proxy for its growth, established on the basis of the retail traffic, its main driver.

Figure 34: Domestic Wireline Business: Retail voice Revenues

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Retail: Voice market Rev.	535	508	490	477	468	463	455	447
as % of Retail Rev.	55%	51%	48%	46%	44%	42%	39%	37%
PSTN/ISDN (k)	2.653	2.593	2.567	2.547	2.536	2.530	2.511	2.493
ARPU	202	196	191	187	185	183	181	179

The PSTN/ISDN accesses comprise the traffic-generating lines as one of the voice market revenue drivers, which were estimated through the computation of an annual growth based on the last four years average as a way to maintain the last tendency. It includes as well the carrier pre-selection which registered a decline at levels of 2011 weighted at a 20% decrease factor, reflecting severe competition.

Turning our attention the non-voice retail market, its revenues were forecasted as the sum of revenues coming from pay-TV and fixed broadband retail market. The figures used were obtained through ICP-ANACOM.

The pay-TV market in terms of total subscriptions encloses the Cable TV, DTH, and other technologies (xDSL/IP TV; TV by FWA, and TV by FTTH) subscriptions. On this particular market, where PT makes himself visible through the Meo brand, the success has been achieved on the back of a very differentiated value proposition, which leverages on an innovative non-linear pay-TV service offering a seamless multiscreen experience (with a set of differentiated offers, live TV channels, VoD, games, music, and others).

Assuming that the number of total households in Portugal will remain stable on the following years, what will drive the pay-TV market increase is its penetration rate. On the back of a deep market research, it is expected that the market will keep the last year tendency and continue to increase. Additionally, pay-TV penetration rate was assumed to increase at a constant level from 2013 onwards, reflecting a considerable investment made by the operators on this domain (Meo targeting an expansion in terms of market share, and ZON trying to protect its position).

PT's share of subscriptions was assumed to grow at the same pace as the pay-TV penetration rate, since PT is making a great effort to acquire new subscribers and in this way capture a higher fraction of the market. PT gains the new subscriptions, gaining more from the new and the existing ones, increasing market share. In order to catenate the entire process the pay-TV market grows in line with the penetration rate growth.

Conciliating all the forecasted item into one formula, the TV customers were calculated combining the total number of subscribers on the pay-TV market with the company's share.

The other type of customers included on the non-voice retail market, the fixed broadband retail customers, were assumed to reach the same numbers as TV customers due to an increasing trend in the industry, the convergence of TV/Fixed broadband. This is an increasing reality which comprises sharing resources and interacting with each other synergistically, and

at the same time contributing to an increased coverage and higher bandwidth, expressed on Meo's double and triple-play offers.

The other determinant of this section of retail revenues, the average revenues per access, was computed as non-voice revenues per total accesses (until 2011), and then assumed to grow at 2% a year, in a conservative approach.

Having completed the forecast of the key drivers as well as the historical analysis, non-voice revenues were the result of combining the ARP access and total accesses (TV and Fixed broadband).

Figure 35: Domestic Wireline Business: Retail non-voice Revenues

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Retail: Other (non-voice) market Rev.	438	488	521	563	606	652	700	751
as % of Retail Rev.	45%	49%	52%	54%	56%	58%	61%	63%
Fixed Broadband Retail	1.105	1.186	1.229	1.300	1.374	1.449	1.526	1.605
TV customers	1.042	1.160	1.229	1.300	1.374	1.449	1.526	1.605
ARP access	204	208	212	216	221	225	230	234

The revenues coming from the wholesale market for the fixed line business are also dependent on the total number of accesses registered. The wholesale accesses can be measured on three different categories, the unbundled local loops which have been abruptly declining year after year; the whole sale line rental, evidencing a slight decreasing pattern; and the fixed broadband wholesale behaving in a similar way to the line rental. The wholesale business is also marked by a decline in the directories business. As a way to incorporate all the associated market trends, this revenue item was projected assuming a declining pattern smoothed along time by a reconciling factor.

As for the data and corporate segment, it has been penalized by the economic environment and consequent cost cutting efforts mainly from companies. It was, however, predicted to slow its decline as the economy tends to recover.

Given its small contribution to the total operating and in an attempt to incorporate market information, the other wireline revenues were assumed to represent a constant level at numbers of 2011.

Figure 36: Domestic Wireline Business Operating Revenues by source

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating revenues	1.843	1.826	1.815	1.824	1.847	1.882	1.916	1.954
Retail	973	995	1.012	1.040	1.074	1.115	1.155	1.199
Wholesale	468	450	437	430	426	426	426	426
Data & corporate	265	244	230	219	210	204	198	193
Other wireline revenues	137	137	137	137	137	137	137	137

In resemblance to the procedure adopted for the operations conducted in Portugal, Oi's operating revenues have been projected considering two main sources, the wireline business and the mobile business. Other services contribution has also been incorporated.

The wireline revenues were divided in Fixed Line, Fixed Broadband, and Others which include revenues coming from public phones and additional services.

In what takes to the fixed line business, Oi has been trying to improve its performance in what regards line losses. It was assumed that line loss in fixed line revenues will be mitigated on the back of the restructuring of fixed tariff plan adopted in the middle of 2011. The loss is softened since these plans stimulate the use of fixed line by expanding its benefits like free minutes for most solutions, and digital calling services. However, due to increasing innovative technologies penetration, fixed line revenues will keep its downside trend.

On the fixed broadband, Oi bets on customer loyalty and retention and in adding new customers to its share. It has been investing in the quality and speed (great progresses on this area) of its fixed broadband services, with visible results to the users. Additionally, Oi practices really competitive prices.

Oi has also established a partnership with the government aimed at increasing the penetration of broadband in Brazil, which has allowed for the company to increase its coverage considerably in the last year.

As a way to formulate the final revenue figures for the wireline business, those have been forecasted based on previous periods' growth and incorporating the provided future trends. Revenues were estimated to show a sustained increase. Growth was based on the growing patterns followed by the broadband customers, accommodated for this item.

Public phones follow the past trend of decline. Its revenues were assumed to decrease at half of the previous period decrease. Higher adhesion to new technologies will contribute to a decline in the usage of public phones which, however, will not be further reduced since Brazil is still a country where the weight of low income population is considerable. Finally, the additional services were assumed to stay constant throughout the explicit period.

Figure 37: Oi Wireline Business Operating Revenues by source

Real million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Wireline	31.213	29.387	28.225	27.557	27.490	27.975	29.002	30.448
Total Fixed Line	20.471	18.284	16.513	15.079	14.071	13.412	13.052	12.963
Fixed Broadband: Data	9.101	9.524	10.158	10.935	11.882	13.029	14.417	15.953
Public Phones	311	249	224	212	207	204	203	202
Additional Services / Advanced Voice	1.330	1.330	1.330	1.330	1.330	1.330	1.330	1.330

The mobile revenues were estimated as the sum of different components, services, sales and others. They were estimated in gross terms.

Oi's mobile business has been registering a solid growth. In the post-paid segment, Oi has launched several initiatives aimed at increasing customer growth, with emphasis on the distribution channels restructuring and price repositioning. On the pre-paid segment, Oi continues to market the new offers launched in the end of 2010, beginning of 2011, allowing for daily bonuses which are dependent on the amount of the recharges. Additionally, Oi offers SMS packages (with up to 88% discount), and data packages (contributing to an increase in internet accesses), improving profitability in this way. As a result of the referred initiatives and stronger commercial competitiveness the customer base is growing, so are the revenues in this business area.

Mobile services revenues growth is amplified by the higher pace increase materialized by the data services revenues, which are growing more than the remaining components of the mobile services, thanks to an investment in access speed and the offer of data packages.

On the other hand, competition explains a large portion of the slowdown in some of the components of mobile services revenues. Price pressure suggests a deterioration in the competitive environment, and a decline in MTRs contributed to higher competition in the market as a second derivative effect.

Looking at sales revenues, those were assumed to grow as mobile penetration rate increases in Brazil. The commercial effort together with increasing marketing and publicity, as well as innovation, drives sales up.

Figure 38: Oi Mobile Business Operating Revenues by source

Real million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Mobile	11.925	12.635	13.386	14.183	15.027	15.922	16.870	17.875
Services	11.775	12.480	13.227	14.019	14.858	15.748	16.691	17.690
Sales of handsets, sim cards and others	150	155	159	164	169	174	179	185

Other services revenues were projected as its percentage to the sum of mobile and wireline total revenues. Assumed to be the average of the last two years weight of the described

revenues, as part of these services depends on the usage of equipment. Assuming values of 2011, consolidated revenues represent 64,2% of the gross revenues.

Figure 39: Oi Business Operating Revenues by source

Real million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Consolidated net revenues	28.252	27.485	27.217	27.301	27.810	28.712	30.004	31.607
Wireline	20.034	18.862	18.116	17.688	17.645	17.956	18.615	19.544
Mobile	7.654	8.110	8.592	9.104	9.646	10.220	10.828	11.473
Other Services	563	513	508	510	519	536	560	590

8.3.2 Operating Costs

Following the operating revenues forecast, the operating costs are considered as another crucial component for valuation purposes.

The same principle of individual forecasting used for developing revenue estimates was applied to the operating costs' side. In this case, the projection incorporate the direct and indirect impact produced by the restructuring plan implemented in the end of 2010. This is a relevant factor with repercussions at the EBITDA margins level. The appropriation of economies of scale as of economies of scope, made possible given the company's scale and size, are key drivers of the registered improvements.

The operating revenues are responsible for driving a considerable part of items from the Income Statement and Balance Sheet. In particular, Operating Costs assume a stable relation with operating revenues.

Looking at the mobile business, the operating costs are composed by four different types, and were computed taking into consideration its relation to the operating revenues in most cases. The costs linked to wages and salaries reflect higher efficiency levels in certain internal processes and lower personnel costs as a direct result of the mentioned restructuring plan, being computed as the average of the last two years, first to incorporate the structural changes, weight on the operating revenues. Being part of the company's policy, the number of employees was estimated to remain constant throughout the observed period, and the adjustment is made on the annual cost per employee (accommodated with inflation estimates).

The direct costs suffered a reduction explained by a decline in interconnection costs, mainly due to the decrease in regulated MTRs, and the decline in the directories business which tend to more than offset the higher programming costs associated with the continued growth of

pay-TV customers, notwithstanding a decline in programming costs per customer as pay-TV is reaching critical mass. Later growth is explained by the increasing importance of pay-TV and other mobile contents.

As for the commercial costs' trend, it is explained by a decrease in costs of products sold, due to the rationalization of TMN's handset portfolio and lower equipment sales, tending to increase as the business performance recovers, as made explicit on the revenue forecast. The other operating costs, including supplies, external services and other expenses, decreased as a result of the strict operational and cost discipline on external supplies embraced by PT. It was estimated to stay at 2011 levels as it has been quite stable for the past years.

Figure 40: Domestic Mobile (TMN) Business Operating Costs by source

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating costs, excluding D&A	682	643	625	659	676	691	703	712
Wages and salaries	45	41	40	41	42	43	44	44
Direct costs	220	206	201	206	213	218	222	225
Commercial costs	215	205	200	221	226	231	234	238
Other operating costs	203	191	185	191	195	200	203	205

Addressing the wireline cost structure there are some patterns which match the ones evidenced by the mobile business given the influence of similar factors such as the restructuring embodied by the Portuguese operations.

As in the mobile business, costs related to wages and salaries were assumed to face a reduction given increasing processes efficiency and lower costs with personnel as a direct consequence of the adopted plan. Once more, the number of employees was estimated to remain constant and thus, the cost evolution on the remuneration side is directly related to some benefit cuts and other payroll adjustments.

Direct costs were assumed to be a percentage of total revenues, capturing TV customers increase which were reflected on this cost item through the programming costs. The established percentage decrease along the explicit period as the increase in TV customers is becoming smaller.

Commercial costs were assumed to register a slight increase due to the increasing number of TV customers partially coming from the announced effort expended on publicity and marketing (as the competitive environment get fiercer with other players practicing an aggressive marketing, it was assumed as crucial to avoid churn), a path that has proven to be successful in enhancing customers' loyalty, since those include costs of products sold, commissions, and marketing and publicity expenses. The other operating costs, where it is

included the maintenance costs associated to customers' set boxes, were projected as a fixed percentage of operating revenues for the entire period, capturing the customer base increase and the increasing complexity in setting top technology items such as the boxes.

Figure 41: Domestic Wireline Business Operating Costs by source

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating costs, excl. D&A & PRBs	1.091	1.079	1.064	1.060	1.064	1.075	1.085	1.096
Wages and salaries	209	207	206	207	209	213	217	222
Direct costs	400	387	376	368	364	361	358	355
Commercial costs	113	119	118	119	120	123	125	127
Other operating costs	369	366	364	366	370	377	384	392

Turning our attention to the Brazilian operations, it is worth noting that the operating costs are starting to impact margins in Oi as a result of investments made by the company which are not having proportional effects on revenues due to a market characterized by intense competition. The overall operating costs have increased due to an increase in sales and the improvement in service quality incurred by the company.

The costs of goods sold show an increasing pattern as a result of the decision to implement subsidization on the modem of "Oi Velox" (the mobile business brand of Oi) and smartphones for post-paid customers, coupled with higher number of SIM cards sold. The same happens with the interconnection costs, growing thanks to higher proportion of on-net traffic, and increase in SMS in the total off-net usage. In selling expenses, as the cost of services, it was assumed a relation with the operating revenues, following in the first case the same pattern of costs of goods sold.

Regarding the general and administrative expenses, those were assumed to increase as the business expands. It pertains to operation expenses which tend to grow as results do so. Other operating expenses were assumed to represent a constant percentage of the revenues.

It was also considered an increase in personnel costs thanks to an increase in staff, and the organizational reorganization incurred in to improve operational performance.

Additionally, an increase in third-party services was accounted, mostly due to higher maintenance costs aimed at improving service quality, higher commissions, focused on post-paid mobile business as well as on the fixed broadband.

Figure 42: Oi Business Operating Costs by source

Real million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating costs	18.744	17.880	17.754	17.806	18.341	18.922	19.732	20.657
Cost of Services	5.783	5.434	5.475	5.466	5.782	5.950	6.179	6.379
Cost of Goods Sold	198	193	191	192	195	201	210	222
Interconnection Costs	4.672	4.636	4.546	4.582	4.656	4.813	5.027	5.297
Selling Expenses	4.941	4.669	4.623	4.637	4.724	4.877	5.097	5.369
General and Administrative Expenses	2.618	2.399	2.375	2.383	2.427	2.506	2.619	2.759
Other Operating (Revenue) Expenses, net	532	550	544	546	556	574	600	632

8.3.3 EBITDA margin

Having the operating revenues and the operating costs forecasts, the EBITDA margin is the relevant factor to address.

EBITDA margins are a really important performance metric and thus, have been incorporated into the previous operating items estimations, after a historical analysis together with the company and industry's margins' evolution projections.

This is a crucial point for the deleveraging effort lead by PT to be made effective. It should be noted that a poor EBITDA scenario can represent a real risk involving EFCF taking a major hit coming from a loss in what takes to Oi's dividends, given that those account for more than 25% of the group's cash flows. Furthermore, a company affected by a declining EBITDA trend, which is a common frame in the telecommunications industry, is subject to major cuts in the dividend pay-out in order to reduce debt and thus keeping a stable leverage ratio.

Figure 43: EBITDA and respective margins by Business unit

EBITDA margins	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
TMN	638	563	517	503	502	511	523	532	539
Margin (%)	46,0%	45,2%	44,6%	44,6%	43,3%	43,1%	43,1%	43,1%	43,1%
Wireline	745	753	747	751	764	783	807	832	858
Margin (%)	38,6%	40,8%	40,9%	41,4%	41,9%	42,4%	42,9%	43,4%	43,9%
Oi		924	910	850	802	757	722	708	755
Margin (%)		34,9%	33,7%	34,9%	34,8%	34,0%	34,1%	34,2%	34,6%
Others	108	170	181	192	204	217	231	246	262
Margin (%)	25,4%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%
PT	1.492	2.188	2.354	2.296	2.273	2.269	2.283	2.318	2.413
Margin (%)	39,9%	35,6%	37,5%	37,5%	37,4%	37,3%	37,5%	37,6%	37,8%

Incorporating a detailed analysis and the company's intention to pursue a deleveraging policy, the Group's EBITDA was forecasted to remain quite stable throughout the explicit period. The decrease on the dividends to be paid by the company was also taken into account, which allied with a stable growth pattern on the EBITDA figures contribute to an ease on achieving the

necessary leverage adjustment, avoiding more aggressive scenarios characterized by constant downside reviews in shareholders remuneration, or even asset sales.

8.3.4 Capital Expenditures

The action taken in what takes to the capital expenditures mirrors the several business units investing activities targeted at improving its operational performance. Portugal Telecom's investment policy is directly linked to the capital structure in force, and influenced by the average levels of depreciation.

Figure 44: Estimated Capex by Business unit

Capex	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Capex Portugal	657	647	678	652	636	621	609	594	579
Capex Mobile	133	131	186	180	180	178	176	173	169
Capex Wireline	524	516	493	472	456	443	433	422	410
Capex Oi	0	444	532	499	448	421	379	350	347
Capex Other	141	133	141	150	160	170	181	192	204
Total	798	1.224	1.351	1.301	1.243	1.212	1.169	1.136	1.130

The capex on the Portuguese operations was estimated to follow a decreasing trend. Capex relating to clients and infrastructures decreased given the strong investment made over the last years, namely on the period between 2008 and 2011, regarding the fiber network implementation, the modernization of the 2G network already adapted to the 4G LTE, and in the leverage of the 3G and 3,5G networks' coverage and capacity, leading to a decline on the capex related to technology, notwithstanding the investment related to the 4G LTE network implementation.

Aligning my expectations with those of the company, it was assumed that the future capex tend to decrease at a visible pace as the fiber network implementation is concluded, not forgetting the implementation of PT's 4G LTE network in 2012 and the considerable investment on the new data center.

In Oi's case the trend is similar, assuming the decreasing pattern as its main driver. The investments linked to the Brazilian operations were mainly directed to projects targeted at improving the fixed network quality, expand coverage of both fixed and mobile networks, increase the speed of fixed broadband services, to increase the capacity of 3G data traffic in strategic locations, and so as to provide the previously mentioned data packages to corporate customers.

8.3.5 Net Working Capital

The working capital was defined as the difference between the non-financial items of the current assets and current liabilities, comprising accounts receivable, cash and equivalents, and inventories on one side, and accounts payable on the other. In this sense, this item will evolve according to the Operating Revenues, and thus are based on historical performance throughout the explicit period.

Figure 45: Working Capital Needs

Euro million	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Current Assets*	8.611	7.738	7.903	7.703	7.642	7.662	7.672	7.751	8.034
Current Liabilities	723	1.446	1.477	1.440	1.428	1.432	1.434	1.449	1.501
Net Working Capital	7889	6292	6426	6263	6214	6230	6238	6302	6532
Δ	5931	-1597	134	-162	-49	16	9	64	230

Portugal Telecom has been paying attention to its working capital and trying to increase its cash flows as a way to cover the debt entrance, showing a solid working capital management. Since it is being analyzed a healthy company with a high liquidity pattern, it was expected an expressively positive figure for this item, meaning the company is financed and able to pay its short-term liabilities.

The financial condition evidenced by the company is verified through some key liquidity ratios, such as the current ratio (5,7), the quick ratio (5,6), and the cash ratio (3,9). The higher values registered show a capable company in what takes to respecting its obligations, giving an idea of PT's operating cycle efficiency and its ability to transform its products in cash.

After computing DSO (days sales outstanding) and DPO (days payable outstanding), it was possible to verify that the later is always higher than the first, once more indicating a strong liquidity profile and pointing at a negative cash conversion cycle.

8.3.6 Financial Analysis

Presently, PT is a highly leveraged company which is reflected on its market D/E of 2,31 and the current financing structure is the result of the past and current intense investing activity.

It was a management strategy to take advantage of leverage to enhance growth and profitability, and at the same time keeping its high values in what concerns shareholders' remuneration. In this way, PT assures the debt payment as well as the distribution of dividends (known for paying a high dividend when compared to other industry players), however it had to make some cuts on the last topic.

Portugal Telecom key credit strength over the last years relates to its ability to generate strong operating free cash flow, which is made possible thanks to its leading market positions in both mobile and fixed businesses in Portugal, as well as to its international operations. Another topic that has proven useful in this context regards the implementation of continued cost cutting programmers.

Looking at 2011, PT maintained a solid liquidity position given its significant level of cash, its debt profile (with an average maturity of approximately six years) and the additional flexibility provided by its committed stand-by lines and underwritten commercial paper lines.

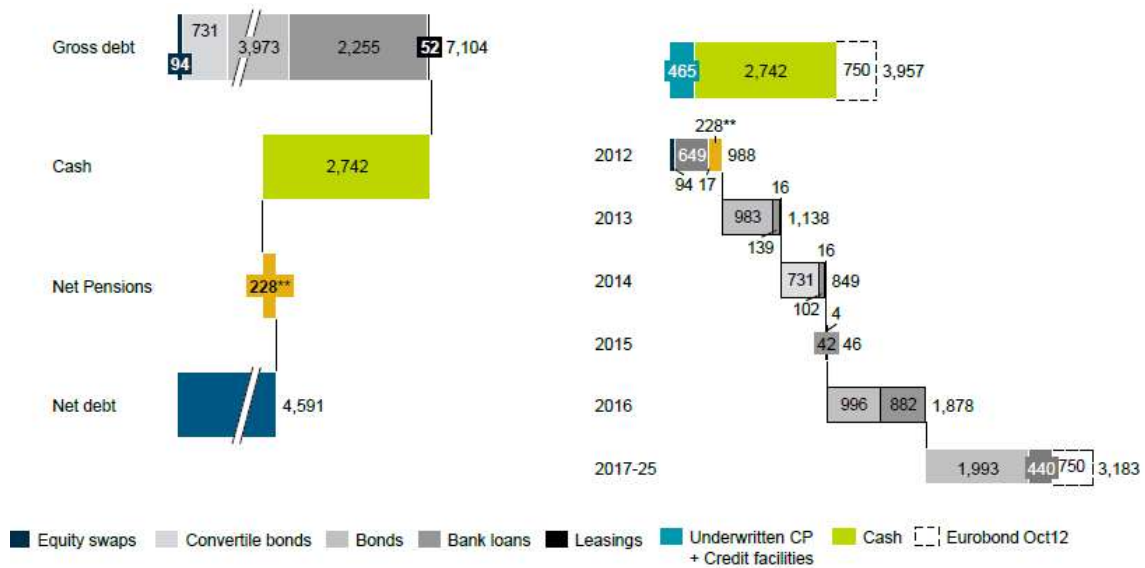
Figure 46: Financing Structure and Debt evolution

Financial Structure	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Financial Debt	7.046	7.206	12.281	11.903	11.292	10.710	10.173	9.598	9.043	8.605
Cash and equivalents	1.518	5.107	5.668	5.789	5.643	5.598	5.612	5.620	5.677	5.885
Net Debt	5.528	2.100	6.613	6.114	5.649	5.112	4.561	3.978	3.365	2.720

PT's debt portfolio comprises exchangeable bonds, bonds, bank loans, liabilities related to equity swaps on treasury shares, commercial paper, leaseings, derivative financial instruments, and other financings. Once more exploring its most relevant funding source, PT has recently issued Eurobonds with a maturity of around five years and a coupon of 5,875%, through its wholly-owned subsidiary PT International Finance BV. This reflects a trend experienced in the previous year where the performance of PT's bonds was significantly influenced by market concerns on sovereigns' creditworthiness, namely with respect to Portugal, which affected the perceived credit risk of corporates. For that reason, PT's credit spreads and yields increased significantly during the year, although substantially less than Portuguese sovereign yields, due to PT's own financial strength and relevant exposure to different geographic markets, which has been growing considerably.

The describe transaction fits the profile of those that contribute to enhance PT's financial flexibility through the extension of the debt maturities, which considerably reduce financial risks, even more considering the current environment.

Figure 47: PT's Debt Profile



Source: Portugal Telecom Trading Update, September 2012

Reconciling the guideline followed by the company, PT has been betting on a strategy based on extending debt maturities together with possessing diversified sources of funding as way to reduce risks from financial nature. In this sense, PT enjoys a very solid financial position, being fully financed until mid-2016.

Another remark to be made has to deal with the weight of net interest expenses on EBITDA, which has kept its regularly low pattern safeguarding the company from a sound impact on net income from minimal unfavorable variations on the revenues and EBITDA margins.

Figure 48: Interest Burden

Interest	2007	2008	2009	2010	2011	2012E
EBITDA	2.292	2.480	1.557	1.492	2.188	2.354
Net Interest Expense	197	272	227	185	297	346
NIE/EBITDA	8,6%	11,0%	14,6%	12,4%	13,6%	14,7%

The financial structure of the firm was assumed to improve overtime through the repayment of debt as part of a sustained deleveraging effort assumed by PT. This can be seen by looking at the Net Debt/EBITDA ratio, evolving really well and thus reaching sounder figures.

Figure 49: Net Debt over EBITDA ratio evolution

Financial Balance Sheet	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Net Debt/EBITDA	3,0	2,6	2,5	2,2	2,0	1,7	1,5	1,1
ROE	9,1%	7,7%	7,2%	6,8%	6,6%	6,5%	6,4%	6,6%

8.3.7 Income Taxes

As Portugal Telecom is present in many geographies it becomes more complex to treat taxes since each location has its own regulatory policy.

For valuation purposes, taxes on EBIT assume its preponderance as a driver of FCFF. This item was assumed to be dependent on the fiscal regimes prevailing on the main geographies where PT operates, Portugal with a tax rate of around 30%, and Brazil which adopts a 34% tax rate. It should be noted that the mentioned tax rates, which are the ones actually used on the performed valuation, in most cases do not match the tax payments of the company as illustrated on its books. This mismatch is widely justified by taxation on interest income, and by a factor that contributes to a decrease on the effective tax bill, the effect of tax shields on interest payments, which are captured on the WACC formula in use.

Another remark should be made on the differences in terms of performance registered along the different countries where the company operates, which gives birth to the existence of differed taxes.

8.3.8 Depreciations and Amortizations

Depreciations were calculated as a relation to Tangible assets. It was assumed a proportion of depreciations over tangible assets applied to the previous year balance of TA.

After a first year increase due to the recent investments made in the roll-out of the pay-TV service, depreciation evidence a downward tendency in such a way that this item's figures tend to equal Capex values in the long term, and for valuation purposes for the terminal values. The implicit assumption behind a decreasing ratio is that as the firm enters in a mature stage and investments reach the end of their useful life, the increment in Capex is not enough to counteract the decreasing depreciation. In this sense, in an extreme scenario, the purpose of investments is mainly to replace the assets into consideration, which tend to be fully depreciated.

8.4 DCF Assumptions

8.4.1 (WACC) Cost of Capital

The cost of capital was estimated to capture the turbulent economic environment and its implications on the conditions for Portugal Telecom to access the financial markets.

On a standard situation it is expected that the cost of the best alternative opportunity for placing capital to be the sovereign bonds assuming null or marginal risk, as a corollary, the cooperative enterprise debt should be superior. All this into a logic of perpetuity in terms of time horizon. In other words, the cost of accessing the market for Portugal Telecom is lower than the one for Portugal, when in a normal situation should be equal to the treasury bonds plus an added premium.

As mentioned earlier in this chapter, as a way to compute the Enterprise Value of each business unit, both the FCFF and the Terminal Value need to be discounted at the appropriate discount rate, in this case at the WACC. In order to capture the individual operating and financial risk that can be inputted to each specific country it was estimated a different rate modeled to each reality. Those rates are the result of combining all the components presented below. The current situation is an exotic one, where the treasury bonds' pricing is greater than the PSI's debt due to several reasons, counting among others the ones that follow.

PT operates in a global context holding investments in other markets, and in this way out of the Portuguese macroeconomic risk, meaning that its business-related risk is partially away from the Portuguese sovereign risk. Furthermore, the market for sovereign debt is assaulted by the speculative effects of the market of derivative debt (short-selling, futures...). The Portuguese debt market is compartmented since a considerable slice belongs to the Portuguese banking system after an acquisition in cartel.

Strictly speaking, it is possible for a company even at risk of State's financial collapse to behave better to the eyes of the capital owners if selling a product which contains first need good's characteristics, as it is the case of telecommunications, or even luxury/ attribution of social status features as it is the case of the Contents' good, since in both these cases the elasticity of demand-income is very low. PT's offer does own these two characteristics.

Yet, it is worth noting that it may still be a convergence of the two risk premiums (sovereign and corporate) in the future, discounting the short-term volatility of sovereign debt speculated in the secondary market and then the high sovereign yields on the secondary market traduce a certain incapacity from the investors' side to judge the long-term, given the political-based instability.

Figure 50: WACC Components

	Portugal		Brazil
Cost of Equity	11,28%	Cost of Equity	14,35%
Rf	1,491%	Rf	9,33%
Market Premium	10,13%	Market Premium	6%
Beta	0,97	Beta	0,84
Cost of Debt	7%	Cost of Debt	10%
Interest coverage ratio	1,788	Tax rate	34%
Attributed Rating	B+	D(%)	30%
Spread	5,50%	E(%)	70%
Tax rate	30%	WACC	12,02%
D(%)	35%		
E(%)	65%		
WACC	9,04%		

8.4.2 Cost of Equity

The adopted risk-free rate was the yield on the German 10-year Treasury Bonds in what concerns the computation of the cost of capital for Portuguese operations, since those are the only Government Bonds in Europe considered to be default free. Furthermore, this choice is based upon the fact that PT's revenues 'currency is the Euro.

In regard of the operations developed on Brazilian soil, the risk-free rate considered was the yield on the country's 10-year Treasury Bond, in accordance to Damodaran (2008), and in what consist of an attempt to make a more consistent valuation trying to capture the country's own reality.

In what takes to the Equity Risk Premium (ERP) chosen for Portugal, it was calculated according to Damodaran's suggested methodology in order to incorporate the additional risk of equity markets resulting from the experiencing turbulent period.

In this sense, the long term country risk-premium was estimated based on the default spread associated with Moody's country ratings (based upon traded country bonds), over a default free government bond rate, in what was considered to be a measure of the added country risk premium for Portugal. Moreover, as a way to reach the total risk premium the default spread was added to the historical risk premium for a mature equity market. It is important to notice

that especially in the short-term, the equity country risk premium can be greater than the actual country's spread, and thus calling for an adjustment. Accordingly, combining the default spread with the relative equity market volatility (estimated as the standard deviation in the country equity market over the standard deviation on the country's bond) it was possible to get to an adjusted country risk premium. For this purpose, it was assumed the emerging market average of 1,5, considering that the equity markets are roughly 1,5 times more volatile than bond markets, obtaining the country specific risk premium which was further added the assumed 6% risk premium for mature markets (in this case the German one) resulting on the total risk premium to be considered for valuation matters.

Regarding the ERP assumed for the Brazilian operations, it was obtained considering a historical approach, given the value attributed the risk free rate in this particular case. As presented on the literature review chapter, the percentages attributed to the ERP have been between 5% to 6%. If the historical excess returns have pointed more towards values around the lower end of the presented range, inserting on the equation the current market conditions it becomes reasonable to assume a higher value, pointing at the 6% figure.

The missing necessary component to get to the cost of equity is the levered Beta which was estimated taking into account several processes in order to opt for the solution that would better adhere to reality and in this way express the company's undiversified risk. In this sense, three different betas were considered, including the industry beta based on Damodaran's predictions, a regression beta computed against the PSI20, and a peer group beta.

After performing all the mentioned calculations, it was assumed a final beta for the Portuguese operations of 0,97, which is the result of an average of the industry beta and the one computed to the group of comparable firms, since those were found to be the most reliable figures given the industry and the company's characteristics.

Figure 51:Beta levered (Portugal)

Beta calculation:	Beta lev.	Market Cap.(EUR)	Net Debt (EUR)	D/E	Beta Unl.	Taxe rate	Final Beta
PORTUGAL TELECOM SGPS SA-REG	0,99	3.374	7.792	2,31	0,38	30%	0,97
DEUTSCHE TELEKOM AG-REG	0,75	41.399	37.459	0,90	0,61	30%	
FRANCE TELECOM SA	0,85	25.006	28.050	1,12	0,57	33%	
SWISSCOM AG-REG	0,74	16.619	6.756	0,41	0,76	21%	
TELEFONICA SA	0,94	48.001	51.503	1,07	0,59	35%	
TELENOR ASA	0,82	25.411	2.648	0,10	0,93	28%	0,98*
Average	0,82			0,72	0,69		0,95

*Industry Beta Damodaran

The average telecommunications industry beta (0,98), according to Damodaran, was achieved based on a sample of US companies that even though exhibiting similar characteristics and acting in the same core business sector as PT, was calling for an adjustment to accurately reflect the company's risk profile. The referred adjustment was performed combining the obtained figure with a peer group-based beta calculation. To do so, a group of companies operating in the same industry and following similar business structures in what has to deal with its business areas as PT, was considered. The beta estimation process was based on the comparable levered betas and its funding structure. The betas of each of the companies were then unlevered according to its prospects on their financial structure and tax rate. Afterwards, an average of the unlevered betas was computed and was combined with PT's target financial structure (obtained according to the company guidelines) and corporate tax rate to obtain the final levered beta. Since this method also comprises its drawbacks, among which are included the distortion caused by the companies different capital structures, and in a way to take into account the closest PT's peers, an average between the two levered betas was done.

Regarding the levered Beta assumed on the Brazilian operations, it was estimated as an average between the regression beta calculated with the returns against the IBOV Index (0,69) considering data taken from Bloomberg and daily returns from 29-09-2006 until 28-09-2012, and the industry beta, as a way to avoid the divergences evidenced on a possible group of comparable to be used on Oi's case.

8.4.3 Cost of Debt

Finally, the cost of debt was estimated allowing for the cost of capital (WACC) used for valuation purposes to be obtained.

The cost of debt for Portugal was calculated resorting to the company spread, which came from the Damodaran's table that relates the interest coverage ratio of a firm to a synthetic rating and the respective default spread (obtained from traded bonds). By adding the spread that suits PT's reality to the adopted risk free rate, it has been obtained the pre-tax cost of borrowing for a firm. For the associated after-tax value, a country-specific tax rate of 30% was considered.

In what takes to Brazil the value of the component into analysis was achieved through the assuming the average Yield to maturity on long-term bonds from comparables.

8.4.4 Remark on Perpetuity Inputs

Making the assumption that from 2018 onwards Portugal Telecom's value grows in perpetuity, implies agreeing on the fact that it has reached its mature state, and therefore, it will grow at a pace equal or, in most cases, lower than the overall economy.

As a way to capture the different realities embraced by each PT's business unit, it was estimated that the Wireline business would grow at 0,7% in nominal terms, and the Mobile business would face a 1,2% growth rate. In what regards the Brazilian operations, those were assumed to grow at 5,3%. The mentioned figures take into account the nominal GDP growth levels, as well as the projected inflation rates, and the implicit growth forecasted for the last years of the explicit period.

The equated scenario also takes into account that PT operates different business units located in different geographies, which needed to be weighted into the company's profile, especially in what concerns growth prospects and demanded returns.

8.5 (SOTP) Valuation Results

In the words of Luehrman (1997) the best alternative to perform a business valuation relies on applying the basic DCF relationship to the business specific types of cash flows and afterwards add all the present values up. This represents the methodology used to value Portugal Telecom in generic terms. It has been used a Sum-of-the-Parts (SOTP) valuation as a way to achieve the appropriate fair value for the company, considering the cash flows for the three main business units (Mobile, Wireline, and Oi), as well as the international participations.

The process began with the estimation of the Enterprise Value of Portugal Telecom through the sum of each business unit contribution and the remaining international participations both in Africa and Asia. Afterwards, in order to go from the EV to the Equity Value some adjustments were performed, namely the subtraction of PT's net debt and its pension liabilities.

Looking at each business weight on the total EV, Oi is the most significant segment, contributing to almost 31%, followed by the Portuguese operations' segments which represent around 30% in what takes to the Wireline business and 29% to the Mobile one. The participations in Africa enclosed on Africatel are responsible for roughly 7%, whereas the Asian

investments account for 2%. The remaining 1% is linked to the indirect participation on Contax which was determined through its market value.

After all these considerations it was possible to reach an approximate 4,5 bn Euro figure for the company's Equity value which resulted in a YE12 5,01 Euro price target, considering the 896,5 million outstanding shares. When comparing to the price registered on September the 5th of 2012 of 3,9Euro, this represents a 28,5% of implied upside potential and thus, the final recommendation is Buy.

Figure 52: Sum-Of-The-Parts Valuation table

Business	Stake	Stake Value	weigh (% EV)	Method
Portugal	100%	6.910	59,4%	
Mobile business	100%	3.421	29,4%	DCF
Wireline business	100%	3.489	30,0%	DCF
Oi	25,6%	3.568	30,7%	DCF
Contax		92	0,8%	Market Value
Africatel	75%	842	7,2%	
Unitel	18,8%	676	5,8%	EV/EBITDA
MTC	25,5%	101	0,9%	EV/EBITDA
CVT	30,0%	59	0,5%	EV/EBITDA
CST	38,3%	5	0,05%	EV/EBITDA
Timor Telecom	41,1%	54	0,5%	EV/EBITDA
CTM	28,0%	165	1,4%	EV/EBITDA
PT's EV		11.632		
PT's Net Debt		6.114		
Pension liabilities		1.025		
Equity Value		4.492		
Shares Outstanding (Millions)		896,5		
Share Price (EUR)		5,01		
Price (05 September 2012)		3,9		
Implied Upside Potential		28,5%		

8.6 Sensitivity Analysis

The aim of this section is to analyze the impact on the forecasted share price through the change of some key drivers' behavior. For this purpose, it has been performed a sensitivity analysis based on the manipulation of the WACC values, as well as of some of its components, and the growth rates used on the Terminal Value estimation. The analysis was performed taking into account values for the Portuguese business units (Mobile and Wireline) separately when possible, and for the Brazilian ones as well.

The discount factor is one of the major drivers of a valuation, even more if recalling that EV of a business is reflected upon the sum of its discounted FCF. In line with this thought, performing a WACC sensitivity analysis was regarded as crucial to measure the amplitude of a change on this particular factor on the final value.

Figure 53: WACC sensitivity analysis

WACC	Portugal		
	Brazil		
	8,04%	9,04%	10,04%
11,02%	6,56	5,55	4,77
12,02%	6,02	5,01	4,23
13,02%	5,61	4,61	3,83

As expected, the results obtained, with figures ranging from 3,83 to 6,56Euro, clearly shows the relevance of this detail on the valuation as a whole.

Still regarding the discount rate, variations on the risk premium (positive and negative of 1%) and on the levered beta were tested for both rates used in Portugal and Brazil.

Figure 54: WACC components sensitivity analysis: ERP and Beta

Discount rates (POR)	ERP			Discount rates (BRA)	ERP		
Beta	9,13%	10,13%	11,13%	Beta	5,00%	6,00%	7,00%
1,17	4,53	4,00	3,54	1,04	4,95	4,66	4,41
0,97	5,59	5,01	4,48	0,84	5,31	5,01	4,76
0,77	7,03	6,36	5,78	0,64	5,73	5,44	5,19

Additionally, and given the relevance and expression of the Terminal Value on Portugal Telecom's Enterprise Value, it was estimated the impact of variations on the adopted growth rate, with direct implications on the EV component in question. The analysis was performed for each business unit, highlighting the amplitude of the range obtained when looking at the Brazilian operations, given the larger scale adopted.

Figure 55: Terminal Growth sensitivity analysis

g Mobile Business	Share Price	g Wireline Business	Share Price	g Oi Business	Share Price
0,60%	4,84	0,10%	4,83	3,30%	4,49
0,90%	4,92	0,40%	4,92	4,30%	4,71
1,20%	5,01	0,70%	5,01	5,30%	5,01
1,50%	5,11	1,00%	5,11	6,30%	5,41
1,80%	5,22	1,30%	5,22	7,30%	5,98

Finally, it should not be forgotten the impact on other factors that would influence the valuation's final outcome. In this regard, the EBITDA margin constitutes a good example since the FCF calculations begin from EBITDA figures and thus it has been tested to detail, even

though this component has presented regular patterns over time, a trend that is quite common on this particular industry.

Figure 56: EBITDA margins sensitivity analysis

EBITDA Consolidated	Share Price	EBITDA TMN	Share Price
+3%	6,69	+3%	5,41
+2%	6,13	+2%	5,28
+1%	5,57	+1%	5,14
-	5,01	-	5,01
-1%	4,45	-1%	4,88
-2%	3,89	-2%	4,75
-3%	3,33	-3%	4,61

EBITDA Wireline	Share Price	EBITDA Oi	Share Price
+3%	5,61	+3%	5,70
+2%	5,41	+2%	5,47
+1%	5,21	+1%	5,24
-	5,01	-	5,01
-1%	4,81	-1%	4,78
-2%	4,61	-2%	4,55
-3%	4,41	-3%	4,32

8.7 Others factors to influence the valuation outcome

Industry's Microeconomic Characterization

It is worth drawing the attention to some relevant effects that influenced the final outcome of the presented valuation.

- Predominance of fixed costs over the variable ones;
- The existence of economies of scale which translates into one fixed costs structure that accommodate several levels of production;
- Economy of joint production between Communications and Contents;
- The end of cycle for some products such as the Wireline ones;
- The potential of the new channels, as it is the case of Internet connection where the ease to communicate is just a support;
- The effect of communication of social status: alliance between the telecommunications and TV operators – strategic alliance to leverage new markets through Contents;

- In the same line, the effect of communication of social status or intentional opacity on price through the alliance between support and communications- it is the case, for example, of the alliance between telecommunications operators and mobile phone manufacturers;
- The role of uncertainty in what regards the future market share, and the profitability levels given the product or service innovation effect ;
- The existence of important barriers to entrance, namely in what takes to high entrance costs- existence of public grant; high and critical demands regarding the experience curve; and the “privileged access” to the infrastructures induces an effect of oligopoly.

8.8 Difference between Market Price and Valuation Price

The market value versus a valuation can be explained, in regard of a listed company, through the following reasons:

- Generally, the analysts, which are professional practitioners, have privileged access to information that is not fully disclosed and thus not accessed by the small players which form the majority of the market transactions. Thereby, it is justified the fact that the market follows the Investment Houses recommendations.
- In a context of volatility over the sovereign risk, the perspective of continuous recession depresses the assessment of the fundamentals through the incorporation of the agents’ expectations.
- Additionally, the difference is for a speculator a lack of the market and a clear indication to buy or sell in anticipation to the present tendency assumed by the quotation.
- Finally, and on the opposite direction, the discounted cash flow method contains information which at great extent does not incorporate the effects of cooperation and rivalry between the main players – Rating agencies versus Investment Banks belonging to the same Group where there is not always a Chinese Wall effect. Another example can be the cartelization of the major players which are lenders and shareholders at the same time, and tend to protect the quotation, or even the pressure exercised by the concerted actions of short-selling, predicted on the Game Theory.

8.9 Multiples Valuation

8.9.1 Peer Group Presentation

In line with what was discussed on the Literature Review, the relative valuation method is one of the most used techniques to value a company. However, for this theory to hold and become an accurate procedure it has to have adherence to reality, which goes by selecting a solid peer group, composed by companies that can be regarded as true comparables.

The search for the exact group of companies to form the peer group in cause encountered some difficulties mainly related to the geographic areas where the companies establish their operations, and its inherent particular self-defining details where it is included the growth pace, and other aspects which are unique for that market. As way to circumvent as much as possible the associated drawbacks and obtain the peer group, the limits to the selection criteria were broadened, as well as its requirements.

The type of business that each company pursues was one of the aspects to take into consideration, and even though some companies tend to act more on the mobile rather than the wireline side (or the other way around), they all tend to be present in the same type of markets and businesses. The same can not be said about geographic diversification, since most are represented in more than one continent but not all at the same geographic areas. The peer group was built taking those aspects into consideration and trying to overcome the disparities through the inclusion of players which on average would constitute a representative sample.

In this sense other factors, capturing operating and financial characteristics, were included onto the criteria, namely the company's size, future prospects in terms of growth and maturity stage, margins expression (EBITDA margin mainly), financial structure, and other key indicators such as ROE and ROIC, and the value for the most relevant multiples for the industry. Moreover, the choice relied upon companies which are quoted.

Figure 57: Peer Group characteristics

Peer Group	Market Cap.	EV	EBITDA Marg.	Total Debt/EV	D/E	ROE	ROIC	ROA	Rev. Yr Gr
PORTUGAL TELECOM SGPS SA-REG	3.374	11.981	35,6%	0,94	2,31	9,4	4,7	1,8	2,1
DEUTSCHE TELEKOM AG-REG	41.399	87.712	34,4%	0,57	0,90	1,5	1,9	0,4	-6,0
FRANCE TELECOM SA	25.006	58.503	33,2%	0,65	1,12	13,8	8,1	4,1	-0,5
SWISSCOM AG-REG	16.619	23.865	37,5%	0,32	0,41	14,2	4,4	3,4	-4,3
TELEFONICA SA	48.001	48.597	30,9%	0,60	1,07	23,5	9,5	4,2	3,5
TELENOR ASA	25.411	29.232	34,9%	0,24	0,10	8,3	6,7	4,2	-2,5

8.9.2 Relative Valuation

The choice of multiples when valuing and comparing companies depend on the specific nature of the business and the industry where the company operates. Taking that into consideration as well as the analysts preferences when dealing with a telecommunications operator, EV/EBITA was the chosen multiple to perform this valuation exercise.

Making the bridge to what was discussed on the Literature Review, Enterprise Value multiples can be more efficient than Equity Value multiples since the first allow for a direct comparison of companies with different profiles, with no regard to its capital structure (value of a firm is independent of its capital structure in theory), whereas the others are impacted by the leverage effect. Furthermore, the EV multiples are commonly less vulnerable to differences on the accounting methods, given that the denominator is computed based on data prior to the Net Income item, which is particularly relevant when valuing companies detaining participations on foreign businesses, as it is the case of PT and Oi.

Figure 58: Peer Group: ratios comparison

Peer Group	EV/EBITDA	P/E	Price/Sales
PORTUGAL TELECOM SGPS SA-REG	4,9	12,0	0,50
DEUTSCHE TELEKOM AG-REG	4,3	13,2	0,71
FRANCE TELECOM SA	3,8	6,8	0,57
SWISSCOM AG-REG	6,3	10,8	1,77
TELEFONICA SA	4,8	9,6	0,77
TELENOR ASA	6,2	14,5	1,81
Average	5,1	11,0	

Looking at the EV/EBITDA multiple and combining it with the analysts regular practices, it was possible to reach an EV of around 11,9bn Euro which compares to the forecasted 11,6bn Euro through the DCF method. The calculated value is based on a 5,1x multiple which result from the average figure for that specific multiple for YE12 of the companies composing the adopted peer group. This methodology relies on the projections, or forward estimates for the multiple obtained through Bloomberg. Empirical evidence suggests that forward-looking multiples are generally more accurate predictors of value than the historical ones.

8.10 IB valuation comparison

The developed valuation will be compared to one performed by Caixa Banco de Investimento (Caixa BI) equity analyst Guido Varatojo dos Santos, which is distributed by the members of the ESN. Caixa BI provides a regular coverage on Portugal Telecom, presenting valuation updates

every quarter. The report used is the 26th March update, which presents a 5,30Euro price target. As it will be further explored throughout this section, several factors explain the pointed out discrepancy.

After a careful analysis of the IB report some differences were noticed which contribute to explain the final outcome disparity. Some value drivers of different kinds, such as the EBITDA margins, the WACC and its components, terminal growth rates, KPIs for the Portuguese operations, Capex, and the Net Debt figures, reflect the basis for such price mismatch.

In what concerns the operating data, in particular the KPIs related to the Portuguese operations, there is a slight difference on the wireline business where I was a little more optimistic on the fixed retail accesses forecasts, and on the number of mobile customers, where this time I adopted a more conservative approach given the intense competition and the difficulty in increasing market share.

Figure 59: KPIs (Portugal) comparison

KPIs Portugal	Caixa BI		DCF Valuation	
	2012E	2013E	2012E	2013E
Fixed Retail Accesses	4.863	4.911	4.939	5.025
PSTN/ISDN	2.599	2.563	2.593	2.567
Broadband	1.137	1.162	1.186	1.229
Pay-TV customers	1.127	1.186	1.160	1.229
Mobile Customers	7.510	7.540	7.407	7.477

Another divergence relates to the Capex forecasts which are less penalizing on Caixa's valuation. On the opposite direction goes the estimated Net Debt figure which have an wider impact on the share price on Caixa BI analysis, deducting a bigger slice to the company's EV bringing closer the Eq.V figures.

When comparing the EBITDA margins it can be noted a more optimistic approach on my side, mainly in what takes to the margins on the Brazilian operations. Those are the main responsible for the gap (of almost 3%) when looking at the total EBITDA margins.

Figure 60: Caixa BI's EBITDA margin estimates

EBITDA margin (%)	2012E	2013E
Portugal	43,9%	43,6%
Oi	32,0%	32,2%
Total	34,8%	34,7%

Source: Caixa BI

Additionally, differences noticed on the FCFE estimations can not be disassociated from the following step which involves the combination with a discount fact. In cases like the Portuguese operations, where the amount of the FCFE computed during the presented valuation are considerably higher than the ones estimated by Caixa BI, the final value reflects an extenuating effect coming from the higher WACC applied.

As corollary of the data exposed on the Sensitivity analysis chapter it was settled that small changes on WACC can have great repercussions on the final outcome of the valuation. In this case the main components being responsible for such differences on the rates include, the target capital structure assumed and the cost of equity calculations. The last mirrors the different estimation method imposed on the ERP, which has been clearly explained on the DCF assumptions' chapter. The choice of the Risk-free rate on my view does not reflect a bond with zero probability of default, being in this case too high for the purposed. Moreover, the levered betas used, which are higher than usual, also contribute to the denoted mismatch.

Figure 61: Caixa BI's WACC calculation

	Portugal		Brazil
Rf	4,5%	Rf	6,5%
Risk Premium	4,0%	Risk Premium	6,0%
Beta	1,30	Beta	1,20
Re	9,7%	Re	13,7%
Rd (gross)	7,0%	Rd (gross)	9,0%
Rd (net of taxes)	4,9%	Rd (net of taxes)	5,9%
Tax rate	29,5%	Tax rate	34,0%
Capital structure target		Capital structure target	
Equity	80%	Equity	80%
Debt	20%	Debt	20%
WACC	8,75%	WACC	12,15%
g	1,0%	g	3,0%

Source: Caixa BI

Testing the WACC values proposed by Caixa's equity analyst on my valuation the gap is diminished by more than 70%, accounting the difference for 8cents instead of the initial 29cents.

Accommodating the EV forecasts onto a single SOTP table, other aspects contributing to the price differential become clear. The most relevant has to deal with the Oi business segment where the value obtained on Caixa BI's report is considerably higher, contributing to this gap a

conservative approach on my side. Given the volatility on the Brazilian market I decided to be cautious when addressing crucial parts on the process.

Figure 62: Caixa BI's Sum-Of-The-Parts estimates

Business	Stake	Stake Value	weigh (% EV)	Method
Portugal	100%	6.732	54,6%	DCF
Oi	25,6%	4.595	37,2%	DCF
Others		-223		
Contax	19,4%	119	1,0%	Market Value
Africatel	75%	894	7,2%	EV/EBITDA
Timor Telecom	41,1%	51	0,4%	EV/EBITDA
CTM	28,0%	164	1,3%	EV/EBITDA
PT's EV		12.337		
PT's Net Debt		7.014		
Pension liabilities		682		
Equity Value		4.641		
Shares Outstanding (Millions)		875,9		
Share Price (EUR)		5,30		

Source: Caixa BI

Overall, most of the differences come from the distinct expectations about the sector on both sides, mine and Caixa BI's research analyst, but in the end there is a balance commensurate by some trends offsetting others, leading to close estimates to the company's equity value.

8.11 Investment Case

All in all, PT stock is, from my viewpoint, a solid investment case and hence a strong pick for those intended at reaching an attractive combination of steady cash-flow generation and growth opportunities.

Portugal Telecom is the largest player on the Portuguese Telecommunications industry, holding investments in Portugal, Brazil, sub-Saharan Africa, and Asia. PT counts with an approximate 100 million customer base, consolidating its leadership in the Portuguese market.

PT remains loyal to its international growth agenda aiming at developing its resources in its core businesses, without despising its commitment to an operational, cost, financial, and strategic discipline. This pronounced international footprint through the implied diversification on its asset base has played an active role on the company's expansion, not only minimizing uncertainty and risks associated to the Portuguese market, devastated by a strong economic

downturn, but also contributing to embrace flourishing sources of revenues regarded as great future opportunities.

Furthermore, PT is not only leader on the domestic fixed and mobile market, where it enjoys the return of a major investment on FTTH, but also in the Brazilian wireline and broadband market. The company is also able to evidence a strong and visible dividend policy, good under shareholders viewpoint.

Additionally, all the mentioned strengths should not be dissociated from a set of effective opportunities to be explored by the company which further contribute to a positive recommendation scenario. The consistently high EBITDA margins which can be improved due to FTTH, constitutes a great example of what has just been discussed. Likewise, the development of its International assets (mainly in Brazil and Africa), and the avail of the increasing fixed-mobile convergence trend, can also contribute to leverage PT's healthy condition. The considerable bet on financial flexibility through the necessary deleverage should also be noted.

However, it should not be forgotten the threats and weaknesses side of the question which accounts for: possible drawbacks linked to frequent changes in the regulatory framework (namely in what concerns MTR downward revisions); uncertainty arising from Oi's future performance, since it is the fourth player on the Brazilian mobile market and counts with low Pay-TV market share; the economic environment experienced in Portugal, and the consequent credit market trends (with emphasis on the credit constraints and the increasing financial costs) ; as well as the fact that the domestic market has reached a mature stage, namely the mobile one. Most of those factors are even more relevant when considering a highly competitive environment as the one characterizing the telecommunications industry.

9. Conclusion

In this dissertation I assayed a way to provide an insight into the best practices of Valuation, manifesting an intention to highlight the relevance for analysts (and any other type of practitioners) of grounding the process on a solid and consistent theoretical knowledge.

Aspiring at that purpose, an extensive review of the literature I regarded as relevant was conducted. As part of the discussion driven on the referred chapter were distinct subjects considered to be relevant in light of PT's strategy, but the incidence was on the fundamentals

of valuation as a science. In this respect, topics such as the DCF methodology and the inseparable WACC-APV comparison occupy a central place. Without contemning the APV methodology, which has proven to be more consistent in particular situations, the WACC-based DCF was shown to be the most suitable method to correctly value Portugal Telecom. The chosen method is also preferred by most research analysts.

I have resorted to a Sum-Of-The-Parts of all investments hold by Portugal Telecom, estimating the discounted cash flows for the domestic and the Brazilian operations and applying a relative valuation technique to value the other international investments that complete the company's portfolio. In order for this to adhere to reality a deep market analysis combined to the company's strategic plan was taken into consideration.

Looking at the final outcome, a YE12 price target of 5,01Euro was obtained grounded on the appealing investment case introduced on the previous chapter. The outlined fundamentals are sound and growth coming from a sustained international exposure is a reality.

It was also performed a comparison with an equity research report on PT, developed by Caixa BI, which yielded similar results despite the differences on the approach used. The methodology and the data used were close and so it was the final results, as stressed on the sensitivity analysis carried out on the last chapter. It also served to highlight the impact of some key variables, such as the WACC components and the terminal growth rate, on the final value.

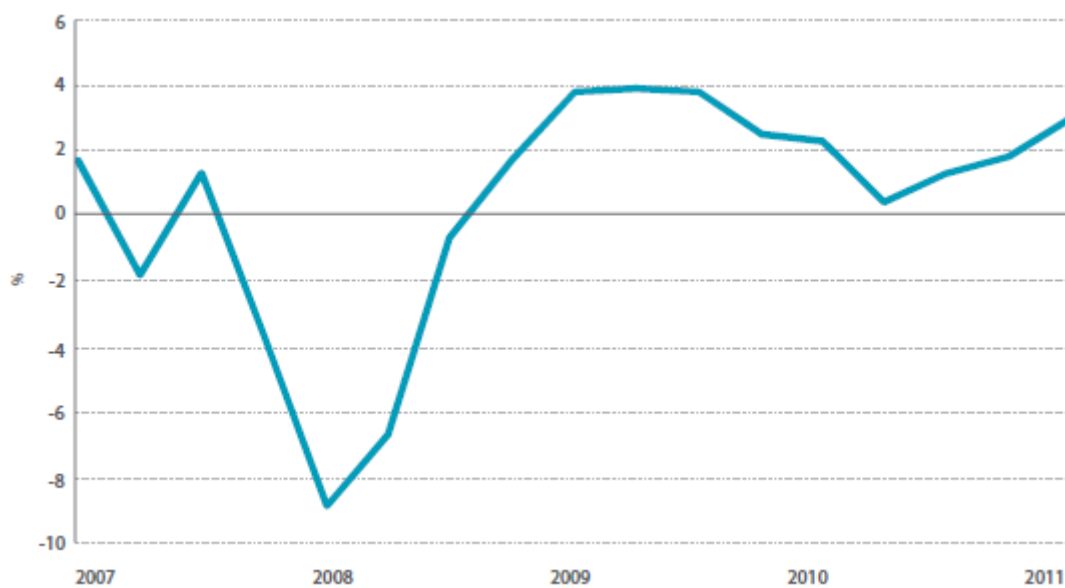
10. Appendix

1. Macroeconomic Environment (Cont.)

1.1 The United States

When looking at the numbers concerning the US GDP in 2010 (3% growth), we observe a deceleration in the growth, since it grew at 1,7% living up to expectations. This fact is mainly responsibility of the external shocks' impact on the US economy, being the most penalizing one the sovereign debt crisis in Europe which resulted in a lower propensity to invest and in a lower public consumption.

Figure: US GDP Growth (%)



Source: Bloomberg

The unemployment rate reduced from 9,1% in the beginning of 2011, to 8,5% at the end. As of the annual inflation, it was set above the 2% target at 3% in the same period.

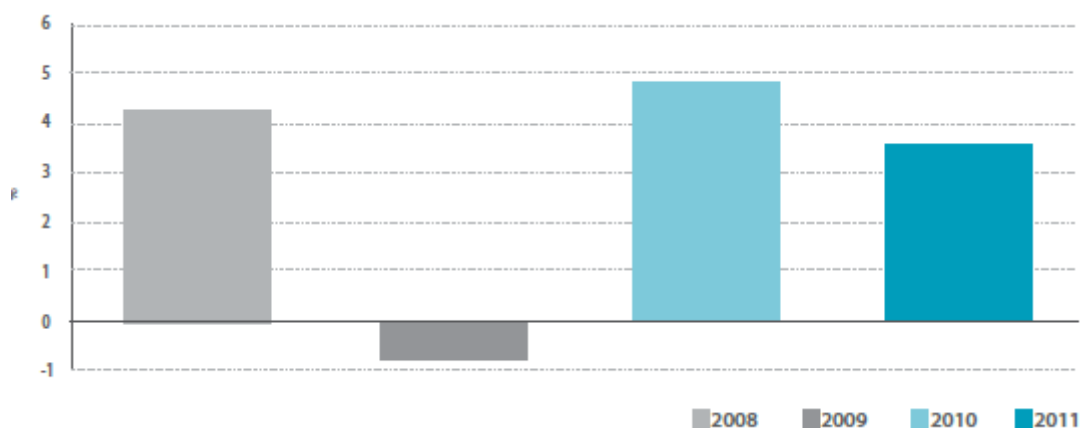
Provided this overall framing, the Federal Reserve moved forward with its second quantitative easing program, acquiring long-term treasuries and keeping the FED funds rate at historically low levels (between 0 and 0,25%).

1.2 Namibia

Leveraged on a credit extension, a solid improvement in the demand for products as specific as the mineral ones, and a fast recovery in mining activities, namely in what involves uranium and diamonds; the Namibian economy is making remarkable progresses having grown 3,6% in

2011 after a 2009 0,7% decrease in this same indicator. Furthermore, in the words of the International Monetary Fund this country's economy is expected to incur in additional growth of around 4,2% in 2012. In line with that, the deficit is predicted to decrease to 4,7% (8,9% forecasted to 2011) while inflation rate should ease to 5,5% (estimated 5,7% in 2011).

Figure: Namibia GDP Growth (%)



Source: IMF

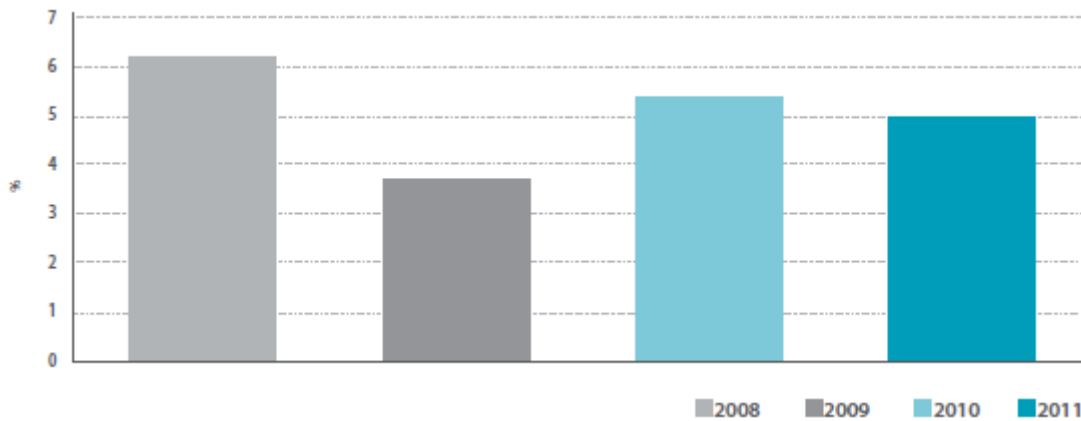
The macroeconomic scenario also involves a situation of high income inequality and unemployment. Conscious of this environment the government has been taking action through the use of expansionary fiscal policies in order to sustain and if possible revert the precariousness of employment, and promote growth.

Based on the adopted course of action the outlook seems promising on the eyes of external entities, and this view is in part sustained good future investment prospects in structural areas such as services and construction. However, it should not be disregarded the presence of relevant downside risks that may injure Namibia's expectations in becoming increasingly competitive and diversified, enhancing in this way its external position.

1.3 Cape Verde

Being one the African countries with higher level of exposure to various European economies, and despite the complicated moment they are going through, plagued by a devastating economic and financial crisis, Cape Verde is still growing at an interesting pace, registering a GDP growth rate of around 5% (slight deceleration from 5,4% in the previous year). This economic activity figures have been held by tourism and some relevant public investments.

Figure: Cape Verde GDP Growth (%)



Source: IMF

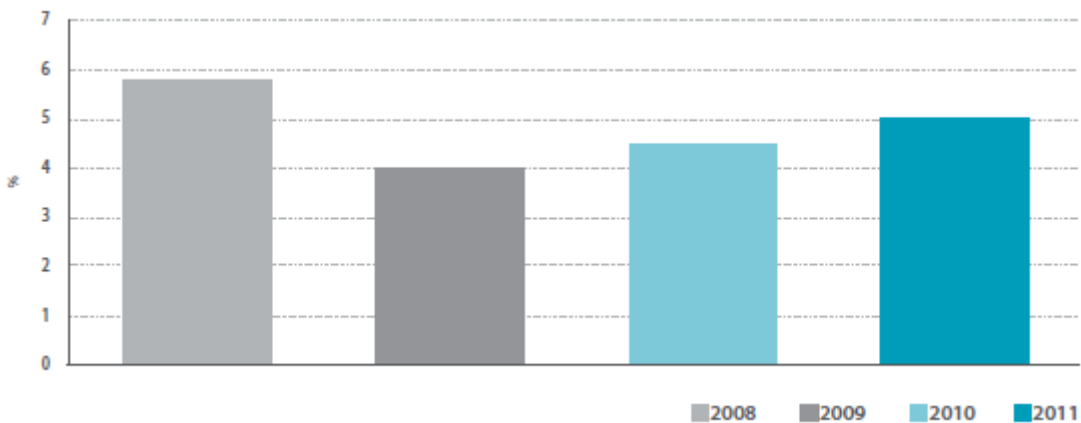
In contrast, some indicators continue to deserve some caution, as it is the case of the overall fiscal deficit which is of 9,9% of GDP (yet meeting estimates), or the consumer price inflation that jumped to 4,5% in 2011 as result of the shocks on food and fuel prices.

In the currency front, the exchange rate is tied against the Euro.

1.4 São Tomé & Príncipe

São Tomé & Príncipe is one the victims of the incapacity of most European countries in overcoming the international financial crisis, which translates into a decrement of foreign direct investments. This was particularly noted in what takes to the GDP growth that registered a significant decline, recovering to approximately 5% in 2011. These prospects are to be maintained based on the consolidation of externally financed projects in several crucial areas (such as tourism or trade), and especially on oil drilling activities.

Figure: São Tomé & Príncipe GDP Growth (%)



Source: IMF

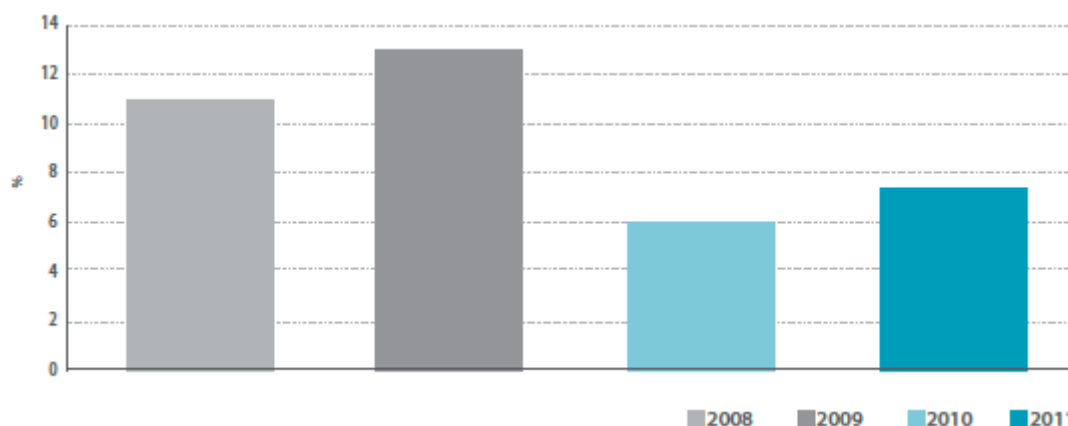
Even though registering high values, inflation has decrease to figures around 12% in 2011. As for the exchange rate, it is following the Euro trends for the past two years.

1.5 Other Geographies

1.5.1 East Timor

Supported on a continuous government spending through the implementation of a plan targeted at a strategic and sustainable development, East Timor has been registering considerable figures in what takes to GDP's growth (around 10%). Public investments have allowed improving infrastructures and making this country's intentions of becoming a higher income county within twenty years plausible. It is also relevant to mention the importance of the petroleum business for this economy's development, which is facing strong demand and rising prices.

Figure: East Timor GDP Growth (%)



Source: IMF

As a consequence of a weak US dollar, high food prices, and need for increasing government spending, inflation continued at high levels and rising to 13,4% in the end of 2011.

2. Industry: Telecommunications Context in Portugal

2.1 Portugal Telecom's Positioning

Portugal Telecom is a Portuguese operator with international expression. PT counts with more than 93 million customers scattered by the geographies where it operates: Portugal, Brazil,

Africa (in four locations), and Asia. The international component is crucial for PT as it is proven by the percentage of revenues realized outside Portugal (around 58%, from which 53% are from Brazil).

PT bases its operations on its core values, being defined as an innovative, customer-oriented company operating in different segments. In what takes to the Residential segment, consolidation of the TV strategy inculcated is the path to follow (currently have approximately 30% market share on the internal pay-TV market). On the Personal segment, the course of action is directed towards developing new data and internet products and services taking advantage of strategic partnerships, as well as, rethinking its tariff plans in order to positively influence the mobile business. Finally, on the Corporate segment the future goes through the use of the new Data Centre, and a solid bet on cloud-services.

As sustained by the company's financial statements, the international expression is key for value creation in this particular sector. In this sense, PT has developed a valuable portfolio of assets whose management should be its first concern. The strategy is assembled on sharing the know-how across its businesses allowing for a better operational performance in the end.

3. Company Overview

3.1 Business Profile (cont.)

PT also holds investments in Namibia through its 25,5% share in MTC. Additionally in this particular case PT, under an agreement with other shareholders, assumes the role of setter and even has the power to control the operating and financial policy of the Namibian mobile operator. The company has been focused on innovation through the increased offer of smartphones and linked services, with emphasis on the broadband usage through the improvement on quality and speed. MTC's customer base is mainly composed by prepaid users, counting with around 1,95 million customers.

The company's revenues have been following a growing trend, culminating in 2011 in 1,608 million Namibian Dollars.

In Cape Verde PT holds a 30% stake in the local mobile, fixed and data services provider, Cabo Verde Telecom (CVT). The mobile telecommunications industry at Cape Verde Islands is predominantly marked by the pre-paid solutions, with approximately 99% percent of the total subscribers. The fixed line services in its turn, evince a penetration rate of about 15,2%. As a

result of a visible effort conducted by the operator in what has to deal with stimulating data and IPTV usage, both broadband and TV showed clear results, representing together almost 39% of the wireline customer base. Some advances have also been made in the corporate segment through the offer of tailor made services.

CVT's gross operating revenues showed some growth from 2009 to 2010, keeping about the same figures (about 84 million) to 2011.

Finally, in what takes to its investments in Africa, and in particular in São Tomé and Príncipe, PT has a 38,3% participation in CST, Companhia Santomense de Telecomunicações. This a fixed, mobile and data services provider, which registered a 11,9 million (in local currency) revenues in 2011.

Operations in Asia. PT's presence in Asia is made visible through its investments in Timor Telecom and CTM.

Regarding the first company, it is a fixed and mobile telecommunications provider operating in East Timor. PT holds a 41,12% interest in such company which counts with an interesting penetration of data contents, accounting for about 18% of the mobile services revenues, as a result of the company's effort on promoting these services together with the voice ones.

Timor Telecom recent strategy allowed for it to grow from 48,6 million US dollars in 2009 to 66,4 million in 2011.

Companhia de Telecomunicações de Macau (CTM) also makes part of PT investments portfolio in Asia, holding a 28% interest on it. CTM is both a mobile and fixed line telephone service provider in the region of Macau, registering a 31,2% coverage of fixed lines, and around 635 thousands customers linked to its mobile services.

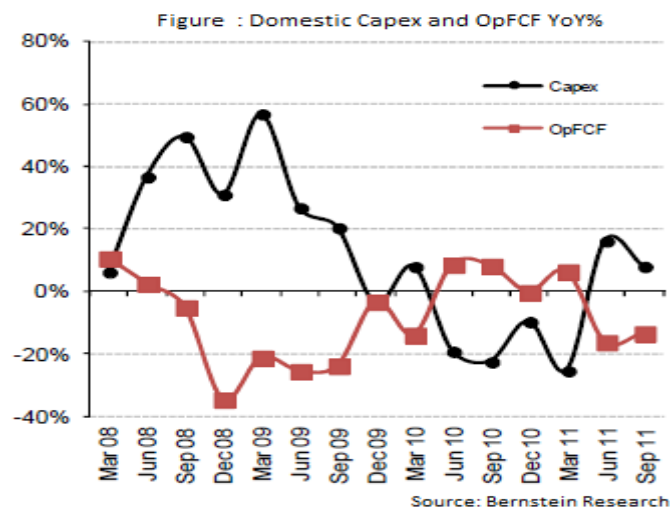
As a result of a strategy based on the promotion of equipment and services to corporate customers, with particular focus on the mobile business area, CTM increased its operating revenues from 2,760 million Patacas in 2010 to 3,979 million Patacas in 2011. Mobile service revenues had an extremely important role in this denouement since it registered a growth of 9,5%, mainly due to smartphones and wireless broadband increasing penetration.

3.2 Strategy by Segment

Looking at each segment individually, PT believes that it can address each type of needs adapting its processes and thus its final offer. In what concerns the Residential services, PT is focused on making the difference through providing a sophisticated multi-screen Pay-TV experience, sustained on the belief that next generation access networks will allow for a growing connectivity, constituting in this way a great market opportunity. Multi-devices connection is regarded as a trend to be consistently leveraged in the future. Associated to this trends surge the cloud-computing concept, allowing for an easier access to software and technology linked with high levels of security and storage capacity. PT has been giving solid steps in differentiating through following those trends, having established important partnerships and developed new and innovative services and applications.

In the Personal segment PT is focused on leveraging mobile data consumption through the convergence of services offered. In this sense, the company bets on taking the best out of the increasing penetration of mobile devices (such as laptops, smartphones, and other) and the significant growth in data services and applications. PT has a complete offer of TV, Internet, and is also enhancing the quality of its mobile offer by creating new pre and post-paid tariffs. Those are high quality (mainly targeted to high-value customers) and customizable and intended to change the type of competition in the market, shifting it away from competition on pricing.

Based on its transport and access networks PT intends to supply the business segment with new and optimized services including IT/IS and BPO ones. PT has registered a significant investment in infrastructures, with emphasis on its new data center built in Portugal. Additionally, PT wants to provide its enterprise customers with innovative cloud-computing services, grounded by solid partnerships with multinational experts such as Microsoft.



As mentioned before, PT is turned into adding value to the group by increasing its international exposure since it believes that its international assets are the most likely to be the catalysts of future growth, with highlight to Brazil. Thereby, Portugal Telecom wants to leverage the strategic value of its international investments, reinforcing its presence in some of the mentioned locations. PT as centered its strategy in promoting commercial and operational excellence. In a way to bring each business to the top PT finds it crucial to bet on sharing best practices across business units.

In Brazil's particular case, the idea is to build upon the partnership with Oi and take advantage of its great expression in the country to improve operational and financial performance. Using all its knowledge and experience acquired in other markets, PT wants to implement a multidisciplinary offer targeted at addressing all the segments individual needs.

In Africa and Asia the rationale behind the adopted strategy is similar to the one followed in Brazil but with especial attention paid to management control and best practices sharing.

4. Regulatory Background (Cont.)

This regulatory background was set having in mind two main areas of concern: the social and the economic.

The normative regulation, established after the dismantlement of the monopolies on the telecommunications, has been ever since marked by the politic perception that liberalization measures could not set apart or undervalue the basic and essential necessity felt on everyone's daily routine, despite the place we are referring to. Furthermore, the price setting is essential on the telecommunications social regulation context, given that one of the universal service base principals is to ensure the access to the universal service provision at moderate prices by everyone.

The liberalization of the telecommunications was promoted to abolish the exclusive rights, creating juridical conditions for the access more or less free of the private initiative to the sector. Yet, since the beginning, the public powers' pretension was not only to make the competition on this industry juridically possible, it was more than that, and it assumed the responsibility to create juridical conditions to favor the implementation of an effective competition on the sector.

It should be considered that, by one side, on the telecommunications industry, as in other network industries, the new agents had to face an operator benefiting from a dominant position inherited from the monopoly's time. On the other side, and constituting this another particularity of this type of industries, the new operators can not fail to take advantage of the essential resources which can only be provided by the incumbent operator, fact that should be carefully addressed and deserves particular attention by the public powers, since there are commercial relations that have to be established between the several agents on the market. In other words, also within this framework, now concerning the economic regulation, the public powers assumed the key role of establishing rules targeted at assuring the balanced functioning of the telecommunications market, correcting its natural distortions and creating juridical conditions for it to get closer to the perfect competition model.

In this sense, it was imperious to establish rules in favor of competition. This is the explanation for the economic regulation to present itself as a favorable one to the emerging operators, since it is marked by the objective of protecting and contemplating them with a positive discrimination. The asymmetry shows up in this way as a characteristic aspect of all the telecommunications' normative regulation rationale.

4.1 Aspects with Practical Relevance

Analyzing some of the most important aspects which have practical relevance for the present case, some highlights should be made.

For the past years or even a decade the mobile market shares have remained constant in what concerns the three main operators in Portugal. This high level of concentration that characterizes the Portuguese mobile market can be largely explained by the existing barriers faced by consumers when trying to switch network. As a consequence of the evident mismatch between the defined on and off-net prices, being the offers associated to the first type of price in rule considerably cheaper, consumers tend to opt for belonging to the same network of their network contacts (including relatives, friends, colleagues) as a way to take advantage of the discounts practiced by the on-net solution.

This issue has been in the center of the telecommunications regulators priorities since it is regarded as a hindrance to development and thus has sparked a set of measures targeted at boosting competition. Action has been taken at different levels. In the middle of 2009 the European Commission, having in mind benefiting costumers and at the same time galvanizing

competition, adopted a recommendation addressing the termination rates and promoting its decrease. With this specific course of action the EC wanted to promote fairness through the charge of fair prices to consumers, it intended to see both fixed and mobile termination rates reduced until it matched the cost of an efficient operator in regard for terminating calls on its network.

Ever since, the effects have been felt all over Europe, including Portugal and its mobile market which has been fatigued by those acts. The mentioned recommendation has had its repercussions on the Portuguese mobile market in gradual stages. On the first year following the EC announced action the MTRs had fallen approximately 6 cents, and in mid-2011 it was around 3,5 cents. Consequently, Portugal Telecom's mobile operator, TMN, taking into account that it is the largest player on the Portuguese market, and that its interconnection revenues are higher than the referent costs, has been watching its interconnection revenues dramatically falling, with an annual decrease of more than 30% in the second half of 2011, being responsible for almost 40% of its total losses on service revenues during this period.

Reinforcing the EC recommendation, ANACOM suggested an even greater reduction in MTRs, aiming at achieving a figure of 1,25 cents in the end of 2012.

However, this is a sensible matter which involves a lot of discussion regarding its practical long-term effects on competition. As mentioned before, the Portuguese reality is deeply marked by high levels of concentration on the mobile market and evidences a considerable dependence on the network effect, since that a consumer will benefit more from adopting the network which count on the widest consumer base. This phenomenon occur thanks to the previously mentioned difference between on and off-net prices.

As a natural response to the competitive environment surrounding the telecommunications operators, the largest ones will tend to practice higher off-net prices as a way to retain and even add new customers to its vast subscriber base. The change on the MTR policy promoted at an international level and materialized by ANACOM is contributing to a change on this landscape, empowering the smaller operators which are pressuring the larger ones to reduce its off-net price policy. In the end, this was the effect pursued by ANACOM which will allow for a healthier competition benefiting the consumers above all.

From a corporate view, and having practical relevance, this encouraged MTR reduction reflects on the ARPU, which will continue to feel a pronounced pressured. Additionally, competition may turn attention to differentiation and at the same time, become more intense.

4.2 PT's Case

Contrary to what occurred in other countries, in Portugal, the liberalization of the telecommunications market did not imply the abolishment of the public service figure. This is the result of before enacting the sector liberalization; the Government had attributed to Portugal Telecom the concession of the telecommunications public service, for a period of 30 years: contract valid from March the 20th of 1995, celebrated under the bases adopted by the decree law nº 40/95, of February the 15th - meanwhile, the concessionaire was legally designated as universal service provider of telecommunications on the term of contract (article 23rd, nº 1, of the law decree nº 458/99, of November the 5th).

Although it had taken into account the imminent liberalization of the sector, predicting, for instance, the restriction or even loss of exclusive rights, the concession contract ended up by designing a specific regulation for the concessionaire which departs in some aspects of the regulation applicable to the majority of the operators competing with it: it has the right to manage the activities predicted on the contract for the stated 30 years (the licenses attributed to the same type of activities are thought to last 15 years); not acting under a license regime, the concessionaire does not have to pay fees for issuing or renewing such acts (however, it pays a rent to the State for the network concession); unlike competitors, is exempt from municipal licensing in urban matters, as well as from the payment of fees for the occupation of public domain; it is subject to the application of contractual penalties (adding to the fines that can also be applied); in his capacity as company concessioned by the State is not subject to the application of the Competition Defense Law in the scope and validity of the contract of concession (Law decree nº 371/93, of October the 29th, article 41st, nº 2).

4.3 ANACOM: Administration and Supervision Activity

At great extent, the administration and supervision functions of the telecommunications sector in Portugal, or strictly speaking the administrative regulation, are assigned to an independent administrative authority, the ANACOM – Autoridade Nacional de Comunicações. However, the law attributes the member of the Government in charge of the communications area some important competences regarding the sector's administration. These competences add to those that the Government already possesses in the scope of the normative regulation (including editing law decrees and administrative regulations), where it is included, moreover, the definition of the strategic lines and the guiding principles of all the public policy for the telecommunications.

In short, ANACOM has regulatory power, power for awarding titles which enable the exercise of telecommunication activities, supervisory power, authoritative power, sanctioning power and, power to mediate disputes between operators.

5. Portugal Telecom's business structure

Telecommunications in Portugal		Telecommunications in Brazil	
Customer Segment		Customer Segment	
Residential		Residential	
Personal	PT Comunicações 100%	Personal	Oi 25,6%
Enterprise	TMN 100%	Enterprise	
Other		Other	

Other Telecommunications Businesses		
Unitel 25% (a)(b)	Angola	Mobile
CTM 28% (b)	Macao	Wireline, mobile
MTC 34% (a)	Namibia	Mobile
CVT 40% (a)	Cape Verde	Wireline, mobile
Timor Telecom 41%	East Timor	Wireline, mobile
CST 51% (a)	São Tomé & Príncipe	Wireline, mobile

(a) These stakes are held by Africatel, which is controlled 75% by PT. (b) These stakes are consolidated by the equity method of accounting.

Other Businesses	
Systems and IT: PT Sistemas de Informação	100%
Innovation, research and development: PT Inovação	100%
Backoffice and shared services: PT PRO	100%
Procurement: PT Compras	100%
Call centres and telemarketing services: Contax in Brazil	44,4% and PT Contact 100%

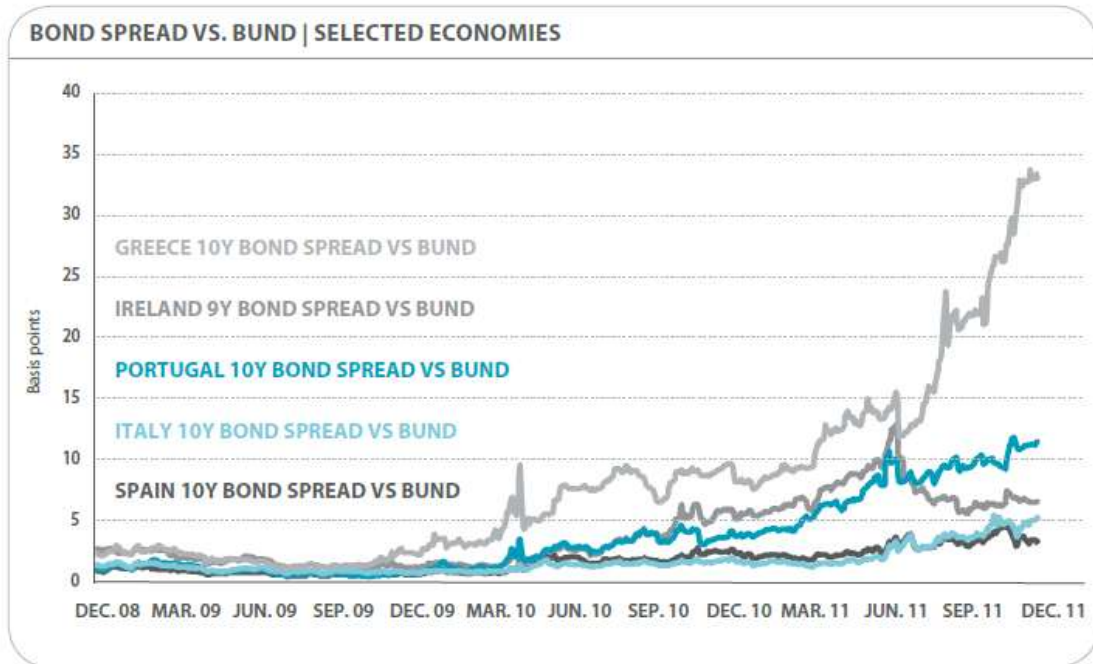
Source: Portugal Telecom Annual Report, 2011

6. Shareholder Structure

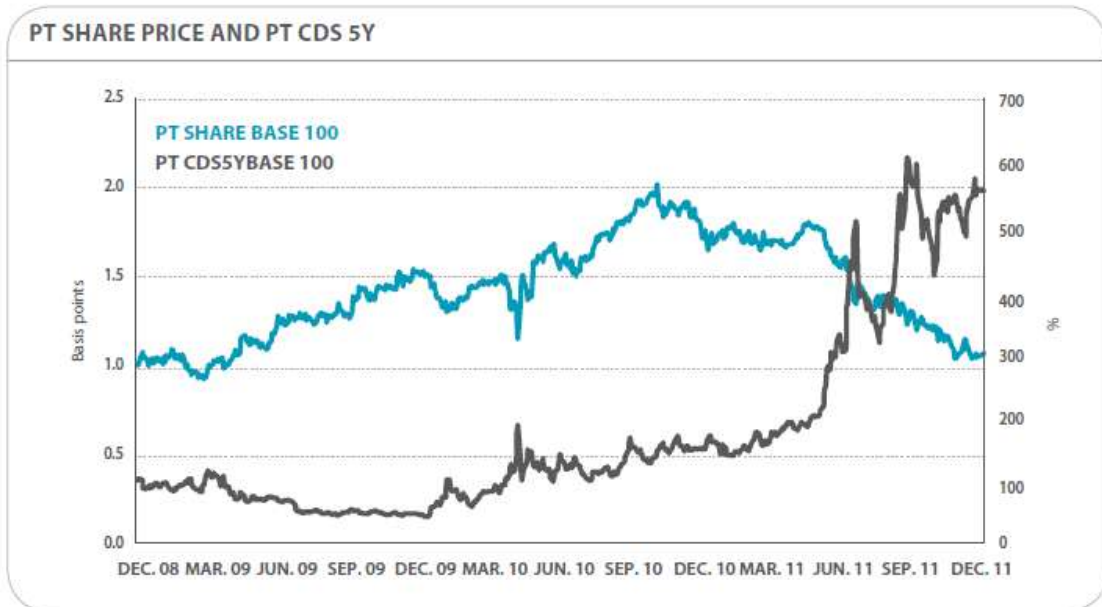
Data do report	Acionistas	Nº. de ações	% do capital	% direitos de voto	Distribuição Geográfica Jul-2012
10-jul-12	RS Holding	90.111.159	10,05%	10,05%	
11-out-12	Grupo Espirito Santo	90.020.566	10,04%	10,04%	
31-mai-12	Telemar Norte Leste S.A.	89.651.205	10,00%	10,00%	
30-jun-12	Caixa Geral de Depósitos	57.582.885	6,42%	6,42%	
06-fev-12	Norges Bank	44.442.888	4,96%	4,96%	
12-jan-12	UBS AG	42.024.498	4,69%	4,69%	
31-dez-11	Brandes Investments Partners	34.628.566	3,86%	2,87%	
31-dez-10	Grupo Visabeira	23.642.885	2,64%	2,64%	
10-dez-09	BlackRock Inc.	21.025.118	2,35%	2,35%	
03-fev-10	Controlinveste International Finance	20.419.325	2,28%	2,28%	
14-dez-12	Barclays Plc	19.525.168	2,18%	2,18%	
17-out-12	Wellington Management Company	18.409.822	2,05%	2,05%	
26-out-12	Ontario Teachers' Pension Plan Board	18.000.000	2,01%	2,01%	

Source: Portugal Telecom (Website)

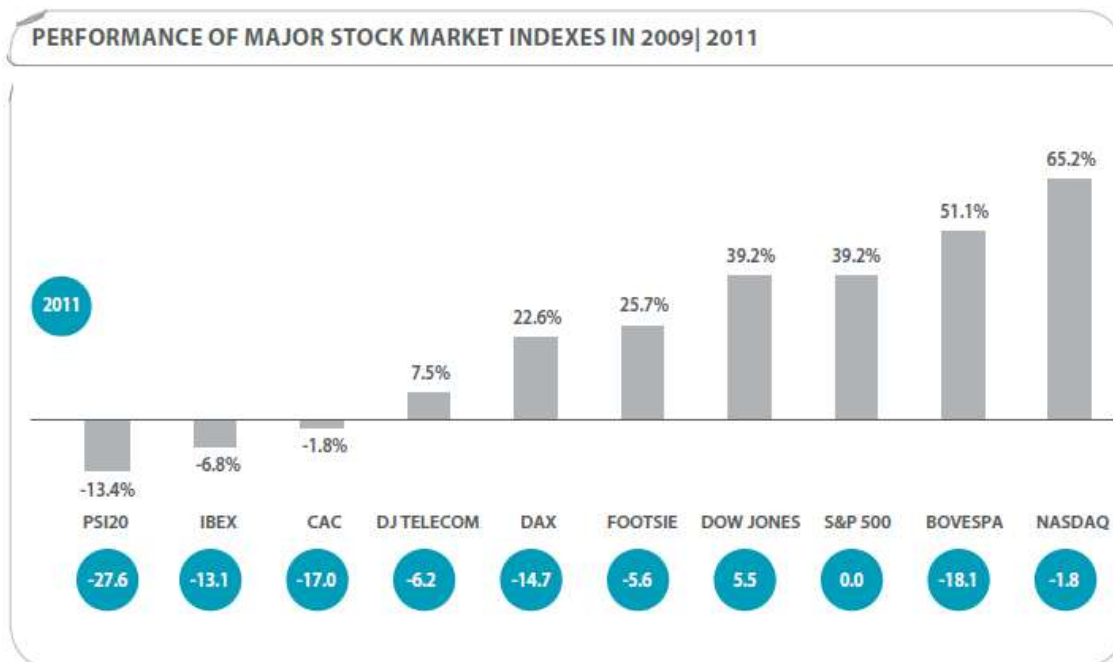
7. PT Share Price



Source: Bloomberg



Source: Bloomberg



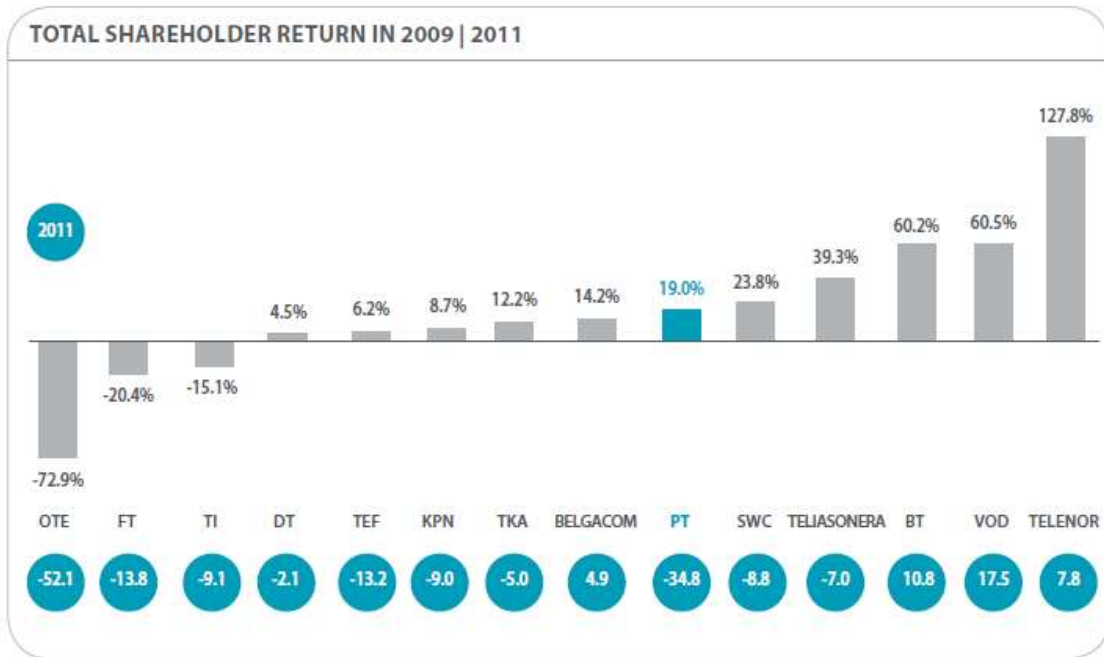
Source: Bloomberg

8. PT Stock Performance for the last 5 years

Reported values	2011	2010	2009	2008	2007
As at 31 December					
Share capital (M€)	27	27	27	27	31
No. of shares (million)	897	897	897	897	1,026
Price (€)	4.45	8.38	8.52	6.07	8.93
Annual average price (€)	6.77	8.74	6.93	7.25	9.98
Market cap (M€)	3,989	7,513	7,638	5,442	9,160
Gross dividend per share (€)	0.65	2.300	0.575	0.575	0.575
Dividend yield (year avg. price)	9.6%	26.3%	8.3%	7.9%	5.8%
Net income (M€)	339	5,672	684	582	742
Pay-out ratio	164.8%	35.5%	73.6%	88.6%	79.5%
Price / transactions					
High (€)	8.85	11.00	8.69	9.45	9.60
Low (€)	4.40	6.480	5.479	4.35	8.02
Volume (million shares)	702	1,203	777	1,057	1,343
Traded value (M€)	4,897	10,418	5,370	7,783	13,343
Performance*					
Portugal Telecom	(46.9%)	17.8%	54.9%	(29.9%)	13.8%
PSI-20	(27.6%)	(6.6%)	39.0%	(49.6%)	19.8%
DJ Stoxx Telecom Europe	(6.2%)	10.3%	18.9%	(32.6%)	19.8%

Source: Bloomberg; PT site

9. Total Shareholder Return: PT versus Major players in the industry



Source: Bloomberg

10. Main Indicators and Forecasts: Portugal

Main features of country forecast - PORTUGAL

	2010			Annual percentage change						
	bn EUR	Curr. prices	% GDP	92-07	2008	2009	2010	2011	2012	2013
GDP	172.7	100.0	100.0	2.2	0.0	-2.9	1.4	-1.6	-3.3	0.3
Private consumption	113.9	66.0	66.0	2.4	1.3	-2.3	2.1	-3.9	-6.1	-1.0
Public consumption	37.3	21.6	21.6	2.4	0.3	4.7	0.9	-3.9	-2.9	-2.6
Gross fixed capital formation	34.1	19.8	19.8	2.1	-0.3	-8.6	-4.1	-11.4	-11.8	0.7
of which : equipment	10.3	5.9	5.9	3.7	6.9	-13.0	4.4	-13.3	-14.0	0.5
Exports (goods and services)	53.6	31.0	31.0	6.0	-0.1	-10.9	8.8	7.4	2.5	4.7
Imports (goods and services)	65.9	38.2	38.2	6.0	2.3	+10.0	5.4	-5.5	-6.9	1.9
GNI (GDP deflator)	167.0	96.7	96.7	2.0	-0.4	-3.4	2.3	-1.8	-3.7	-0.1
Contribution to GDP growth :										
Domestic demand				2.6	0.9	-2.5	0.7	-5.6	-6.8	-1.0
Inventories				0.2	0.0	-1.1	0.1	-0.5	-0.1	0.2
Net exports				-0.6	-1.0	0.7	0.6	4.4	3.6	1.1
Employment				0.4	0.5	-2.6	-1.5	-1.5	-3.3	0.2
Unemployment rate (a)				6.5	8.5	10.6	12.0	12.9	15.5	15.1
Compensation of employees/head				5.8	3.0	2.8	1.4	-0.8	-3.1	-0.6
Unit labour costs whole economy				4.0	3.5	3.1	-1.5	-0.8	-3.1	-0.6
Real unit labour costs				0.0	1.9	2.2	-2.6	-1.4	-3.8	-1.8
Saving rate of households (b)				-	7.1	10.9	10.2	9.4	8.2	8.3
GDP deflator				4.0	1.6	0.9	1.1	0.7	0.7	1.3
Harmonised index of consumer prices				3.6	2.7	-0.9	1.4	3.6	3.0	1.1
Terms of trade of goods				0.4	-3.1	5.0	0.1	-2.0	-0.5	0.2
Merchandise trade balance (c)				-10.3	-12.9	-10.0	-10.0	-7.2	-4.2	-3.4
Current-account balance (c)				-7.9	-12.6	-10.8	-9.7	-6.5	-3.6	-2.9
Net lending(+) or borrowing(-) vis-à-vis ROW (c)				-5.8	-11.4	-9.6	-8.3	-5.0	-2.2	-1.4
General government balance (c)				-4.2	-3.6	-10.2	-9.8	-4.2	-4.7	-3.1
Cyclically-adjusted budget balance (c)				-4.4	-3.6	-8.9	-9.1	-3.0	-2.6	-1.3
Structural budget balance (c)				-	-4.7	-8.6	-8.4	-6.2	-3.0	-1.3
General government gross debt (c)				55.9	71.6	83.1	93.3	107.8	113.9	117.1

Source: European Commission, Eurostat

11. Main Indicators and Forecasts: Brazil

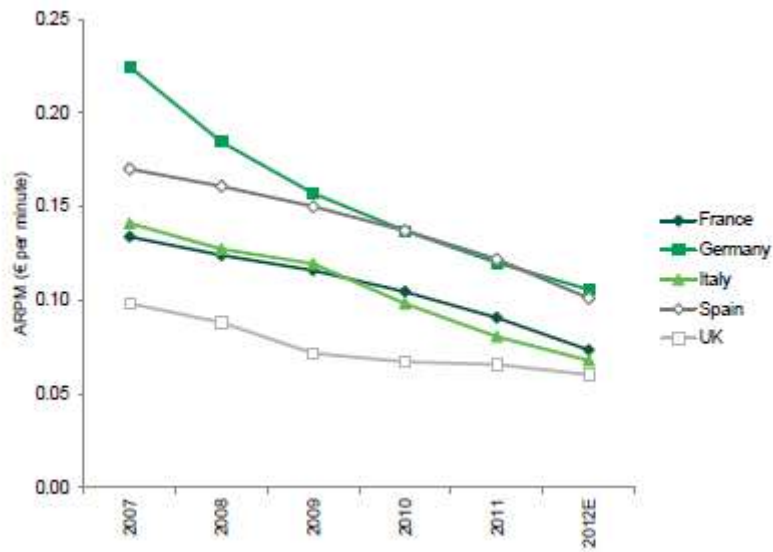
GDP	2010	2011	2012E	2013E
GDP growth (%)	7,5	2,7	2,5	3,3
Household Consumption	6,9	4,1	3,5	4,2
Government Consumption	4,2	1,9	3,2	3,6
FCGF	21,3	4,7	1	1,4
Exports	11,5	4,5	4,1	1,5
Imports	35,8	9,7	5,6	2,7

Inflation	2012E	2013E	2014E
	5,2	4,8	5,1

Source: Central Bank of Brazil

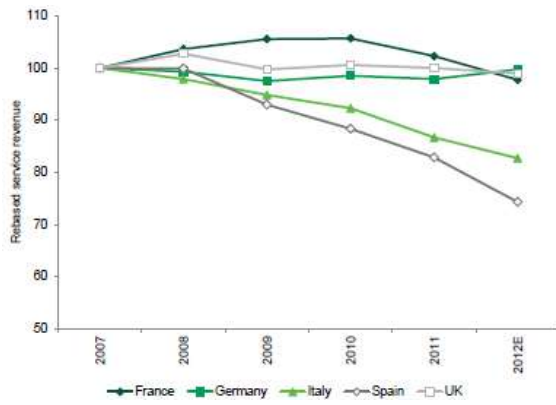
12. Other Industry and Company Figures

12.1 ARPM Trends in Major European Markets

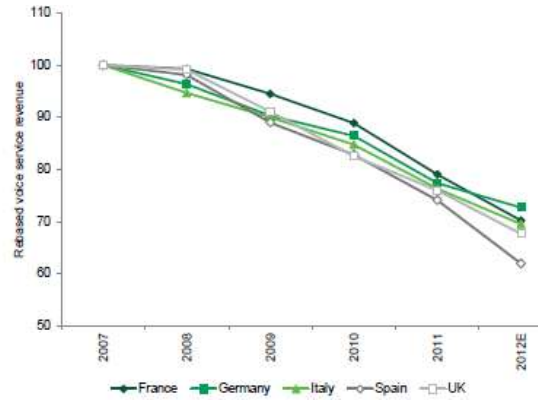


Source: Espirito Santo Investment Bank

12.2 Mobile Service Revenues Trends in Europe

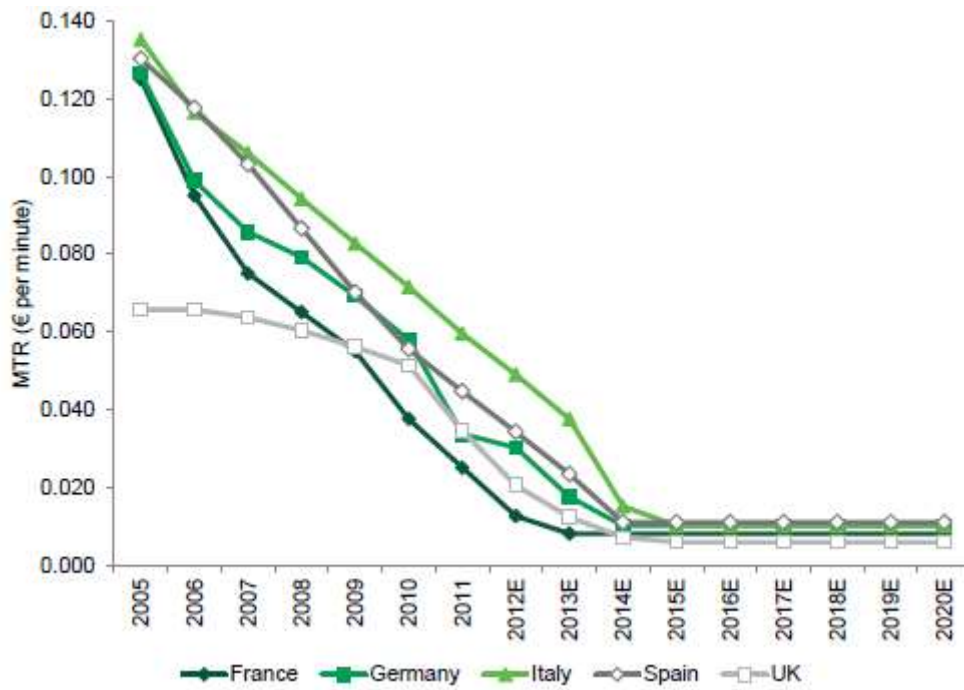


12.3 Voice Service Revenues Trends in Europe



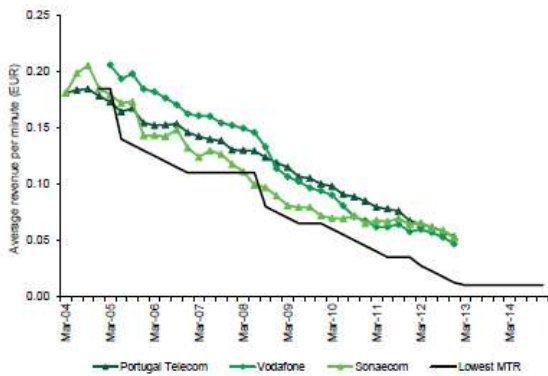
Source: Espirito Santo Investment Bank

12.4 Mobile Termination Rates Trends in Europe

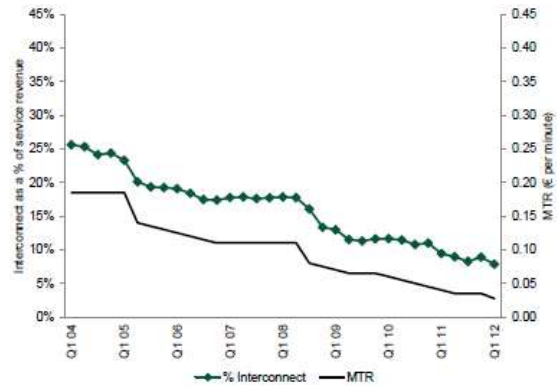


Source: Espirito Santo Investment Bank

12.5 ARPM Trends versus Lowest MTR

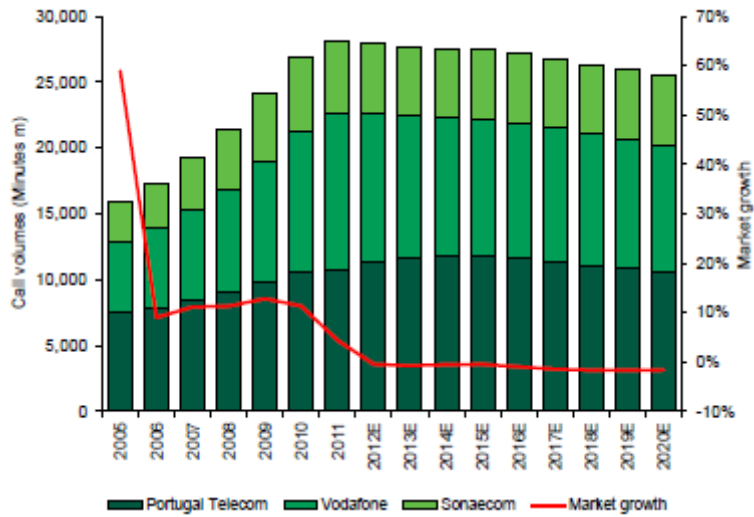


12.6 TMN: Termination as percentage of Service Revenues



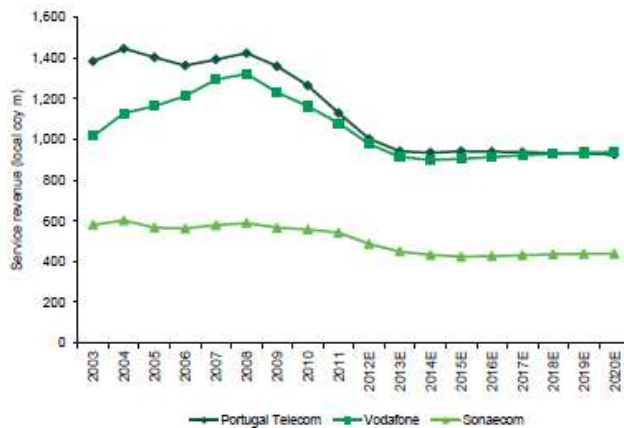
Source: Espirito Santo Investment Bank

12.7 Voice Traffic Volume Estimates for the Portuguese Market



Source: Espirito Santo Investment Bank

12.8 Total Service Revenue Estimates for the Portuguese Market by Operator



Source: ESIB

13. Domestic Mobile Business: Operating data – Number of Customers (Forecasted)

Operating Data (from ANACOM)	2010	1Q11	2Q11	3Q11	4Q11	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
TMN Customers (k)	7.419	7.414	7.334	7.354	7.444	7.444	7.407	7.477	7.618	7.782	7.923	8.016	8.063
% of TMN subscribers	44,1%	44,3%	44,0%	43,7%	43,9%	44,0%	44,0%	44,0%	44,0%	44,0%	44,0%	44,0%	44,0%
Proxy Ts (assuming TMN 11FY 44%)	16481	16459	16327	16644	16822	16822	16739	16898	17216	17587	17905	18117	18223
		-0,1%	-0,8%	1,0%	0,8%	0,6%	-0,5%	0,9%	1,9%	2,2%	1,8%	1,2%	0,6%
Total subscriptions	16824	16736	16668	16829	16956	16927	16843	17003	17323	17696	18016	18229	18336
		-0,5%	-0,4%	1,0%	0,8%	0,6%	-0,5%	0,9%	1,9%	2,2%	1,8%	1,2%	0,6%
Penetration rate	154,9%	154,7%	153,4%	156,3%	157,9%	157,9%	157,9%	159,4%	162,4%	165,9%	168,9%	170,9%	171,9%
						3,0%	0,0%	1,5%	3,0%	3,5%	3,0%	2,0%	1,0%
Population Portugal (source: INE)	10.642	10.641	10.643	10.649	10.654	10.654	10.601	10.601	10.601	10.601	10.601	10.601	10.601

14. Domestic Mobile Business: Customer Data and Voice Market Estimation

Customer**	2010	1Q11	2Q11	3Q11	4Q11	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Customer: Data market	310,6	75,6	78,9	85,1	79,9	319,5	336,5	356,6	377,9	397,6	416,9	430,3	441,5
Δ	-1,1%	1,4%	-0,9%	4,8%	6,3%	2,9%	5,3%	6,0%	6,0%	5,2%	4,9%	3,2%	2,6%
Customer: Voice market	788,4	176,3	174,4	171,4	165,1	687,1	654,6	641,0	640,0	644,0	649,1	653,5	657,3
Δ	-8,3%	-13,8%	-11,1%	-13,0%	-11%	-12,8%	-4,7%	-2,1%	-0,2%	0,6%	0,8%	0,7%	0,6%
ARPU (customer: data)	13,954	3,400	3,586	3,859	3,577	14,421	15,142	15,899	16,535	17,031	17,542	17,893	18,251
Δ	-3,4%	-0,7%	-1,8%	4,2%	6,0%	3,3%	5,0%	5,0%	4,0%	3,0%	3,0%	2,0%	2,0%
ARPU (customer: voice)	35,422	7,926	7,927	7,767	7,392	31,012	29,461	28,577	28,006	27,586	27,310	27,173	27,173
	-10,3%	-15,5%	-11,9%	-13,5%	-13,6%	-12,4%	-5,0%	-3,0%	-2,0%	-1,5%	-1,0%	-0,5%	0,0%

15. Domestic Wireline Business: Retail Voice and Non-Voice Market Estimation

Retail**															
Euro million		2009	2010	1Q11	2Q11	3Q11	4Q11	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Retail: Voice market Rev.		680	581	143	136	130	126	535	508	490	477	468	463	455	447
as % of Retail Rev.		70%	60%	58%	56%	54%	52%	55%	51%	48%	46%	44%	42%	39%	37%
PSTN/ISDN (k)		2.746	2.695	2.683	2.672	2.662	2.653	2.653	2.593	2.567	2.547	2.536	2.530	2.511	2.493
Traffic-generating lines		2.612	2.600	2.597	2.593	2.589	2.585	2.585	2.541	2.524	2.511	2.504	2.501	2.484	2.468
Δ		-1,6%	-0,5%	-0,1%	-0,1%	-0,1%	-0,1%	-0,6%	-1,7%	-0,6%	-0,5%	-0,3%	-0,1%	-0,7%	-0,7%
Carrier pre-selection		134	95	87	79	73	68	68	53	43	37	32	29	27	26
Weigh on total PSTN/ISDN		-23,2%	-28,9%	-9,0%	-8,3%	-8,1%	-6,8%	-28,5%	-22,8%	-18,2%	-14,6%	-11,7%	-9,3%	-7,5%	-6,0%
Retail traffic (proxy)		4.713	4.581	1.138	1.098	1.080	1.130	4.446	4.315	4.210	4.129	4.069	4.031	3.993	3.956
Δ		-5,5%	-2,8%	-2,4%	-3,9%	-2,5%	-2,9%	-2,9%	-2,9%	-2,4%	-1,9%	-1,4%	-0,9%	-0,9%	-0,9%
ARPU		247	216	53	51	49	48	202	196	191	187	185	183	181	179
Retail: Other (non-voice) market Rev.		291	388	103	107	111	117	438	488	521	563	606	652	700	751
as % of Retail Rev.		30%	40%	42%	44%	46%	48%	45%	49%	52%	54%	56%	58%	61%	63%
Fixed Broadband Retail		862	1.001	1.019	1.040	1.072	1.105	1.105	1.186	1.229	1.300	1.374	1.449	1.526	1.605
Δ		21,5%	16,1%	13,2%	2,1%	3,1%	3,1%	10,3%	7,3%	3,7%	5,8%	5,6%	5,5%	5,3%	5,2%
TV customers		581	830	876	919	974	1.042	1.042	1.160	1.229	1.300	1.374	1.449	1.526	1.605
Proportion of TV to Fixed broadband customers		67%	83%	86%	88%	91%	94%	94%	98%	100%	100%	100%	100%	100%	100%
ARP access		202	212	54	54	54	54	204	208	212	216	221	225	230	234
									2%	2%	2%	2%	2%	2%	2%
Pay-TV Market (Total TV subs)		2.528	2.775					2.977	3.109	3.184	3.258	3.333	3.408	3.483	3.557
		10,6%	9,7%					7,3%	4,4%	2,4%	2,3%	2,3%	2,2%	2,2%	2,1%
Cable TV (subs)		1.452	1.438	1.428	1.428	1.448	1.448	1.448							
DTH (subs)		645	670	671	676	699	699	699							
Other technologies (subs)		432	666	3.537				830							
PT Subs Share		23,0%	29,9%	31,2%	32,3%	33,5%	35,0%	35,0%	37,3%	38,6%	39,9%	41,2%	42,5%	43,8%	45,1%
Pay-TV Penetration rate		44,2%	48,5%					51,8%	54,1%	55,4%	56,7%	58,0%	59,3%	60,6%	61,9%
Δ		3,8%	4,3%					3,3%	2,3%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%

Data from ICP-ANACOM

16. PT's EBITDA Margins

EBITDA margins	2007	2008	2009	2010	1Q11	2Q11	3Q11	4Q11	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
TMN	44,0%	42,8%	44,4%	46,0%	47,5%	46,9%	45,5%	40,9%	45,2%	44,6%	44,6%	43,3%	43,1%	43,1%	43,1%	43,1%
Wireline	48,1%	45,9%	41,1%	38,6%	41,2%	41,1%	40,5%	40,3%	40,8%	40,9%	41,4%	41,9%	42,4%	42,9%	43,4%	43,9%
Oi				34,9%	28,6%	35,0%	35,6%	33,1%	33,7%	34,9%	34,8%	34,8%	34,0%	34,1%	34,2%	34,6%
Others	25,3%	28,5%	31,0%	25,4%	22,6%	14,3%	42,5%	26,5%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%
PT	37,3%	36,9%	41,7%	39,9%	41,0%	35,7%	37,4%	30,8%	35,6%	37,5%	37,5%	37,4%	37,3%	37,5%	37,6%	37,8%

17. PT's Net Working Capital

Euro million	2007	2008	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Net Working Capital	2.328	1.442	1.958	7.889	6.292	6.426	6.263	6.214	6.230	6.238	6.302	6.532
Δ		-886	516	5.931	-1.597	134	-162	-49	16	9	64	230
Current ratio	3,6	2,5	2,9	12,7	5,7	5,7	5,7	5,7	5,7	5,7	5,7	5,7
Quick ratio	3,5	2,3	2,7	12,5	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6
Cash ratio	1,7	0,8	1,1	7,1	3,9	3,9	3,9	3,9	3,9	3,9	3,9	3,9

18. PT's CAPEX

Capex	2008	2009	2010	1Q11	2Q11	3Q11	4Q11	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Capex Portugal	647	745	657	101	149	150	247	647	678	652	636	621	609	594	579
Capex Mobile	245	180	133	19	38	35	39	131	186	180	180	178	176	173	169
%	15,3%	11,9%	9,6%	6,2%	12,3%	11,0%	12,4%	10,5%	16,0%	16,0%	15,5%	15,0%	14,5%	14,0%	13,5%
Capex Wireline	403	565	524	82	112	114	208	516	493	472	456	443	433	422	410
	20,9%	29,0%	27,2%	18,1%	24,2%	24,9%	44,4%	28,0%	27,0%	26,0%	25,0%	24,0%	23,0%	22,0%	21,0%
Capex Oi			0	0	117	107	221	444	532	499	448	421	379	350	347
					14,0%	13,3%	28,4%	18,4%	20,4%	20,4%	19,4%	18,9%	17,9%	16,9%	15,9%
Capex Other			141	21	30	30	52	133	141	150	160	170	181	192	204
			33,2%	18,6%	15,0%	17,7%	30,8%	20,5%	20,5%	20,5%	20,5%	20,5%	20,5%	20,5%	20,5%
Total			798	122	296	286	520	1.224	1.351	1.301	1.243	1.212	1.169	1.136	1.130

19. PT's TMN FCF

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
EBITDA	563	517	503	502	511	523	532	539
Depreciation and Amortization	232	244	237	230	222	215	207	201
Other expenses	10,5	6,9	6,7	6,9	7,1	7,2	7,4	7,5
Financial expenses (gains) except interest	1,0	0,9	0,9	0,9	1,0	1,0	1,0	1,0
EBIT	319	265	258	265	282	300	316	330
Taxes	95,7	79,5	77,5	79,5	84,5	90,1	94,7	98,9
Operating Profit	223	186	181	185	197	210	221	231
Depreciation and Amortization	232	244	237	230	222	215	207	201
Net Working Capital	1.275	1.187	1.154	1.188	1.215	1.243	1.263	1.280
Change in NWC		-88	-33	34	27	28	20	17
Cash Flow from Operations	456	517	450	381	392	397	408	414
Net Capex	131	186	180	180	178	176	173	169
FCFF	325	331	270	201	214	221	235	245
Discounted FCF		331,4	247,3	169,1	164,9	156,3	152,7	146,0
Nominal Growth rate	1,2%							
Terminal value	2053,6							
Enterprise Value	3421,2							

20. PT's Wireline FCF

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
EBITDA	753	747	751	764	783	807	832	858
Depreciation and Amortization	476	500	485	470	454	440	425	411
Post retirement benefits	56	60	58	58	58	58	59	61
Other expenses	18	11	11	11	11	11	11	12
Financial expenses (gains) except interest	2,0	1,9	1,9	1,9	2,0	2,0	2,0	2,1
EBIT	201	175	195	223	258	296	335	372
Taxes	60,2	52,4	58,5	67,0	77,3	88,9	100,4	111,7
Operating Profit	141	122	137	156	180	207	234	261
Depreciation and Amortization	476	500	485	470	454	440	425	411
Post retirement benefits	56	60	58	58	58	58	59	61
Net Working Capital	1.887	1.869	1.858	1.867	1.891	1.926	1.962	2.000
Change in NWC		-18	-11	9	23	35	36	39
Cash Flow from Operations	672	699	691	675	669	670	682	694
Net Capex	516	493	472	456	443	433	422	410
FCFF	156	206	219	219	226	237	261	283
Discounted FCF		206,3	200,9	184,4	174,5	167,7	169,1	168,5
Nominal Growth rate	0,7%							
Terminal value	2217,6							
Enterprise Value	3489,0							

21. Oi's FCF

Euro million	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
EBITDA	924	910	850	802	757	722	708	755
Depreciation and Amortization	610	640	622	603	582	563	544	526
EBIT	314	270	228	200	175	159	164	229
Taxes	107	92	78	68	60	54	56	78
Operating Profit	207	178	151	132	116	105	108	151
Depreciation and Amortization	610	640	622	603	582	563	544	526
Net Working Capital	2.469	2.666	2.502	2.362	2.276	2.168	2.118	2.231
Change in NWC		197	-164	-140	-85	-109	-50	113
Cash Flow from Operations	817	621	936	875	783	777	702	564
Net Capex	444	532	499	448	421	379	350	347
FCFF	373	90	437	427	362	397	352	217
Discounted FCF		89,8	390,1	340,2	257,8	252,2	199,6	109,9
Nominal Growth rate	5,3%							
Terminal value	1928,6							
Enterprise Value	3568,2							

22. PT's International Investments

Contax		Value
Current Market Cap.	1.286	92
PT's Stake	19,4%	
Exchange rate EUR/BRL	2,702	
Exchange rate BRL/EUR	0,370	

Total excl. Contax	1.061,0
Total incl. Contax	1.153,4

(a) These stakes are held by Africatel, which is controlled 75% by PT.

Million	4Q10	2010	1Q11	2Q11	3Q11	4Q11	2011	Value
Unitel (a) - stake 25%								676,1
Revenues (euro)	309	1.133	290	300	324	367	1.282	
EBITDA (euro)	167	652	161	168	190	204	721	
EBITDA margin	54,2%	57,6%	55,4%	55,8%	58,4%	55,4%	56,3%	
MTC (a) - stake 34%								101,5
Revenues (euro)	40	149	38	37	43	42	159	
EBITDA (euro)	21	79	20	20	20	20	80	
EBITDA margin	51,1%	53,2%	52,0%	53,8%	47,9%	47,3%	50,0%	
CVT (a) - stake 40%								59,0
Revenues (euro)	25	84	17	21	20	25	84	
EBITDA (euro)	10	39	10	9	10	10	39	
EBITDA margin	38,7%	45,9%	57,0%	44,1%	49,7%	40,6%	47,1%	
CTM - stake 28%								164,6
Revenues (euro)	68	260	83	91	91	92	356	
EBITDA (euro)	28	112	29	31	27	30	118	
EBITDA margin	41,0%	43,2%	35,1%	34,6%	30,3%	32,1%	33,0%	
CST (a) - stake 51%								5,4
Revenues (euro)	3	13	3	3	2	3	12	
EBITDA (euro)	0	3	1	1	1	0	3	
EBITDA margin	6,7%	23,8%	25,0%	27,0%	31,6%	15,0%	24,1%	
Timor Telecom - stake 41.12%								54,5
Revenues (euro)	12	43	11	11	12	13	48	
EBITDA (euro)	7	24	6	6	7	8	27	
EBITDA margin	56,2%	56,4%	56,2%	52,1%	54,3%	60,0%	55,7%	

23. Ratings and associated Spreads

Interest Coverage Ratio		Rating	Spread
>	≤		
-10000	0,199999	D	12,00%
0,2	0,649999	C	10,50%
0,65	0,799999	CC	9,50%
0,8	1,249999	CCC	8,75%
1,25	1,499999	B-	6,75%
1,5	1,749999	B	6,00%
1,75	1,999999	B+	5,50%
2	2,249999	BB	4,75%
2,25	2,499999	BB+	3,75%
2,5	2,999999	BBB	2,50%
3	4,249999	A-	1,65%
4,25	5,499999	A-	1,40%
5,5	6,499999	A+	1,30%
6,5	8,499999	AA	1,15%
8,5	100000	AAA	0,65%

Source: Damodaran

24. Exchange Rates: BRL/EUR

Exchange rate BRL/EUR	1Q11	2Q11	3Q11	4Q11	2011
EUR/BRL	2,306	2,260	2,507	2,416	2,635
BRL/EUR	0,434	0,442	0,399	0,414	0,379

2012E	2013E	2014E	2015E	2016E	2017E	2018E
2,702	2,850	3,029	3,202	3,471	3,712	3,712
0,370	0,351	0,330	0,312	0,288	0,269	0,269

25. PT's Historical Balance Sheet

Euro million	2007	2008	2009	2010	1Q11	2Q11	3Q11	4Q11	2011**
Cash and equivalents	1.835	1.125	1.518	5.107	4.494	3.505	3.867	5.668	5.668
Accounts receivable, net	1.442	1.394	1.538	3.403	3.976	3.911	3.935	1.936	1.936
Inventories, net	161	297	240	102	132	132	129	134	134
Financial Investments	565	634	614	540	394	433	505	556	556
Current Assets	4.003	3.450	3.910	9.151	8.996	7.981	8.436	8.294	8.294
Intangible assets, net	3.383	3.463	4.074	1.112	4.916	5.562	5.042	5.424	5.424
Tangible assets, net	3.585	4.638	4.844	3.875	6.430	6.402	6.134	6.229	6.229
Accrued post retirement benefits	134	2	68	2	12	13	12	14	14
Other assets	911	973	784	338	1.676	1.912	1.686	1.664	1.664
Deferred tax assets and prepaid expenses	1.106	1.189	1.161	693	1.474	1.433	1.313	1.320	1.320
Total assets	13.122	13.714	14.840	15.170	23.505	23.304	22.622	22.944	22.944
Accounts payable	1.109	1.374	1.339	723	1.287	1.212	1.137	1.446	1.446
Current Liabilities	1.109	1.374	1.339	723	1.287	1.212	1.137	1.446	1.446
Gross debt	6.217	6.696	7.046	7.206	11.922	12.380	12.408	12.281	12.281
Accrued post retirement liability	1.464	1.837	1.558	969	1.024	975	958	1.004	1.004
Other liabilities	1.878	1.777	1.603	1.063	3.074	3.051	2.989	3.105	3.105
Deferred tax liabilities and deferred income	372	834	907	600	953	1.476	1.359	1.365	1.365
Total liabilities	11.040	12.518	12.453	10.561	18.260	19.093	18.851	19.201	19.201
Equity before non-controlling interests	1.338	232	1.318	4.392	4.315	3.284	2.888	2.828	2.828
Non-controlling interests	744	964	1.069	217	929	927	883	915	915
Total shareholders' equity	2.082	1.196	2.387	4.609	5.244	4.211	3.771	3.743	3.743
Total liabilities and shareholders' equity	13.122	13.714	14.840	15.170	23.505	23.304	22.622	22.944	22.944

26. PT's Forecasted Balance Sheet

Euro million	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Cash and equivalents	5.789	5.643	5.598	5.612	5.620	5.677	5.885
Accounts receivable, net	1.977	1.928	1.912	1.917	1.920	1.939	2.010
Inventories, net	136	133	132	132	132	134	139
Financial Investments	568	554	549	551	552	557	578
Current Assets	8.471	8.257	8.192	8.213	8.224	8.308	8.611
Intangible assets, net	5.390	5.347	5.289	5.243	5.195	5.154	5.143
Tangible assets, net	6.189	6.140	6.074	6.020	5.965	5.919	5.905
Accrued post retirement benefits	14	14	13	13	14	14	14
Other assets	1.699	1.656	1.643	1.647	1.649	1.666	1.727
Deferred tax assets and prepaid expenses	1.348	1.314	1.303	1.307	1.308	1.322	1.370
Total assets	23.110	22.726	22.514	22.443	22.355	22.383	22.771
Accounts payable	1.477	1.440	1.428	1.432	1.434	1.449	1.501
Current Liabilities	1.477	1.440	1.428	1.432	1.434	1.449	1.501
Gross debt	11.903	11.292	10.710	10.173	9.598	9.043	8.605
Accrued post retirement liability	1.025	1.000	992	994	996	1.006	1.042
Other liabilities	3.171	3.091	3.066	3.074	3.078	3.110	3.223
Deferred tax liabilities and deferred income	1.394	1.359	1.348	1.352	1.353	1.367	1.417
Total liabilities	18.970	18.181	17.545	17.025	16.460	15.974	15.789
Equity before non-controlling interests	3.146	3.472	3.812	4.172	4.554	4.966	5.425
Non-controlling interests	993	1.074	1.158	1.247	1.341	1.443	1.556
Total shareholders' equity	4.140	4.545	4.969	5.418	5.896	6.409	6.981
Total liabilities and shareholders' equity	23.110	22.726	22.514	22.443	22.355	22.383	22.771

27. PT's Historical Income Statement

Euro million	2007	2008	2009	2010	1Q11	2Q11	3Q11	4Q11	2011
Operating revenues	6.148	6.721	3.733	3.742	871	1.798	1.747	1.731	6.147
Wireline	1.962	1.931	1.948	1.929	456	461	459	467	1.843
Mobile TMN	1.543	1.594	1.518	1.387	303	307	320	316	1.245
Brazil - Oi	0	0	0	0	0	832	801	778	2.412
Other and eliminations	2.643	3.196	268	426	112	197	167	170	646
Operating costs	3.857	4.241	2.177	2.251	514	1.155	1.093	1.197	3.959
Wages and salaries	638	617	547	637	157	303	284	277	1.020
Direct costs	907	1.087	522	548	125	292	299	296	1.012
Commercial costs	1.068	1.233	423	393	73	138	141	166	518
Other operating costs	1.244	1.304	685	673	159	423	369	458	1.408
EBITDA	2.292	2.480	1.557	1.492	357	642	654	534	2.188
Post retirement benefits	1.123	1.268	717	38	12	14	14	18	59
Depreciation and amortization	-65	45	90	759	196	383	365	382	1.326
Income from operations	1.234	1.167	750	695	149	245	275	135	804
Other expenses (income)	318	110	58	281	7	5	12	36	60
Curtailment costs	276	100	15	146	4	1	1	30	36
Net losses (gains) on disposal of fixed assets	(3)	(19)	(2)	(6)	0	(0)	0	(9)	(9)
Net other costs	45	30	46	141	3	4	11	15	33
Income before financial and income taxes	916	1.057	692	414	142	240	264	99	744
Financial expenses (income)	(117)	129	(201)	82	(56)	84	89	96	213
Net interest expenses	197	272	227	185	(17)	99	118	98	297
Equity in earnings of affiliates, net	(126)	(171)	(456)	(142)	(80)	(42)	(47)	(40)	(209)
Net other costs (gains)	(188)	28	28	38	42	28	17	38	125
Income before income taxes	1.033	927	893	332	197	156	175	3	531
Income taxes	243	231	186	78	48	48	48	(36)	108
Income before non-controlling interests	835	696	789	5820*	150	108	127	39	423
Losses (income) attributed to non-controlling interest	(93)	(120)	(105)	(148)	(20)	(25)	(38)	(1)	(84)
Consolidated net income	742	576	685	5.672	130	82	89	38	339

28. PT's Forecasted Income Statement

Euro million	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating revenues	6.278	6.119	6.071	6.086	6.095	6.157	6.382
Wireline	1.826	1.815	1.824	1.847	1.882	1.916	1.954
Mobile TMN	1.160	1.128	1.161	1.187	1.214	1.234	1.251
Brazil - Oi	2.604	2.444	2.307	2.224	2.118	2.069	2.180
Other and eliminations	688	732	778	828	881	937	997
Operating costs	3.923	3.823	3.798	3.817	3.811	3.839	3.968
EBITDA	2.354	2.296	2.273	2.269	2.283	2.318	2.413
Post retirement benefits	60	58	58	58	58	59	61
Depreciation and amortization	1.391	1.351	1.309	1.265	1.224	1.183	1.144
Income from operations	904	887	906	946	1.002	1.076	1.209
Other expenses (income)	37	37	36	36	36	37	38
Income before financial and income taxes	866	850	870	910	965	1.039	1.171
Financial expenses (income)	299	271	264	269	283	306	353
Net interest expenses	346	316	309	314	328	351	400
Equity in earnings of affiliates, net	(145)	(142)	(141)	(141)	(141)	(143)	(148)
Net other costs (gains)	99	96	96	96	96	97	101
Income before income taxes	567	579	606	641	682	734	818
Income taxes	170	174	182	192	205	220	245
Income before non-controlling interests	397	406	424	449	477	513	572
Losses (income) attributed to non-controlling interest	(79)	(80)	(84)	(89)	(95)	(102)	(113)
Consolidated net income	318	325	340	360	383	412	459

29. Domestic Mobile Business: Income Statement

Euro million	2007	2008	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating revenues	1.543	1.594	1.518	1.387	1.245	1.160	1.128	1.161	1.187	1.214	1.234	1.251
Services rendered	1.393	1.425	1.360	1.265	1.132	1.081	1.052	1.058	1.082	1.107	1.125	1.140
Customer	1.112	1.167	1.174	1.099	1.007	991	998	1.018	1.042	1.066	1.084	1.099
Interconnection	247	231	161	142	100	70	44	30	30	30	30	30
Roamers	34	26	26	24	26	20	10	10	10	11	11	11
Sales	142	159	144	112	90	70	68	94	96	98	100	101
Other operating revenues	8	9	14	10	11	9	9	9	9	9	9	9
Operating costs, excluding D&A	864	912	844	749	682	643	625	659	676	691	703	712
Wages and salaries	53	52	48	48	45	41	40	41	42	43	44	44
Direct costs	283	279	259	246	220	206	201	206	213	218	222	225
Commercial costs	318	324	277	230	215	205	200	221	226	231	234	238
Other operating costs	210	257	259	226	203	191	185	191	195	200	203	205
EBITDA	679	682	674	638	563	517	503	502	511	523	532	539
Depreciation and amortisation	224	232	221	226	232	244	237	230	222	215	207	201
Income from operations	455	450	453	412	331	273	266	273	290	308	324	338
Other expenses (income)	3,7	6,0	8,5	31,5	10,5	6,9	6,7	6,9	7,1	7,2	7,4	7,5
Income before financial and income taxes	452	444	445	381	320	266	259	266	282	301	317	331
Financial expenses (income)	-9,4	15,2	10,4	7,7	6,8	6,4	6,2	6,4	6,6	6,7	6,8	6,9
Net interest expenses	-10,5	15,0	9,7	6,5	5,8	5,5	5,3	5,5	5,6	5,7	5,8	5,9
Net foreign currency exchange losses	0,1	-0,7	-0,1	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Net gains on financial assets and other investments	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Net other costs (gains)	1,0	0,8	0,8	0,8	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,7
Income before income taxes	461,0	429,0	434,3	373,3	313,2	259,7	252,8	259,5	275,9	294,5	309,9	323,7
Minus Income taxes	123,0	114,2	113,5	102,9	94,0	77,9	75,9	77,8	82,8	88,3	93,0	97,1
Net Income	338,0	314,8	320,7	270,5	219,3	181,8	177,0	181,6	193,2	206,1	217,0	226,6

30. Domestic Wireline Business: Income Statement

Euro million	2007	2008	2009	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Operating revenues	1.962	1.931	1.948	1.929	1.843	1.826	1.815	1.824	1.847	1.882	1.916	1.954
Retail	1.023	953	971	969	973	995	1.012	1.040	1.074	1.115	1.155	1.199
Wholesale	487	488	495	491	468	450	437	430	426	426	426	426
Data & corporate	266	287	301	288	265	244	230	219	210	204	198	193
Other wireline revenues	187	203	181	181	137	137	137	137	137	137	137	137
Operating costs, excl. D&A & PRBs	1.019	1.044	1.148	1.184	1.091	1.079	1.064	1.060	1.064	1.075	1.085	1.096
Wages and salaries	253	227	233	228	209	207	206	207	209	213	217	222
Direct costs	354	391	409	438	400	387	376	368	364	361	358	355
Commercial costs	91	113	118	127	113	119	118	119	120	123	125	127
Other operating costs	321	314	388	390	369	366	364	366	370	377	384	392
EBITDA	943	887	800	745	753	747	751	764	783	807	832	858
Post retirement benefits	324	366	435	38	56	60	58	58	58	58	59	61
Depreciation & amortisation	-65	45	90	462	476	500	485	470	454	440	425	411
Income from operations	685	477	275	245	221	187	208	236	271	309	348	386
Other expenses (income)	282,4	101,2	45,5	211,2	18	11	11	11	11	11	11	12
Income before financial and income taxes	402,8	375,5	229,9	34,1	203	176	197	225	260	298	337	374
Financial expenses (income)	3,2	7,9	11,3	7,1	6,8	6,7	6,7	6,7	6,8	6,9	7,0	7,2
Net interest expenses	2,1	7,3	8,1	5,0	4,8	4,8	4,7	4,8	4,8	4,9	5,0	5,1
Net foreign currency exchange losses	1,1	1,0	-0,5	-0,7	-0,6	-0,6	-0,6	-0,6	-0,6	-0,7	-0,7	-0,7
Net gains on financial assets and other investments	-1,4	-2,2	-1,3	-0,9	-0,9	-0,9	-0,9	-0,9	-0,9	-0,9	-0,9	-1,0
Net other costs (gains)	1,4	1,8	5,0	3,7	3,5	3,5	3,5	3,5	3,5	3,6	3,7	3,7
Income before income taxes	399,6	367,6	218,5	27,0	196	170	190	219	253	291	330	367
Minus Income taxes	115,7	93,0	47,0	16,9	58,8	50,9	57,1	65,6	75,9	87,4	98,9	110,2
Net Income	284,0	274,6	171,5	10,1	137	119	133	153	177	204	231	257

31. Oi: Income Statement (in Euros)

Euro million	1Q11	2Q11	3Q11	4Q11	2011	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Consolidated net revenues	770	802	709	748	2.745	2.604	2.444	2.307	2.224	2.118	2.069	2.180
Wireline	573	559	493	517	1.946	1.787	1.627	1.495	1.411	1.324	1.284	1.348
Mobile	189	223	198	216	744	768	772	769	771	754	747	791
Other Services	7	19	17	15	55	49	46	43	42	40	39	41
Operating costs	549	521	457	500	1.821	1.694	1.595	1.505	1.467	1.396	1.361	1.425
Cost of Services	157	160	153	154	562	515	492	462	462	439	426	440
Cost of Goods Sold	5	7	5	5	19	18	17	16	16	15	15	15
Interconnection Costs	132	130	119	125	454	439	408	387	372	355	347	365
Selling Expenses	139	145	119	132	480	442	415	392	378	360	351	370
General and Administrative Expenses	69	76	69	70	254	227	213	201	194	185	181	190
Other Operating (Revenue) Expenses,	48	4	-7	14	52	52	49	46	44	42	41	44
EBITDA	220	280	252	248	924	910	850	802	757	722	708	755
Depreciation and amortisation	162	163	140	146	610	640	622	603	582	563	544	526
Income from operations	59	118	112	101	314	270	228	200	175	159	164	229
Equity Accounting												
Financial Expenses	94	98	138	91	421	400	375	354	341	325	318	335
Financial Income	66	69	77	64	276	262	246	232	224	213	208	219
Income Before Tax and Social Contr	31	88	52	74	245	132	99	78	57	47	54	113
Income Tax and Social Contribution	11	30	18	25	84	45	34	26	19	16	19	38
Net Income	20	58	34	49	161	87	65	51	38	31	36	75

1. Introduction

Portugal Telecom is the largest player on the Portuguese Telecommunications industry, holding investments in Portugal, Brazil, sub-Saharan Africa, and Asia. PT counts with an approximate 100 million customer base, consolidating its leadership in the Portuguese market.

PT remains loyal to its international growth agenda. This pronounced international footprint through the implied diversification on its asset base has played an active role on the company's expansion, not only minimizing uncertainty and risks associated to the Portuguese market, devastated by a strong economic downturn, but also contributing to embrace flourishing sources of revenues regarded as great future opportunities.

Furthermore, PT is not only leader on the domestic fixed and mobile market, where it enjoys the return of a major investment on FTTH, but also in the Brazilian wireline and broadband market. The company is also able to evidence a strong and visible dividend policy, good under shareholders viewpoint.

Additionally, all the mentioned strengths should not be dissociated from a set of effective opportunities to be explored by the company which further contribute to a positive recommendation scenario. The consistently high EBITDA margins which can be improved due to FTTH, constitutes a great example of what has just been discussed. Likewise, the development of its International assets (mainly in Brazil and Africa), and the avail of the increasing fixed-mobile convergence trend, can also contribute to leverage PT's healthy condition. The considerable bet on financial flexibility through the necessary deleverage should also be noted.

All in all, PT stock is, from my viewpoint, a solid investment case and hence a strong pick for those intended at reaching an attractive combination of steady cash-flow generation and growth opportunities.

2. Valuation

It has been used a Sum-of-the-Parts (SOTP) valuation as a way to achieve the appropriate fair value for the company, considering the cash flows for the three main business units (Mobile, Wireline, and Oi), as well as the international participations both in Africa and Asia.

Looking at each business weight on the total EV, Oi is the most significant segment, contributing to almost 31%, followed by the Portuguese operations' segments which represent around 30% in what takes to the Wireline business and 29% to the Mobile one. The participations in Africa enclosed on Africatel are responsible for roughly 7%, whereas the Asian investments account for 2%. The remaining 1% is linked to the indirect participation on Contax which was determined through its market value.

After all these considerations it was possible to reach an approximate 4,5 bn Euro figure for the company's Equity value which resulted in a YE12 5,01 Euro price target, considering the 896,5 million outstanding shares. When comparing to the price registered on September the 5th of 2012 of 3,9Euro, this represents a 28,5% of implied upside potential and thus, the final recommendation is Buy.

Figure 1: Sum-Of-The-Parts Valuation table

Business	Stake	Stake Value	weigh (% EV)	Method
Portugal	100%	6.910	59,4%	
Mobile business	100%	3.421	29,4%	DCF
Wireline business	100%	3.489	30,0%	DCF
Oi	25,6%	3.568	30,7%	DCF
Contax		92	0,8%	Market Value
Africatel	75%	842	7,2%	
Unitel	18,8%	676	5,8%	EV/EBITDA
MTC	25,5%	101	0,9%	EV/EBITDA
CVT	30,0%	59	0,5%	EV/EBITDA
CST	38,3%	5	0,05%	EV/EBITDA
Timor Telecom	41,1%	54	0,5%	EV/EBITDA
CTM	28,0%	165	1,4%	EV/EBITDA
PT's EV		11.632		
PT's Net Debt		6.114		
Pension liabilities		1.025		
Equity Value		4.492		
Shares Outstanding (Millions)		896,5		
Share Price (EUR)		5,01		
Price (05 September 2012)		3,9		
Implied Upside Potential		28,5%		

A 7 years explicit forecast period was adopted, with estimates until 2018, assuming a constant growth rate for the upcoming cash flows, interiorized on the Terminal Value. A discount rate based on the WACC methodology was computed in order to discount the obtained free cash flows through the DCF models.

The cost of capital was estimated to capture the turbulent economic environment and its implications on the conditions for Portugal Telecom to access the financial markets.

In order to capture the individual operating and financial risk that can be inputted to each specific country it was estimated a different rate modeled to each reality. Those rates are the result of combining all the components presented below.

Figure 2: WACC Components

	Portugal		Brazil
Cost of Equity	11,28%	Cost of Equity	14,35%
Rf	1,491%	Rf	9,33%
Market Premium	10,13%	Market Premium	6%
Beta	0,97	Beta	0,84
Cost of Debt	7%	Cost of Debt	10%
Interest coverage ratio	1,788	Tax rate	34%
Attributed Rating	B+	D(%)	30%
Spread	5,50%	E(%)	70%
Tax rate	30%	WACC	12,02%
D(%)	35%		
E(%)	65%		
WACC	9,04%		

As a way of testing the sensitivity of the obtained price target to the estimated WACC figure, a sensitivity analysis on this matter was performed, reinforcing the its relevance to the valuation outcome.

3. Company Overview

3.1 Company Presentation

PT operates in many geographies in a market characterized by a rapid technological change in a highly competitive environment. The Company is positioned as a holding, contemplating a set of direct and indirectly held subsidiaries. The main companies which belong to PT are as follows: (1) PT Comunicações, which operates in the wireline market. It has the largest telecommunications infrastructure in Portugal, the biggest client base in the sector, comprising more than 4 million telephone connections and a team driven by experience and know-how. It

also offers an integrated service of voice, internet and television, through its brand Meo, representing a key driver for success in what takes to the residential segment. Meo assimilates the company's value proposition allowing for every customer to access the intended content through different interfaces. (2)TMN (Telecomunicações Móveis Nacionais, S.A.)operating on the mobile telecommunications sector, being the market leader in Portugal. And, in what takes to the operations in Brazil, (3) Oi. The idea is to expand PT's success in the European telecommunications market to Brazil, as PT's mobile business is well positioned, thanks to its continuous innovation-based strategy. This is made possible through valuable partnerships, and important investments, mainly on innovation and technology. Taking into consideration the weight of Oi in the Brazilian market and its high future growth potential, this is considered to be crucial for the group's financial and operational performance.

It still has some relevant interests in other telecommunications companies in Africa and Asia, namely in Angola, Namibia, Cape Verde, São Tomé & Príncipe, East Timor and Macau.

In 2011, around 42% of the Company's consolidated revenues were from its Portuguese operations, whereas the remaining 58% came from the international ones.

3.2 Shareholder Structure

PT's shareholder structure includes: RS Holding (with 10,05% of the total capital), Espírito Santo Group (10,04%), Telemar Norte Leste S.A. (10%), Caixa Geral de Depósitos (with 6,42%, representing the Portuguese Government indirect influence after the end of the "golden share" in 2011), Norges Bank (4,96%), UBS AG (4,96), and Brandes Investments Partners (3,86%).

4. Business Description

The telecommunications sector in Portugal is being marked by a continuous consolidation of bundled offers. The last four years were craved by a bet on the bundled offers by the majority of the players performing in this market, which are increasingly turning attentions to the joint reality of broadband, TV and voice, the so called triple-play. This action is mainly characterized by the presence of copper operators in TV segment, and the exploitation of the voice segment by cable operators. As a response to these new necessities, the main operators in Portugal focused part of their efforts in improving the business related to data and voice, where PT stands as one of the most successful cases, achieving co-leadership in the pay-TV market.

The Portuguese telecommunications reality does not distune from the trends evidenced throughout Europe, adapting its landscape with resort to investments directed towards fiber. In this field, Portugal Telecom, benefiting from a changed regulation (geographical segmentation approach), should be highlighted since it covers around 1,6 million households with its FTTH service.

4.1 Portuguese Operations

Residential Customers. This particular segment includes fixed and mobile services. Nowadays, as a result of the convergence in the existing offers, mobile network operators are able to match PT's fixed line telephone offer and in this way target the same group of customers. Those operators have already gone further and are in position to practice lower prices through the creation of low-cost brands, which will not only impact the fixed-line business, as it will also attempt to reach the lower end of the market.

One end leads to the other, and as a response to the increase in competition, operators come up with new solutions. In what concerns the international telephone service, which has been watching its revenues being damaged owing to, for instance, competition from calling cards, and declining call prices, the answer goes through providing unlimited communications to all national numbers and to a large range of international fixed locations. This overall framing keeps pushing PT towards an international fixed line telephone price reduction.

The Portuguese fixed voice market is traditionally a direct access market and this trend is well consolidated as ANACOM's figures show, pre-selection has registered the lowest number of lines in this configuration of the past ten years. According to the same source, PT has a 58,7% market share in this market, a slight decrease from 2010 (60,4%). PT also has around 56,7% market share in what concerns the outgoing traffic.

Based on the same source's estimations, in 2011 PT has approximately 49,4% market share, and is the number one provider of fixed broadband Internet services, a sector with visible potential (more than 2 million users) that is already growing.

PT also performs well in other viable markets as it is the case of Pay-TV. It was initially regarded as a high-value market, but nowadays the strategy goes through creating new low-end offers, and opting for a price skimming tactic making it affordable to all the market segments, and at the same time, in order to keep the high-value customers, offering new free quality content (such as video-on-demand). This is a market which enclose around 3 million customers (around 51,7% of the total households), where PT detains a 35% market share

(meaning a 5,1% increase from 2010), being the second player in this market just behind ZON who keeps being the market leader despite its decrease of 4% in market share from 2010 (current market share of 53,9%). The remaining direct competition has been struggling to keep its residual scores.

The figures presented above are the result of different strategies carried out by the various players. In PT's case there has been a clear bet on a strategy based on a FTTH roll-out which proved effective enough to reach a number around 1 million households in 2011.

Personal Customers. Portugal has one of the most dynamic markets in what takes to the mobile business. With more than 150 active mobile cards per each group of 100 habitants, this market performance has been remarkable as a result of the innumerable offers available which cover most of the customer needs in this field. In this market PT competes through its mobile operator -TMN- with two major opponents: Vodafone and Optimus which benefit from their multinational status that translates into higher resources availability, a set of well spread best practices, and cost synergies, to make tuff competition to TMN, on the mobile market, and broadly to PT thanks their capacity to improve performance in fixed-line services.

In 2011, TMN assumed a leadership position with around 44% market share as a result of a strategy focused on strengthening its share, even more when its main competitors are betted on gaining territory in a near future, marketing its services belligerently.

A revolutionary development that transformed this market in an even more competitive reality is linked to the introduction of the called "tribal plans". Those plans consist of on-net pricing plans adaptable to each type of customers' reality. Other innovative plans followed under the form of post-paid services and bundles including Internet, which allowed for all customers to adhere, increasing the number of minutes of usage on one hand, and negatively impacting per minute revenues on the other.

The same landscape fits the mobile broadband services. It presents constant evidence of declining revenues not only resulting from the high level of competition but also by the tight regulation imposed in the telecommunications industry. An illustrative example is the constant terminations rates reduction, which has been a trend since 2007 (68,2% decline in the past four years), and will still be decreased on upcoming periods. The influence of a controlling regulatory activity through the reduction on the MTRs has direct impact on the ARPU, which will harm PT's revenues. Other examples comprise roaming and retail data.

Enterprise Customers. As a result of a competitive environment, PT was forced to decrease leased line prices. Attempting at leveraging performance in this particular branch, PT is turning its attention to efficient solutions linked to the IP VPN (Internet Protocol Virtual Private Networks).

Additionally, PT's strategy goes through potentiating its past investments and canalize the output towards providing efficient services on a field in which it is pioneer – cloud services. This is a way of developing a service that is expected to register a considerable growth in a near future, making use of its modern Data Center and its extensive FTTH network, contributing to a revenue increase through reaching a wider group of customers.

Wholesale Services. Now that most operators are adopting new alternatives to the use of PT's network, direct competition in wholesale services segment is increasing, thus negatively impacting PT's revenues. Most internal operators (both mobile and fixed) are using foreign providers of international connections to enhance their performance on this business area. The strongest operators are also adopting new courses of action with the same results to PT, they are installing their own wireline networks.

4.2 Operations in Brazil: Oi

4.2.1 Residential Services Segment

Local Fixed-Line Services. Mobile telecommunication services are making themselves more visible, leading to a constant transfer of customers from the fixed-line reality to the mobile one. This trend has been magnified by their ability to price their services on a really low base. The mitigation of such market also results of a change in patterns regarding the type of customers to involve. This is historically a market directed to corporate customers, in which most companies have focused their attention in. But even this has changed, and competitors started adapting their strategies to the low-income market end, investing on economic bundles. Adding to this, there was a flow of price decreases in telecommunications services led by a decrease in the interconnection rates. This rate decrease was an incentive for new players to use the other providers' existing networks instead of investing in the construction of their own, allowing them to practice more competitive prices than the incumbent players.

According to ANATEL (data from 2011), Oi is the market leader in the fixed-line business with an estimated market share of around 72,7%, followed by Embratel with 17,4% and GVT, which has been investing in this area, with approximately 5%. Considering region 2, Oi keeps its leading position accounting for roughly 66,4% of the market, compared to the 18,5% detained

by GVT, and the 11% of Embratel, company from which Oi expects an increasingly intense competition in a near future.

Competition is expected to come from other points such as mobile service operators which are gaining territory. The number of mobile subscribers in region 1 increased by almost 18% from 2010 to 2011, in region 2 grew by 14%, and in region 3 by 16% in the same period. This occurrence allied to the low rates associated to mobile services is expected to have a continuing negative impact in the number of fixed-line users and consequently on the traffic volume too. Traffic migration from fixed-lines is a consolidating process that is probable to be amplified by the difference in prices within the mobile network when compared to the fixed-line one. Oi expects a decrease in revenues from this market as a result of the use of mobile devices over the fixed-line ones.

Long-Distance Services. Under ANATEL's estimates of the number of long-distance minutes (data from 2011), in region 1 the top player is TIM with a market share of 57,4%, followed by Embratel with 29,8%. Oi only accounts for around 9,1%. Regarding region 2 the same ranking prevails, with TIM registering a 48% market share, Embratel a 26,1%, and Oi having a market share of 17,4%. The same ranking characterizes region 3. This time TIM has approximately 34,5% market share, Embratel has around 29%, Telesp (the incumbent player in this region) has a considerable 20,3% market share, and Oi registers a 10,1% mark.

As in many other geographies, in Brazil the communication rates generally drive consumption, this is true for long-distance calls as well. Together with the increasing offer of plans that include free minutes in calls to other subscribers, this may enhance customer migration and thus affecting Oi's revenues. On the other hand, many customers started buying more than one SIM card tied to different operators in order to maximize the number of calls to all the operators with the least possible cost associated, which can be exploited by Oi in order to expand its customer base.

Data Transmission Services. When compared to previously presented markets like the fixed-line, the data transmission one is considerably less regulated, allowing in this way to less significant barriers to entry which translates into higher competition from other services (emphasis on the fixed-line communications).

In what concerns the broadband market, the cable television providers make their influence felt mainly through the offer of integrated packages including broadband, television and voice services to the cable television subscribers. Moreover, Oi's predicts a continuous bet on the

expansion of networks incurred by its competitors which will promote a price reduction and the subsequent margin shrink.

DTH services. In Brazil, subscription television has low penetration (20,8%) and limited growth prospects as a result of the high quality services provided by television broadcasters. Oi has only recently expanded this service to all states of regions 1 and 2 following a staged process.

4.2.2 Personal Services Segment

Competition is based on promotions offered to both pre-paid (under the form of traffic subsidies) and post-paid (traffic and handset subsidies) customers, and is targeted at reaching as much market share as possible.

According to ANATEL, in 2011 the market share structure was as follows: in region 1 Oi was ranked in third place with 23,2% market share, after registering an addition of mobile subscribers during 2011, behind Vivo (27,2%) and TIM (26,7%), but in front of Claro which has a 22,5% share. In region 2, Vivo kept the leader position with a 30,8% share, followed by Claro, accounting for 28,6%, and TIM with 26,3% market share. Oi in turn has around 14,2% market share in this region. In what takes to region 3, the hierarchy is the same as in region 2, with pretty close figures. Vivo is the number one player with 33% of the market, followed by Claro with approximately 26,1%, and TIM with 26,3%. Oi has circa 14,5%.

5. Conclusion

Based on the performed valuation, it can be concluded that Portugal Telecom's stock is undervalued, being the allocated recommendation a BUY. This can be mainly justified by the generalized negative market sentiment founded on the troubled macroeconomic environment involving Portugal, and expressed on its sovereign debt crisis, which is negatively driving investors and practitioners perspectives.

Looking at the final outcome, a YE12 price target of 5,01Euro was obtained grounded on the appealing investment case proportionate by PT. The outlined fundamentals are sound and growth coming from a sustained international exposure is a reality.

11. Glossary

ADSL- Asymmetric Digital Subscriber. Technology that allows high volume data transmission (broadband) over traditional phone lines.

ANACOM- Autoridade Nacional de Comunicações. Is the regulatory authority for electronic communications and postal services in Portugal.

ANATEL- Agência Nacional de Telecomunicações. Regulatory authority for the communications in Brazil.

ARPU- Average Revenue Per User. Monthly average service revenues per average number of users in the period.

Capex- Capital expenditure. Investments in tangible and intangible assets.

Cash Flow- The difference between cash inflows and cash outflows for a specific period.

CCPU- Cash Cost Per User. Monthly average operating costs minus provisions, depreciation and amortization, and cost of equipment sales, per average number of users in the period.

CRM- Customer Relationship Management.

Curtailement Costs- Workforce reduction program costs.

Diluted Earnings per Share- Earnings per share computed using net income excluding the costs associated with the convertible bonds divided by the diluted number of shares.

EBITDA- Income from operations + PRBs + depreciation and amortization.

EBITDA Margin- EBITDA divided by Operating revenues.

EBITDA to Net Interest- EBITDA divided by Net interest.

Enterprises- Customer segment that includes all SOHOs, SMEs and corporate customers that subscribe wireline and wireless products and services.

Euronext Lisbon- The domestic stock market upon which PT shares are listed and traded.

Free Cash Flow (FCF)- Equals operating cash flow +/- acquisitions/sales of financial investments +/- net interest paid – payments related with PBR – income taxes paid +/- dividends paid/received +/- other cash movements.

FTTH- Fiber-To-The-Home. Next generation network that brings fiber to the customer premises.

Gearing Ratio- Equals Net debt divided by the sum of net debt and equity.

GSM- Global System for Mobile. Internationally standardized digital radio network that allows both voice and data transmission.

HDTV- High Definition Television. Transmission of the televisions signal with a higher resolution than the traditional formats.

IAS/IFRS- International Accounting Standards/International Financial Reporting Standards. The new international accountancy standards introduced in 2005.

Income From Operations- Equals income before financials and taxes + workforce reduction costs + losses (gains) on disposal of fixed assets + net other costs.

IP- Internet Protocol. Standard that specifies the exact format of packets of data as they are transmitted through an Internet network.

IPTV- Internet Protocol Television. Digital television service available over a fixed telephony line through a broadband connection.

ISDN- Integrated Services Digital Network. Digital telecommunications network that allows simultaneous voice and data transmission over an access line.

ISP- Internet Service Provider. Company that provides access to the Internet.

MMS- Multimedia Message Service. Technology allowing for data such as text, tunes, pictures, photos and brief video sequences to be transmitted via mobile phone.

MOU- Minutes Of Usage. Monthly average of outgoing and incoming traffic in minutes per average number of users in the period.

MTR- Mobile Termination Rate. Costs charged by mobile operators for completing outgoing calls on its network.

NGAN- Next generation access network.

Net Debt- Equals short-term debt + medium and long-term debt – cash and equivalents.

Net Debt to EBITDA- Equals Net debt over EBITDA.

NYSE- New York Stock Exchange.

Operating Cash Flow- Equals EBITDA – Capex +/- change in working capital +/- non-cash provisions.

Personal- Customer segment that includes all consumer customers that subscribe to wireless products and services on an individual basis.

PRB- Post-Retirement Benefits Costs.

PSTN- Public Switched Telephone Network. Traditional telephone system that runs through copper lines.

Residential- Customer segment that includes all consumer customers that subscribe wireline products and services at home on an individual basis.

Retail Access- RGU per access Retail accesses per PSTN/ISDN line.

SARC- Subscriber Acquisition and Retention Cost. Estimated as (70% of marketing and publicity costs + commissions + subsidies)/(gross additions + upgrades).

SEC- US Securities and Exchange Commission. The US regulator for capital markets.

SMS- Short Message Service. Short text messages service for mobile handsets allowing customers to send and receive alphanumerical messages.

Triple-Play Offer- Integrated offer of voice television and Internet services.

VoD- Video-on-Demand. System that allows users to select and watch videos.

Wholesale, Others and Eliminations- Customer segment that includes all the wireline and wireless wholesale business for the other businesses (e.g. directories) and all intercompany eliminations that are related to the Portuguese telecommunications businesses.

3G- Third generation is a generic term covering several technologies for mobile networks (UMTS, W-CDMA and EDGE), that integrate mobile multimedia services and allows a higher data transmission rates than GSM technology.

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