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FINANCE

MASTERS FINAL WORK PROJECT

EQUITY RESEARCH - CTT

CAROLINA SILVA COUTINHO

OCTOBER – 2015

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SUPERVISOR:

PROF. DOUTOR CARLOS MANUEL COSTA BASTARDO

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Abstract

CTT – Correios de Portugal is the leading company in Portugal for the mail and express business units. Having also experience with financial services, being this a growing division for the company. Currently, the company is trying to leverage the wide retail network with the launching of a Postal Bank aiming at expand the product offer and encourage the cross-selling. CTT also wants to take advantage of the brand perception that consumers have, targeting the average-income and more conservative consumers.

The goal of this project is to understand if the stocks are under or overvalued and according to this, give a final recommendation to the investor. This valuation was focused not only on the company but also on its environment (macroeconomic framework and peers). Moreover, it was performed a sensitivity analysis, in order to observe how would the stock's price respond with a variation on the perpetual growth rate and cost of equity.

With this assessment and having in consideration the assumptions taken, it was possible to reach to a target price on 31/12/2014 of €12.14. Being the market price on this date of € 8.02, it is possible to conclude that the stocks were undervalued, given that the investor was able to have a potential gain. Hence, the recommendation given to investors was to buy CTT's shares.

Keyword: Company Valuation, DCF, Equity Value, Relative Valuation, FCFE, CTT

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Abbreviations List

APT- Arbitrage Pricing Theory

APV- Adjusted Present Value

B2B – Business to Business

B2C – Business to Customer

CAPEX-Capital Expenditure

CAPM- Capital Asset Pricing Model

CPI - Consumer Price Index

DCF – Discounted Cash Flow

DDM – Dividend Discounted Model

DPS – Dividends per Share

EBIT- Earnings before Income and Taxes

EBITDA - Earnings before Income, Taxes, Depreciation and Amortization

ECB – European Central Bank

EV- Enterprise Value

EVA- Economic Value Added

FCFF- Free Cash Flow to the Firm

FCFE- Free Cash Flow to Equity

GGM- Gordon Growth Model

GDP- Gross Domestic Product

IPO- Initial Public Offering

IRC- Corporate Income Tax

IMF –International Monetary Fund

NWC- Net Working Capital

ROA- Return on Assets

ROE- Return on Equity

SWOT - Strengths, Weaknesses, Opportunities and Threats

TV – Terminal Value

WACC- Weighted Average Cost of Capita

YTM – Yield-To-Maturity

1. Introduction

With the beginning of the Economic and Financial Assistance Program, Portugal had the need to privatize some companies and divest in some private companies. In 2013, the privatization process of CTT - Correios de Portugal began, the same had already been done in similar companies in other European countries such as, Germany, Belgium, Netherlands and Denmark, among others.

Nowadays, the privatization process of CTT is successfully finished and CTT is the only company in PSI-20 with 100% free float.

For the future CTT have four goals. First, with the new technologies the mail unit sales have been decaying, CTT intends to contradict this tendency, while also, taking advantage of the growth trend in parcels and gain market share. Aligned with these, they intend to launch the Postal Bank and make this the major sales driver in the future and in order to accomplish these, CTT will use the extensive physical network and brand recognition in order to reduce the costs of the Postal Bank.

The purpose of this project is to value the company aiming to establish its target price at 31/12/2014. This project is divided into four different sections:

1. In the first part – Literature Review – the different and most used valuation methods will be explained in detail. Once these methods are clearly explained, one can more easily identify which are the most suitable methods for CTT's case.
2. Secondly, the company will be analyzed. The history will be presented, as well as the company's business portfolio and its strategy. It will also be important to

examine the shareholder structure, the evolution of the performance of the stocks and the dividend policy in force. It will be done an operational analysis where CTT will be compared to its peers.

3. In the third section, the macroeconomic framework will be presented.
4. The last part will show the assumptions made, the valuation realized, the results reached and how these results change using different assumptions. To observe this it will be performed a sensitivity analysis. As it will be possible to observe, the method used was the Discounted Cash Flows (equity valuation), the relative valuation will be used in order to validate the results obtained in the DCF.

2. Literature Review

2.1. Framework

Valuation has a major role in several areas, such as corporate finance, mergers and acquisitions and portfolio management (Damodaran, 2010).

In his work, Fernandez (2015) outlines eight goals of valuation. Which are, to determine the value for buying and selling operations; to value listed companies and compare the theoretical price to the price of the market; in a situation of public offering, valuation is also used to justify the price at which the stocks are selling; to compare its value to the value of other assets; to grant compensation schemes based on value creation; to identify and stratify the main value drivers; to make strategic decisions; and finally, to measure the company policies and create a strategic plan.

According to Damodaran (2006), there are four main approaches: Discounted Cash Flow, Relative Valuation, Asset Based Valuation and finally, Contingent Claim Valuation. These four models should lead to equivalent results when using similar assumptions.

Regarding all the existing theory about corporate valuation, there still exists a huge gap between theory and practice, mainly due to the lack of direction about how to estimate the necessary parameters, leading practitioners to make their own assumptions. This can induce substantial errors and differences in the estimation of parameters. This subject was studied by Bancel & Mittoo (2014), where they reached to a few important conclusions. For example, despite the majority of the financial experts assumed to use Discounted Cash Flow and Relative Valuation models, the final results were completely different, essentially

due to a lack of guidance in the estimation and also to the fact that practitioners ignore some recommendations presented in theory.

2.2. Valuation methods

2.2.1 Discounted Cash Flow model

Discounted Cash Flow (DCF) models are the most popular instruments for estimating the value of either projects or companies. DCF is computed by using the cumulative present value of the expected cash flows discounted with the appropriate risk-adjusted discount rate. This discount rate represents the cost of capital and can be derived using the capital market models, e.g. Capital Asset Pricing Model (CAPM) or Arbitrage Pricing Model (APM). This method has several different approaches, being the three most important the Firm Valuation, Equity Valuation and the Adjusted Present Value (Damodaran, 2006; Kemper, 2010).

2.2.1.1 Firm Valuation

This first approach was created in the 1950's by Modigliani & Miller (1958) and has suffered some changes across the years. According to Damodaran (2006), this approach consists in valuing the whole firm by discounting the free cash flow to the firm (FFCF) by the weighted average cost of capital (WACC).

So, to reach to the firm value, one has to take three steps. Firstly, determine the free cash flow to the firm.

According to Damodaran (2010), FFCF is the sum of all cash flows of the firm after all expenses are paid, thus it is the value left to all the claim holders of the firm. And it is computed using the following formula:

$$FCFF = EBIT(1 - \tau) + Depreciations - Capex - \Delta NWC$$

Equation 1 – FCFF Formula

The second step is to calculate the WACC. WACC is the required rate of return of all of the firm's assets. Equation 2 presents WACC's formula.

$$WACC = K_d \times (1 - t) \times \frac{D}{D + E} + K_e \times \frac{E}{D + E}$$

Equation 2- WACC formula

K_d: Cost of debt E: Equity level

ţ: Tax rate K_e: Cost of equity

D: Debt level

On its work, Fernandez (2015b) warns that the WACC is neither a cost nor a required return and this is a common mistake. Accordingly, the WACC is the weighted average of the cost of debt and the required return of equity.

How to compute the WACC?

First, it is necessary to compute the cost of equity. Copeland, Koller & Murrin (1996) recommend using capital asset pricing model (CAPM) or the arbitrage pricing theory (APT).

Regarding the APT, it was created by Ross (1976), who claims that if there are no arbitrage opportunities, then the returns of the assets are approximately linearly related to the factor loading.

CAPM was created in the 1960's and has as main assumptions that investors act rationally and are in the presence of efficient markets (Quiry, Dallocchio, Le Fur, & Salvi, 2009). The equation for the cost of equity is as presented below:

$$K_e = r_f + \beta \times (K_m - r_f)$$

Equation 3 - CAPM equation

R_f: Risk-free rate

β: Systematic risk

K_m: Return of market portfolio

In order to implement the CAPM, it is needed to estimate these three variables (risk-free rate, beta and market risk premium). These factors will be explained subsequently.

Starting by the risk-free rate, this is one of the main difficulties when applying the CAPM model. The problem is how to choose which rate to use. This rate should incorporate no risk of default and also no coupon reinvestment risk. According to these criteria, the risk free rate chosen should be a default-free (government) zero coupon rate (Damodaran, 2008). The rate that should be used changes among different economies, typically when doing a valuation in Europe, it is advisable to use a German zero coupon bond and for a valuation in United States of America, it is desirable to use a treasury bond.

In relation to beta, Rosenberg & Guy (1975) state that the systematic risk (beta) capture the part of the investment risk that cannot be eliminated throughout diversification. In

practice, a stock with a beta higher than one will be riskier than the market and so they offer higher returns than average in order to compensate the risk.

Beta can be estimated using a simple linear regression between market returns and returns of the security (Quiry et al., 2009) and usually is estimated using the last three to five years of available data.

Lastly, the market risk premium is the difference between the market expected return and risk free rate. Despite all the models suggested by several academics there is no model that is able to estimate accurately the market risk premium.

According to Fernandez (2015b), there are four different concepts:

1. Historical Equity Premium: historical differential return of the stock market over treasuries.
2. Expected Equity Premium: expected differential return of the stock market over treasuries.
3. Required Equity Premium: incremental return of the market portfolio over the risk-free rate that is required by the investor to hold the market portfolio. The CAPM model considers that the expected and required equity premium are the same.
4. Implied Equity Premium: is the required equity premium that occurs from a pricing model and by assuming that the markets are efficient.

The most frequently used, easiest to understand and compute is the first one, since it is the difference between the returns of the portfolio and the risk-free rate.

Several authors have studied the market risk premium used by academics and practitioners. For example, Copeland et al. (1996) estimate that the market risk premium fluctuate around 4.5 and 5.5 percent, whereas Fernandez (2009) analyzed the average market risk premium used in 2008 by professors in several countries and find out that in the United States this average was about 6.4% while in Europe was 5.3%. Moreover, Fernandez (2009b) studied 100 textbooks and found out that the proposals for the market risk premium varied from 3% to 10%. And this difference of values was mainly due to the lack of clarification of the four different concepts.

The main difference between CAPM and APT is the way they measure market risk. Since CAPM assumes the market risk is absorbed in the market portfolio and APT allows for more than one source of market risk and measures the sensitivity to changes in each one of its sources (Damodaran, 2010).

Considering now the cost of debt, this rate is the interest a company has to pay on new debt (Berk, DeMarzo, & Harford, 2011). The most usual way to estimate is through the yield-to-maturity (YTM). This is the internal rate of return that an investor expects to receive if he holds the bond until maturity. Other possibility to estimate the cost of debt is using the CAPM and the debt betas. Though, debt betas are difficult to estimate since the market for corporate bonds is not liquid enough.

To conclude, if the firm reaches a stable growth after n years and starts growing at a stable rate (g), then the value of the firm will be:

$$Firm\ value = \sum_{t=1}^{t=n} \frac{FCFF_T}{(1+WACC)^t} + \frac{TV}{(1+WACC)^n}$$

Equation 4 - Enterprise Value

$$TV = Terminal\ Value = \frac{FCFF_{n+1}}{(WACC - g_n)}$$

Equation 5- Terminal Value

2.2.1.2 Equity valuation

The second approach consists in valuing the equity component of the business. It is possible to distinguish two different models in this approach, the dividend discounted model (DDM) and the free cash flow to equity (FCFE).

Dividend Discounted Model

DDM is the oldest and simplest discounted cash flow model and it states that the present value of the expected cash flows is the value of the asset (Damodaran, 2011). The basis for this model consists in assuming that the only cash flow the investor receives when buying stocks is the dividend.

To compute the equity value using this model it is necessary to compute two variables, the expected dividends and the cost of equity. The expected dividends can be obtained by making assumptions about the future growth rates of dividends and the payout ratios (Damodaran, 2010). The cost of equity, as seen previously, is obtained using CAPM or APT. Equation 6 presents the value of the company per share:

$$Value\ per\ share = \sum_{t=1}^{t=\infty} \frac{E(DPS_t)}{(1+k_e)^t}$$

Equation 6- Value per share

$E(DPS_t)$ = Expected dividends per share

K_e= Cost of equity

In equation 6, it can be perceived that the dividends did not suffer any growth. This is the original model. *A posteriori*, Gordon observed that the dividends tend to grow at a constant rate perpetually – Gordon Growth Model (equation 7).

$$Value\ per\ share = \sum_{t=1}^{t=\infty} \frac{E(DPS_t)}{k_e - g}$$

Equation 7- Gordon Growth Model (GGM)

$E(DPS_t)$ = Expected dividends per share

K_e= Cost of equity

G = Expected growth rate

After this model, Gordon introduced the two stage model that has two different periods. The first, where it allows for an unstable period of growth, and the second being a period of stable growth (Platt, Demirkan, & Platt, 2010). A simpler model was created by Fuller & Hsia (1984), where it was added some constraints regarding the risk and dividend payout. This model (H-model) considers that a firm's growth rate declines (or increases) linearly from an above-normal (or below-normal) rate to a normal rate. This model is considered to be more practical than the general one, and more realistic than the GGM.

Free Cash Flow to Equity (FCFE)

FCFE is a method to compute the company's equity and represents the amount of money that shareholders receive from the company, after expenses. Damodaran (2006) highlights

that with this model the analyst is discounting potential dividends rather than actual dividends. Equation 8 presents the formula for FCFE:

$$FCFE = Net\ Income + Depreciation - Capex - \Delta NW - (New\ Debt\ Issued - Debt\ Repayments)$$

Equation 8- Free Cash Flow to Equity

This method is usually used in special circumstances, e.g. valuing a highly leverage transaction, where the capital structure is constantly changing or for financial firms, where the cost of capital is difficult to estimate (DePamphilis, 2010). It is also common to observe practitioners using variants of FCFE to evaluate the attractiveness of the companies as an investment (Damodaran, 2006).

Having the FCFE computed, the analyst can easily compute the equity value by discounting the FCFE at the cost of equity as it can be observed in Equation 9. As previously, the cost of equity can be obtained using the CAPM or the APT.

$$Equity\ Value = \sum_{t=1}^{t=\infty} \frac{FCFE}{(1+k_e)^t}$$

Equation 9 - Equity Value

Damodaran (2006) compared the DDM and the FCFE and observed that the equity value computed by both models will be equal whenever the dividends of the DDM are equal to the ones considered by the FCFE or when the FCFE is higher than the dividend, but the firm chose to apply the excess cash (FCFE-Dividends) in fairly priced assets. Contrarily, they can be different in three situations. First, when the FCFE is higher than the dividend and the excess cash either earns below market rates or is applied in assets that are not

fairly value and have a negative net present value. Second, if the FCFE is higher than the dividend that will lower the debt-equity ratios and lead to an underleveraged firm, causing a loss in value. Lastly, when the dividends are greater than FCFE, there are several hypotheses, one is that the firm might be borrowing money to pay dividends which will make the firm to become overleveraged and lose value, or if the company is paying too much in dividends, this might lead to capital rationing constraints, which also makes the firm to lose value.

2.2.1.3 Adjusted Present Value

The last discounted cash flow is the Adjusted Present Value (APV), this model was developed by Myers in 1974 and the purpose of this model is to value each claim of the firm individually. Booth (2002) affirms that the fundamental idea of this model is that the value of the company may be divided in two groups, the unlevered value of the firm and the value of its debt tax shield.

The overall value of the firm is given by Equation 10.

$$APV = Value\ of\ Unlevered\ Firm + PV\ of\ Tax\ Benefits - Expected\ Bankruptcy\ Costs$$

Equation 10- APV formula

Copeland et al. (1996) have stated that in a perfect market, the capital structure of the company will not affect the value of its economic assets. The only things that may affect the firm value are market imperfections, such as taxes and distress costs.

According with Damodaran (2006), in order to apply the APV method, first it is necessary to compute the value of the unlevered firm:

$$Value\ of\ Unlevered\ Firm = \frac{FCFF(1+g)}{r_u - g}$$

Equation 11- Value of the Unlevered Firm

R_u: unlevered cost of equity

The next step is to calculate the value of the expected tax benefit. Since, when debt is added to the firm, this creates a benefit (the interest expenses are tax deductible). The value of the tax benefits is determined as follows:

$$Value\ of\ Tax\ Benefits = \sum_{t=1}^{t=\infty} \frac{Tax\ Rate_t \times Interest\ Rate_t \times Debt_t}{(1+r_d)^t}$$

Equation 12- Value of Tax Benefits

R_d: unlevered cost of capital

Despite academics agreed that tax shields should be discounted at an appropriate rate, they have not agreed to which rate to use (Luehrman, 1997). Cooper & Nyborg (2004), Inselbag & Kaufold (1997) and Myers (1974) believe that the appropriate rate is the cost of debt. However, Harris & Pringle (1985) believe the appropriate rate is the cost of equity.

The final step requires estimating the boost on the bankruptcy risk that the debt has created. These are the present value of expected bankruptcy cost (Equation 13). This is one of the main difficulties of this model, given that the needed variables are not easily computed.

$$PV\ of\ Expected\ Bankruptcy\ Cost = (Probability\ of\ Bankruptcy) \times (PV\ of\ Bankruptcy\ Cost)$$

Equation 13- PV of Expected Bankruptcy Cost

2.2.1.4 *Economic Value Added (EVA)*

EVA, also known as economic profit, is a particular version of excess return models. According with Damodaran (2011), EVA measures the excess value created by an investment or a portfolio of investment. Equation 14 presents how EVA is computed.

$$EVA = Net\ Operating\ After\ Taxes - (Cost\ of\ Capital) \times (Capital\ Invested)$$

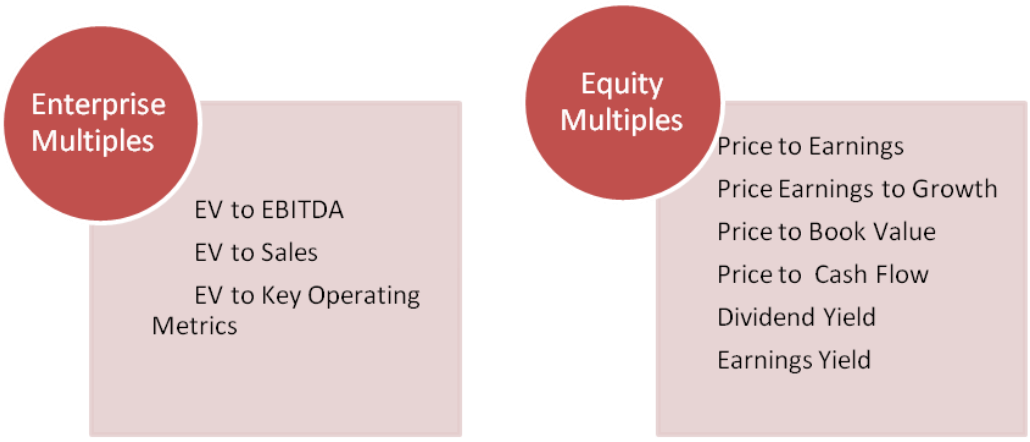
Equation 14- Economic Value Added

2.2.2 Relative Valuation

Relative valuation is the method of valuing assets by comparing them to similar ones that are valued in the marketplace. When applying this method the analyst is assuming that markets are efficient.

In order to apply this method, the analyst has to identify companies that are similar to the target firm. According with Sharma & Prashar (2013), first it should be created a broader group of comparables and then, narrow it according to the similarity with the target company. The comparable companies are chosen based on its business profile (sector, end markets, products and services, geography and distribution channels) and its financial profile (size, return on investment, growth pattern and profitability).

Jinda (2011) observed two different types of multiples: the enterprise value multiples and the equity multiples. Figure 1 presents the most used multiples in each category.



Source: Annual Reports of CTT and ESN

Figure 1 - Most used multiples

The multiples to use are chosen according to the nature of the business or the industry in which the company operates.

Relative Valuation has several advantages. Damodaran (2006) claims that this approach requires less information, less assumptions, it is easier to understand and more likely to reflect the market mood of the moment. Also, this approach tends to yield values closer to the market price. The fact that multiples reflect the market mood of the moment it is both an advantage and a disadvantage, since if the industry is overvalued (undervalued) the valuation will present high (low) values. Moreover, this method allows for a data manipulation, because the analyst can choose a multiple that gives a biased valuation or choose the wrong comparable firm.

2.2.3 Asset Based Valuation

This approach consists on estimating the business value as the net amount of its assets and liabilities. However, several authors believe this method is a subset of the previous approaches, since it needs to use the DCF or the RV to compute the value of the individual assets (Damodaran, 2006). Damodaran (2010) presents two ways of valuing its net assets: liquidation value and replacement cost. Some other authors present one other indicator, the book value (DePamphilis, 2010).

The liquidation value, also known as breakup value can be obtained by summing the price of the firm's assets if they were sold. The replacement cost estimates the cost that would be incurred if all the firm's assets were replaced at current market prices. Finally, the book value presents the value of the firm has the sum of the asset's value in the balance sheet.

2.2.4 Contingent Claim Valuation

The last approach consists in valuing real options (opportunities) by assuming that the underlying asset has the characteristics of financial options (DePamphilis, 2010). In financial terms, opportunities are very similar to options, so they can be valued as such. Many authors believe this method is a step further from traditional models, such as DCF, since it allows to make a more informed investment choice, given that managers consider the value of keeping their options open (Leslie & Michaels, 1997). Albeit this approach is a complement and not a replacement of the DCF analysis (Luerhman, 1997).

This approach can be applied using three different models: Black-Scholes model, Binomial model and the Monte Carlo Simulation.

This method has some disadvantages, like the fact that is more time consuming, less intuitive and it might be difficult to apply this tool to corporate problems.

3. Company overview

3.1 History

During the time of Discoveries, Portugal was in the center of the world and the king D. Manuel I felt the need to create a postal service that would allow to make contacts with other stats and merchants. So, in 1520 the king created the postal service. Initially, this service was used only by the aristocracy, merchants and the royal family and the deliveries were made via foot or horseback. It was only in 1893 that the postal service became available to the population.

From 1960 forward, the number of customers started to increase substantially and the deliveries were already made by car or train. The company that since 1606 was private became public in 1970 (Vegar, 2014).

More recently, Portugal received external help from Europe (European Commission, European Central Bank and International Monetary Fund) and was advised to privatize several Portuguese companies, being one of them CTT- Correios de Portugal.

This privatization occurred in the end of 2013. Initially, the state privatized only 70% using two different methods, an IPO and direct sales. Later in 2014, the government sold the remaining 30%, through the accelerated book building process.

3.2 Business Portfolio

The CTT group operates in three different areas of business. These are, mail, express & parcels and financial services (annex 1). Each one of these business units have several subsidiaries allocated.

The mail service operates in the field of postal services and corporate solutions. The companies that provide this service are: CTT S.A., PostContacto, CTT Gest and Mailtec.

The express & parcels business unit is present in three different markets, Portugal (market leader with CTT Expresso), Spain (through Tourline) and Mozambique (where CTT holds 50% of the capital of CORRE). Not only offers express and parcels services, but also some additional logistical services.

Finally, the financial services division provides services through two companies: CTT S.A. and Payshop. There are three different types of services: Savings and Insurance, Payments, Money Orders and Transfers and Consumer Credit. CTT is preparing the launching of a new bank, the Postal Bank and its main purpose is to offer services to the financially conservative population with low income.

3.3 Business Strategy

The primary goal of the company is to have a stable and sustained growth of dividends allied with the continuous growth of the company's value and the improvement of the profitability in each one of the business units. In order to achieve these objectives, the company has delineated a few strategic guidelines. The company is focused in maintaining the business value of couriers; while also, taking advantage of the e-commerce and use it

to enlarge the growth of Express & Parcels; and finally, launching the Postal Bank in order to expand the financial services unit.

With the increase of new technologies and subsequent decrease in the sales of the mail unit, the future of the company relies heavily on the launching of the Bank. The Postal Bank will be supported by a low cost principle, since it will be using the already existing wide retail network of the company. The target consumer will be the already customer from the financial services unit of CTT, but also the average-income and more conservative customer, who wants simpler and competitive products. The Postal Bank will also aim at benefiting from cross-selling opportunities.

3.4 Operational Performance

Regarding the operational performance of the company there are several aspects to take in consideration. In this chapter we will also compare the CTT indicators, in order to understand how the company is established in the market. The peers (Royal Mail Group, Post NL, BPost, UK Mail Group, TNT Express and DHL) used in this chapter are the ones used to perform the relative valuation, so they will be explained in the more detail in the valuation chapter.

Starting by analyzing how sales are distributed by each segment, it is possible to observe in Annex 2, that throughout the years in analysis the business unit that sells more is the mail segment, although in relative terms this value has been declining. Financial services were the segment that presented a higher growth, mainly due to the increase of the products offered and its quality and also due to the strategic partnership implemented.

In relative terms, not only CTT, but also the majority of its peers, have as the key sales driving force the mail division as it can be observed in table 1.

Royal Mail Group	**Parcels**	**Letters & other Mail**	**Marketing Mail**	
	51.39%	36.23%	12.38%	
Post NL	**Parcels**	**Mail**	**International**	
	18.66%	43.96%	37.38%	
Bpost	**Domestic Mail**	**Parcels**	**Others**	
	62.35%	12.58%	25.07%	
UK Mail Group	**Mail**	**Parcels**	**Courier**	**Pallets**
	48.24%	43.24%	3.19%	5.33%
TNT Express	**Internat. Europe**	**Internat. AMEA**	**Domestics**	**Unallocated**
	41.06%	13.56%	38.13%	7.25%
DHL	**Parcels**	**Express**	**Freight**	**Supply Chain**
	27.12%	21.60%	25.80%	25.48%

Source: Annual Reports of each company

Table 1 - 2014 Sales for CTT peers in percentage

In relation to EBITDA, this has been increasing since the company is committed in applying for the past few years a strong policy of cost reduction and implementing structural changes that have allowed the company to maximize their efficiency, flexibility and sustainability (Annex 3).

Comparing to its competitors, CTT has been following the increasing trend in relation to this indicator. This may indicate the strength of the company, despite operating in a smaller market than its peers (table 2).

	2014	2013	2012
Royal Mail Group	1,207,436 €[1]	1,055,180 €[1]	838,107 €[1]
Post NL	494,000 €	588,000 €	511,000 €
BPost	551,800 €	511,600 €	380,500 €
UK Mail Group	39,098 €[1]	35,453 €[1]	31,506 €[1]
TNT Express	91,000 €	195,000 €	354,000 €
DHL	3,165,000 €	2,926,000 €	2,766,000 €

Source: Annual Reports of each company

Table 2 - Competitor's EBITDA

Regarding the return on equity (ROE), this has increased, from 13.1% in 2012 to 29.4% in 2014, illustrating the increase of net income of 116% in the period of 2012-2014. Also for this same reason, the return on assets (ROA) presents a large growth. In relation to the financial autonomy of the company, the equity ratio has been decreasing throughout the last years, meaning that the risk has been increasing.

3.5 Shareholders Structure

CTT is the first Portuguese company to be listed with 100% free float. On December 31 2014, CTT presented a share capital of 150,000,000 shares corresponding to a value of 75,000,000 Euro.

The structure of the shareholders is presented in Annex 4. By looking at the table, it is noticeable that the major stake of the company is held by Standard Life Investments

[1] The values for Royal Mail Group and UK Mail Group were converted from GBP to EUR, using the following rates for each respective year:

	GBP/EUR
31-12-2014	1.2777
31-12-2013	1.2018
31-12-2012	1.2307

Table - Exchange Rate – GBP/EUR

(Holdings) Limited and the lowest is held by The Goldman Sachs Group, Inc. who in 2013 held almost 5% of the company.

3.6 Shares Performance and Dividends Policy

The Portuguese government set the price of the IPO at 5.52 Euros, however when the market opened at December 5 2013, the stock started selling at 5.90Euros. In March 2014, the company debuted in the PSI 20 index. The stock has been having a continuous appreciation has it is possible to see in the Annex 5. The stock presents a higher growth until May 2014 and henceforth some ups and downs. Comparing the stock with PSI 20, it is clear that the CTT's stocks have outperformed the market (Annex 6). Through the period of December 5 2013 until December 31 2014, CTT has appreciated 44.71%, whereas the index has depreciated 32.62%.

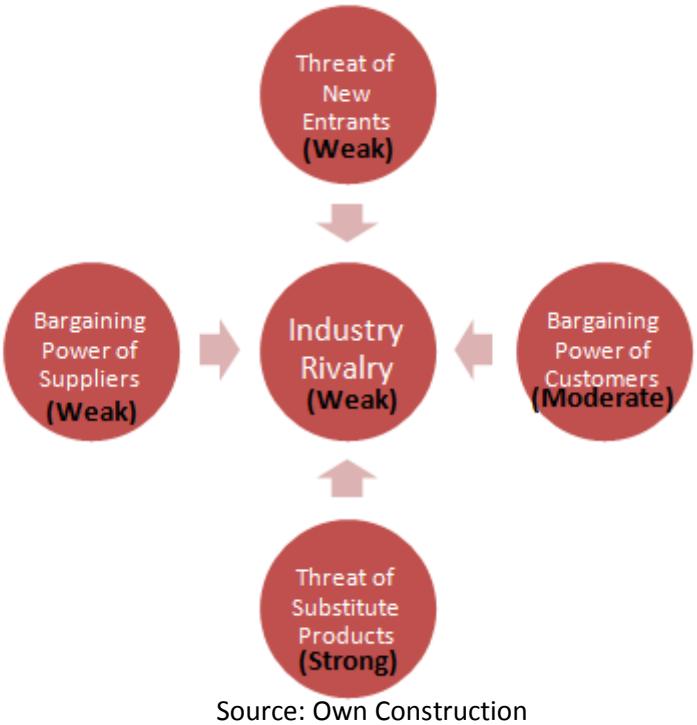
In relation to the dividends policy, CTT paid in 2013 a dividend of 2.20 Euros per share and an extraordinary dividend of 0.65 Euros per share. In 2014, the company paid a dividend of 0.40 Euros per share concerning the period of 2013, presenting in 2014 a payout ratio of 78.43%. This has always been a goal of the company, to delivery most of the profits to the shareholders.

3.7 Strategic Analysis

In order to perform a better analysis of CTT and its industry, it was applied the Porter Five Forces Model and it was made a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. In the former (figure 2 and annex 7), the business unit that was analyzed more in-depth was the mail segment, since this is the area that represents a higher share

of the sales (in 2014 represented 71.4% of the overall sales). Regarding the industry competition, there are a high number of existing companies present in the three markets where CTT operates. However, the threat of new entrants is very low especially for the mail industry since this industry has been impacted by the appearance of new technologies. This is also directly related to the fact that there are a lot of substitute products. Nevertheless, the new technologies tend to increase the volume of e-commerce and the express segment should have an increase in sales. In relation to the bargaining of both suppliers and customers, this is very low to suppliers and individual customers, yet for B2B (business to business) it is possible to observe some degree of bargaining.

For the SWOT analysis (Annex 8), the main strengths are the human resources, the strong financial background and the brand perception that the consumers have of the company. On the weaknesses and threats side, CTT are very dependent of the domestic market, the increase in the regulatory environment, the liberalization of the postal sector and finally, the lack of investment opportunities, normal for a country that is trying to overcome an economic crisis. However, CTT should be able surpass its weaknesses and threats by creating new products which should generate new habits and needs to consumers that until now did not exists. Finally, the company should also bet on new business areas.



Source: Own Construction

Figure 2 - Porter Five Forces Model

3.8 CTT's Future – Bank of CTT, S.A.

As stated previously, CTT are in the process of creating a postal bank. The launching of this new bank will happen in two different phases. The first stage will take place in November of 2015 and will be using a "soft-opening" approach, later on, in 2016 the second stage will go off with a massive opening to the general public. With this method the company can make sure that everything goes smoothly, without any errors in the first stage and move on to the second phase.

The launching of the bank goes in line with the CTT's strategy to expand the offer of financial products and gaining a relevant quota in the Portuguese financial market. This

project follows the path of other European postal companies, such as Deutsche Post, Correos and La Poste.

The bank will be a wholly-owned subsidiary of the CTT - Correios de Portugal. The subsidiary will provide savings, credit and structured products, as well as risk insurances, among others. The target will be the average income and conservative consumers who need a bank to execute their daily banking operations, leveraging the vast retail network of the company and high recognition of the Portuguese public. Moreover, the bank will be following a low cost principle and will offer competitive and simple banking products, as well as integrate all the retail channels – physical stores, online and mobile.

4. Macroeconomic Framework

The year of 2014 was marked positively by the end of the Economic and Financial Assistance Program which was in plan since 2011 with European Commission, ECB and IMF. By applying this program, the government was able to decrease the public expense and balance both social security and public health system, these was achieved by increasing revenues (mainly through the fiscal policy).

Regarding the Gross Domestic Product (GDP), as can be observed in annex 7, in 2011 when the program was first implemented the GDP had a negative growth rate of 1.83%. Until 2013 the GDP followed a continuously decreasing path (in 2012 had decreased -4.03% and in 2013 -1.60%). With the end of the program, Portugal was able to finally present a positive rate of 0.90%.

It is also important to observe the evolution of the Consumer Price Index (CPI). In 2011, this indicator had a value of 3.65%, which decreased until it reached a negative value of 0.28% in 2014 (annex 8).

In the euro zone, the Euribor rate has presented low rates especially since 2012. Now-a-days, presents negative rates for same maturities. Regarding the currency, this has been devaluating towards the main world currencies.

5. Valuation

This chapter intends to make a valuation of CTT the purpose of this is to understand if the stock is undervalued or overvalued. CTT will be evaluated by having in consideration data until 31 of December 2014 and the final value will be compared using this date.

The method that seemed to be more appropriate was the Discounted Cash Flow – Equity Valuation, given that the studied company does not present a high degree of leverage. It will also be performed a relative valuation in order to understand if this approach follows the same line as the DCF valuation.

5.1 Assumptions

In order to apply the equity valuation some assumptions had to be made. These are explained below.

Regarding the growth of sales, it was assumed an increase of 4% until 2018 and henceforth a 2% rate. The reasons behind these values are mainly due to the launching of the postal bank that should lead to an increase of sales, aligned with the positive

macroeconomic environment and the continuity of the Transformation Program that has been put in place since 2013.

In relation to the tax rate, this remained unchanged from 2011 until 2013 (at a level of 25%) and decreased to 23% in 2014. From 2014 onwards, the IRC tax rate was assumed to be constant for the forecasted period.

To compute the cost of equity it was used the model CAPM. Firstly, to use this, it was necessary to compute the beta. Beta was calculated using a linear regression between the stocks of CTT and the PSI-20 index. The beta reached was 0.55, which means that CTT presents less risk that the index. Secondly, the 10-year German Bund was used as a proxy for the risk-free rate (0.541% - 31/12/2014). Also, the risk premium chosen was 9.92%. This rate was selected according to Damodaran pick's for a company operating in Portugal. Lastly, having these values established it was possible to reach a value for the cost of equity equal to 6.04%.

Concerning the terminal value, the perpetual growth rate used to discount this was 1.50%. This rate was chosen because the company has good expectations towards the future with the launch of the postal bank, some new partnerships and the positive future perspectives of the Portuguese economy.

Regarding the remaining variables, the projection values were computed using either a margin of the respective variable towards sales or an average of the growth rates of the historical dates.

5.2 DCF – Equity Valuation

In order to apply the equity valuation approach, first it was necessary to make projections in relation to several variables, as explained above. The second step is to compute the FCFF using the method explained in the literature review section. Once the FCFF was reached it was possible to calculate the FCFE using the following equation:

$$FCFE = FCFF - [Interest \times (1 - \tau)] + Net\ Borrowing$$

Equation 15- FCFE calculation using FCFF

	2015	2016	2017	2018	2019
FCFF	60,065.84	57,037.93	59,319.45	61,692.23	67,603.29
Interest*(1-t)	8,481.30	8,820.55	9,173.38	9,540.31	9,731.12
Net Borrowing	654.27	680.44	707.66	735.96	750.68
FCFE	52,238.80	48,897.82	50,853.73	52,887.88	58,622.86
TV	1,481,132.47				
PV(FCFE)	49,264.63	43,488.41	42,652.93	41,833.50	43,729.76
PV(TV)	1,104,851.69				

Source: Own Construction

Table 3 – FCFE calculation

After obtaining the FCFE and the TV, these were discounted and it was possible to reach the company's value. Having these, it was necessary to discard the short, medium and long term debt and include the cash and cash equivalents to reach the equity value of the firm. The table below summarizes the results of the DCF valuation.

Equity Value	1,820,675.56
Shares Outstanding	150,000.00
Fair Value per Share	**€ 12.14**
Price at 31/12/2014	**€ 8.02**
Potential Gain	**51.34%**

Source: Own Construction

Table 4 - Fair Value vs. Historical Price

Finally, the fair value of CTT achieved was €12.14. With a market price of €8.02 on 31/12/2014, CTT stocks can be considered to be undervalued since having these prices it is possible to have a gain (51.34%).

5.3 Relative Valuation

The relative valuation was applied with the purpose of complementing the DCF valuation. The first step was to choose the peer group. The companies used as multiples were chosen according to the market in which they operate, in this case the target market was the European one and the core business should be either mail or express & parcels. According to these, the chosen companies were: Bpost, Deustche Post, Royal Mail, Poste NL, UK mail group plc and TNT Express.

Annex 9 shows the values used to compute the multiples and the below table presents the values computed for CTT and its peers.

Company	Country	EV/EBITDA	EV to Sales	PER	PBV	Dividend Yield	Earnings Yield
CTT	**Portugal**	**4.01**	**0.77**	**15.59**	**4.83**	**4.99%**	**6.41%**
Bpost	Belgium	6.59	1.49	14.03	6.05	6.02%	7.13%
Deustche Post	Germany	10.94	0.61	15.80	3.42	2.96%	6.33%
Royal Mail	UK	5.03	0.50	3.27	1.74	4.78%	30.54%
Poste NL	Netherlands	4.15	0.48	6.07			16.46%
UK mail group	UK	8.73	0.55	14.96	3.62	4.51%	6.68%
TNT Express	Netherlands	28.17	0.40		1.37	0.70%	
Average		**9.66**	**0.69**	**11.62**	**3.50**	**3.99%**	**12.26%**
Price per share		**8.70 €**	**3.22 €**	**5.98 €**	**5.82 €**		

Source: Own Construction

Table 5 - Relative Valuation

After observing the table it is possible to conclude several things:

1. Comparing the EV to EBITDA of CTT with its peers it is possible to conclude that the company is undervalued since the price paid by the investor for the benefit of receiving the company's cash flow is lower than the price paid for the cash flow of its peers.
2. In relation to the EV to Sales, the investor desires the lowest possible EV to Sales this would mean that the company is undervalued. However in this case, CTT is not the company with the lower EV to Sales; hence CTT has low sales relative to its value.
3. PER is one of the most commonly used multiple and it shows how many years does an investor needs to earn back the price paid for the stock. Thus, when using this multiple, the value desired should be positive but as lower as possible. Contrarily to the desired, CTT value is one of the analyzed companies with the highest value.
4. Moreover, CTT presents a PBV higher than one, this means that the company is undervalued, which confirms the results of the DCF valuation.

5. Regarding the Dividend Yield multiple, this is higher than the average of the peers, meaning CTT on average distributes more dividends than its peers.
6. Finally, the earnings yield represent the opposite of the PER, so being the earnings yield lower than the average of the peers, the stock is considered to be undervalued.

It is also possible to observe with this relative valuation, that the stock's fair value ranges between €3.22 and €8.70. This range is very different from the value obtained as being the fair value but similar to the market value on 31/12/2014.

When looking at both results it is important to note that the equity valuation is built using several assumptions which can influence the final results. For this reason, in the next chapter it will be performed a sensitivity analysis with the purpose of showing how do the price per share moves in relation to a shift in different variables.

5.4 Sensitivity analysis

As said previously the fair value given by the valuation will depend strongly by the values assumed. Having this, it is necessary to perform a sensitivity analysis in order to understand how the price per share responds to a variation either on the cost of equity, the perpetual growth rate, or both.

The below table shows the sensitivity analysis performed:

Perpetual growth rate

Cost of equity	12,14 €	0,50%	1,00%	1,50%	2,00%	2,50%	3,00%
	4.04%	14,80 €	16,35 €	18,51 €	21,73 €	27,04 €	37,45 €
	5.04%	12,42 €	13,30 €	14,42 €	15,91 €	17,99 €	21,09 €
	6,04%	10,90 €	11,46 €	12,13 €	12,98 €	14,06 €	15,49 €
	7,04%	9,85 €	10,23 €	10,67 €	11,20 €	11,86 €	12,67 €
	8,04%	9,08 €	9,35 €	9,66 €	10,02 €	10,45 €	10,96 €
	9,04%	8,48 €	8,69 €	8,91 €	9,17 €	9,47 €	9,82 €

Source: Own Construction

Table 6 - Sensitivity analysis

It can be perceived by the table that both variables (cost of equity and perpetual growth rate) have a major influence in the final result of the valuation.

For example, having has a starting point the scenario used in the valuation, for an increase of one percentage point in the cost of equity (to 7.04%), *ceteris paribus*, there is a decrease in the price per share from originally € 12.14 to € 10.67. Regarding the impact caused by a change of the perpetual growth rate, an increase of half a percentage point (2.00%), *ceteris paribus*, leads to an increase from € 12.14 to € 12.98 of the share price.

It is also important to note that whichever rates are assumed for the two variables, if the values are in the range used in the sensitivity analysis, the final value will always be greater than the market value. Hence, the market price will always be undervalued.

6. Conclusion

The process of a company valuation is the practice used to reach to the value of a company; this value is not necessarily the price for which a company may be sold. Especially since companies are not only valuated in buying/ selling situations. The process of valuation may happen due to the planning of the future of a company, decision-making, among other reasons. This process is not objective and the final result may depend of the final purpose, the assumptions taken and finally, according to the method used. For this project, the methods used were the DCF – Equity Valuation and the relative valuation. The first method was chosen mainly because of the low volatility of cash flows and to the fact that CTT are in the stage of maturity in its life cycle. The second method was performed in order to complement the first valuation.

With the DCF approach it was possible to conclude that CTT stocks were undervalued on the 31/12/2014, given that the market value was €8.02 and the fair value computed was €12.14. According to this, the final recommendation for the investor would be to buy the stocks. Since the market should automatically lead the price to its target price. This conclusion was validated by the sensitivity analysis performed. Using this analysis it was possible to confirm that whichever is the cost of equity and/or perpetual growth rate chosen, as long as it is between 4.04% - 9.04% for the former and between 0.50% - 3.00% for the latter, the market price will always be undervalued taken in consideration the assumptions made previously.

Regarding the future of the company, it will depend both of the macroeconomic environment and the company events. For the macroeconomic environment, it is expected that Portuguese GDP will increase as well as investment, exportations and private consume. This should affect directly CTT, since e-commerce will increase and CTT should have a boost in the express & parcels business unit sales.

Concerning the CTT events that should boost its sales, these are the launching of the new bank and the partnerships that CTT should be able to implement. For example, in 2015, CTT are implementing a few partnerships that has as main purpose to use its wide retail chain to offer other types of services (not only postal services), this partnership was made with the Portuguese Government (Espaço Cidadão) and EDP. Moreover, CTT will have to also be able to struggle against the substitution effect and embrace globalization and new technologies, throughout the constant innovation and creation of new products.

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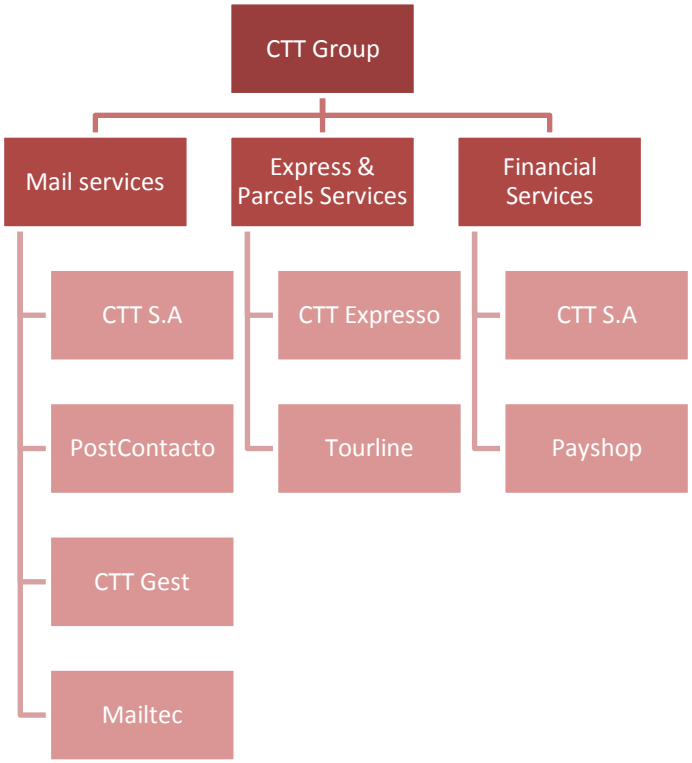
Annexes

Annex 1 – CTT Group



Source: Own Construction

Annex 2 – Revenues by Segment

Million €

	2014		2013		2012	
Mail	514.9	71.7%	513.3	72.9%	528.5	74.0%
Express & Parcels	129	18.0%	129.5	18.4%	128	17.9%
Financial Services	73.9	10.3%	60.9	8.7%	57.7	8.1%
	717.8	100.0%	703.7	100.0%	714.2	100.0%

Source: Annual Reports of CTT and ESN

Annex 3 – Results and Ratios

	2014	2013	2012
EBITDA	135,100	122,928	104,339
EBITDA Margin	18.80%	17.40%	14.60%
Net Income	77,171	61,016	35,735

Thousand €

	2014	2013	2012
ROE	29.4%	22.10%	13.10%
ROA	6.71%	5.69%	3.36%
Leverage Ratio	126.16%	121.31%	124.43%
Equity Ratio	21.10%	25.08%	25.72%

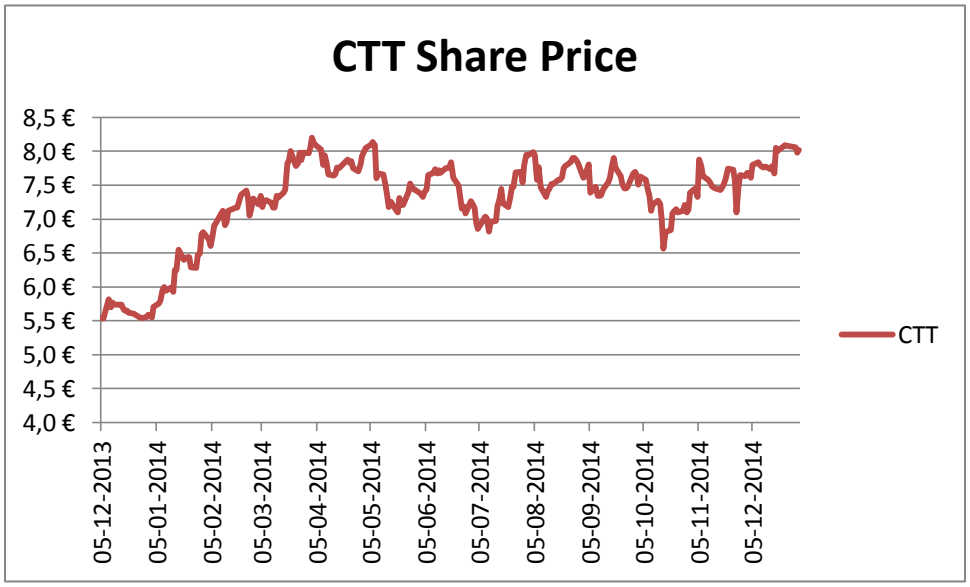
Source: Annual Reports of CTT and ESN

Annex 4 – Shareholders Structure on December, 31 2014

Shareholder	Nº of Shares	%
Standard Life Investments (Holdings) Limited	10,007,653	6.67%
Aegon NV	5,141,137	3.43%
Allianz Global Investors Europe GmbH (AGIE)	4,695,774	3.13%
UBS Group AG	3,830,469	2.55%
Morgan Stanley	3,553,396	2.37%
UniCredit S.p.A	3,128,282	2.09%
Artemis Investment Management LLP	3,104,624	2.07%
FMR LLC	3,096,298	2.06%
DSAM Cayman Ltd.	3,096,079	2.06%
The Goldaman Sachs Group, Inc.	3,019,750	2.01%
Other Shareholders	107,326,538	71.55%
	150,000,000	100%

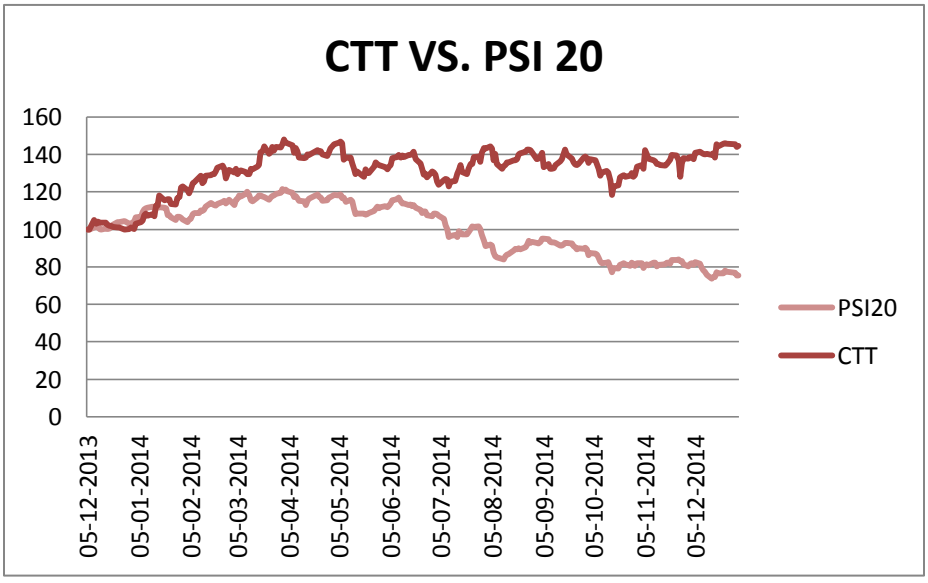
Source: Annual Reports of CTT

Annex 5 – CTT Share Price Evolution



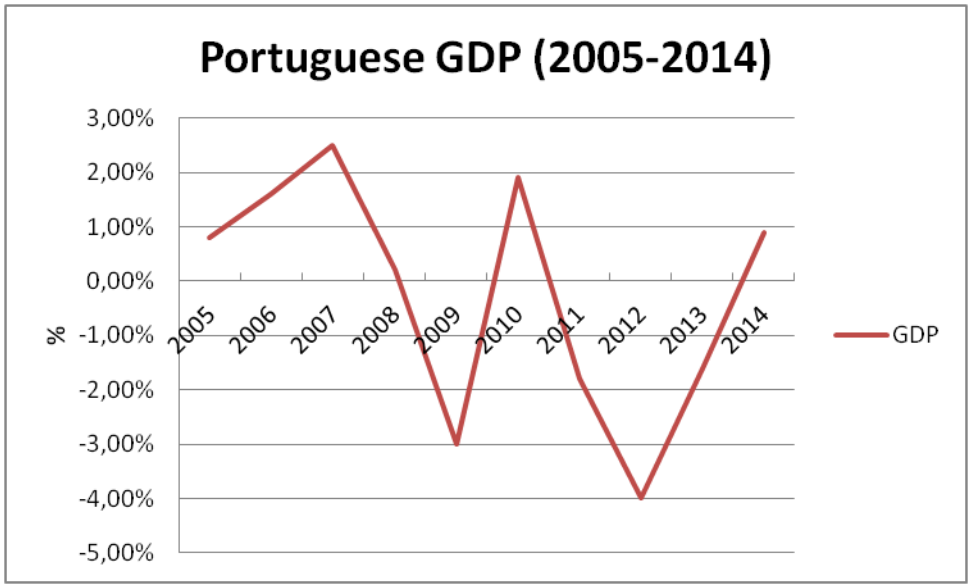
Source: Yahoo Finance

Annex 6 – CTT Stock Price Evolution VS PSI-20 Index



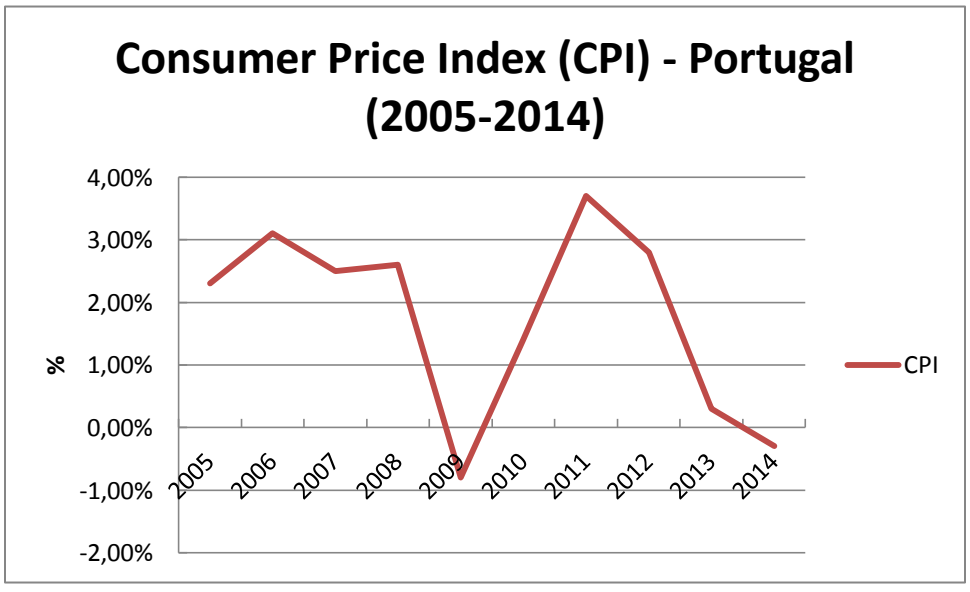
Source: Yahoo Finance

Annex 7 – Portuguese GDP growth rate (2005-2014)



Source: Pordata

Annex 8 – Consumer Price Index for Portugal (2005-2014)



Source: Pordata

Annex 9 - Porter's Five Forces Analysis

1. Industry competition

Considering the number of competitors in this sector, there were in 2014 sixty-nine companies in the mail, express and parcels segments. Despite, the high number of companies operating in these segments, the CTT group is leader in the sector of total postal traffic presenting 94.4% of market share, while in the express segment has 32.9% of quota. The main competitors of CTT are: Chronopost, Noticias Direct, Vasp Premium, and General Logistics Systems (GLS).

In what concerns the switching costs, these are low. Since the customer can easily switch from on service to other.

2. Threat of new entrants

As to the entry of new players in the market, this possibility is not very strong, since with the increase of electronic communications; the postal market has decreased, becoming an unattractive market for new entries. Also, there are high entry barriers such as: level of reputation, legal constrains, economies of scale, economies of density, high initial investment.

3. Bargaining power of suppliers

The main suppliers of CTT are companies that offer outsourcing services, energy, fuel and the equipment necessary like vehicles or computers. These do not present a high degree of bargaining power since there are a lot of suppliers available in the market. Supplies with similar products tend to compete in terms of prices leading to low prices. Another thing that makes the supplier not having a high bargaining power are the low switching costs, these only exist if there are contracts that have to be fulfilled.

4. Threat of substitute products

With the growth of new technologies into daily life, these have been the greatest substitute for postal services. The postal unit has been substituted by other channels of communication, such as internet, e-mail, fax, telephones, etc. This service not only has a wider scope, but also arrives to the public faster target at a lower cost.

In relation to the parcel and express segments, these are not threatened by the new technologies. These units can even growth, since companies are increasing online sales.

5. Bargaining power of customers

Regarding the bargaining power of customers, this is low for private clients. However, for large customers, particularly in the segment of B2B (business to business), there is a power to make pressure on the company that might downscale the frequency of delivery, use other approach of communication towards its clients, or even delivery their own internal mail.

Annex 10 – SWOT Analysis

Strengths	Weaknesses
Consumers have Confidence on the Brand; Talent Management Plan – retain qualified staff; Strategic Partnerships; High Operational Performance; Large Retail Network; Consistent Dividend Policy; Cross Selling; CTT have a leading market share;	Decline in postal traffic; Dependence of the Domestic Market; Credit Risk - possibility of financial losses; Increase in the regulatory environment;
Opportunities	**Threats**
Innovation through the launching of new products; Launching of Postal Bank; Invest on e-commerce solutions;	Higher competition - Liberalization of the postal sector; Globalization; Poor economic climate.

Source: Own Construction

Annex 11 – Application of the Relative Valuation Method

Company	Share price (31/12/2014)	Sales in €	Enterprise Value	EBITDA	EPS	Dividend per Share
CTT	8,02 €	703.283.590 €	542.190.000 €	135.101.000 €	0,51 €	0,40 €
Bpost	20,60 €	2.441.700.000 €	3.633.719.446 €	551.800.000 €	1,47 €	1,24 €
DHL	27,05 €	56.630.000.000 €	34.625.189.047 €	3.165.000.000 €	1,71 €	0,80 €
Royal Mail	5,34 €	12.082.025.760 €	6.075.383.279 €	1.207.435.950 €	1,63 €	0,26 €
Poste NL	3,10 €	4.240.000.000 €	2.051.854.483 €	494.000.000 €	0,51 €	- €
Uk mail group plc	6,11 €	619.817.121 €	341.194.668 €	39.097.926 €	0,41 €	0,28 €
TNT Express	5,49 €	6.472.000.000 €	2.563.314.255 €	91.000.000 €	- 0,36 €	0,04 €

Source: Own Construction

Annex 12 – Income Statement

Thousand €	2011	2012	2013	2014
Sales and Services rendered	741.850	699.332	690.069	703.284
Other operating income	23.917	14.893	14.778	14.491
Cost of sales	18.353	18.543	16.906	16.998
Supplies and external services	256.464	246.416	237.292	234.843
Staff costs	358.096	326.666	317.480	320.429
Other operating costs	18.942	11.608	10.241	10.404
EBITDA (recurring)	**113.912**	**110.992**	**122.928**	**135.101**
Impairment of inventories and accounts receivable, net	3.119	798	2.321	936
Provisions, net	6.274	2.856	- 118	1.070
Impairment of non-depreciable assets	1.942	-	-	10
Deprec/amort and impairment of investments, net	22.252	24.636	24.611	21.562
EBIT (recurring)	**80.325**	**82.702**	**96.114**	**111.523**
Company restructuring (costs)	-	6.653	- 3.623	- 37.192
Privatisation costs	-	-	4.422	2.837
Other non-recurring income and costs	-	19.077	8.079	10.460
EBIT	**80.325**	**56.972**	**87.236**	**135.418**
Financial results	- 2.259	- 4.379	- 4.003	- 7.473
Gains/losses in associated companies	85	240	21	54
EBT	**78.151**	**52.833**	**83.254**	**127.999**
Income tax for the period	- 22.468	- 16.864	- 22.148	- 51.155
Net profit before non-controlling interests	**55.683**	**35.969**	**61.106**	**76.844**
Net profit attributable to non-controlling interests	423	232	89	- 327
Net profit for the period attributable to Equity holders	**55.260**	**35.737**	**61.017**	**77.171**

Source: CTT Annual Reports

Annex 13 – Balance Sheet

Thousand €	2011	2012	2013	2014
Assets				
Non-current assets				
Tangible fixed assets	269.247	259.077	225.364	212.466
Investment property	2.728	1.369	21.762	23.330
Goodwill	25.529	25.529	25.084	7.705
Intangible assets	15.080	14.355	13.049	13.426
Invest. in subsidiaries and associated companies	553	690	711	227
Other investments	131	131	131	1.107
Other non-current assets	6.005	2.019	1.951	791
Deferred tax assets	102.468	102.229	103.645	91.429
Total non-current assets	**421.741**	**405.399**	**391.697**	**350.481**
Current assets				
Inventories	6.306	6.711	5.994	5.785
Accounts receivable	164.395	135.318	135.590	131.682
Deferrals	5.495	5.594	4.875	5.693
Other current assets	27.214	20.856	17.102	22.785
Cash and cash equivalents	426.259	489.303	544.876	664.570
Total current assets	**629.669**	**657.782**	**708.437**	**830.515**
Total assets	**1.051.410**	**1.063.181**	**1.100.134**	**1.180.996**

Thousand €	2011	2012	2013	2014
Equity and Liabilities				
Equity				
Share capital	87.325	87.325	75.000	75.000
Reserves	25.793	28.629	30.398	31.774
Retained earnings	88.569	87.105	83.367	84.375
Other changes in equity	15.851	33.080	24.549	- 18.786
Net Profit att. to equity holders of parent company	55.260	35.735	61.017	77.171
Non-controlling interests	1.628	1.608	1.604	- 324
Total equity	**274.426**	**273.482**	**275.935**	**249.210**
Liabilities				
Non-current Liabilities				
Provisions	16.476	36.596	38.502	45.672
Medium and long term debt	5.944	4.561	3.282	1.913
Employees benefits	300.975	282.065	278.639	255.541
Deferrals	13.705	11.323	8.837	6.427
Deferred tax liabilities	6.165	5.740	5.482	4.841
Total non-current liabilities	**343.265**	**340.285**	**334.742**	**314.394**
Current liabilities				
Accounts payable	346.905	349.215	391.958	499.537
Short term debt	5.165	6.857	3.717	1.846
Employee benefits	20.456	21.251	19.904	21.750
Income tax payable	7.381	863	93	6.173
Deferrals	4.676	4.369	4.103	5.502
Other current liabilities	49.136	66.859	69.682	82.584
Total current liabilities	**433.719**	**449.414**	**489.457**	**617.392**
Total liabilities	**776.984**	**789.699**	**824.199**	**931.786**
Total equity and liabilities	**1.051.410**	**1.063.181**	**1.100.134**	**1.180.996**

Source: CTT Annual Reports