

**MASTER  
FINANCE**

**MASTER'S FINAL WORK  
DISSERTATION**

**M&A: THE CASE OF CIMPOR AND INTERCEMENT**

**MARISA ALEXANDRA MIRA FERREIRA ELIAS**

**OCTOBER-2016**

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**OCTOBER-2016**

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**Abstract**

The cement industry is characterized by large initial investments and also high production scales with a stable trend among the biggest international cement producers’.

In June 2012, InterCement Austria Holding GmbH, controlled by the Brazilian Group Camargo Corrêa, acquired the Portuguese cement producer Cimpor with an offer price of 5,50€ per share. The group already had a participation on Cimpor capital – 33% - and this deal allowed the full control of Cimpor – 94%.

The deal occurred in the upshot of the 2008 financial crisis when the European macroeconomic environment was still suffering some consequences, especially in the sovereign debt area of Portugal and Spain.

The main purpose of this work is to analyze if the price paid per share in the deal was the fair one and the synergies created in the deal. With this is possible to conclude that the price paid was above the share price achieved.

**Keywords:** Cimpor, InterCement, Valuation, Cement, FCFF, WACC, Synergy

**Resumo**

A indústria do cimento é caracterizada por grandes investimentos iniciais e também por elevadas escalas de produção com uma tendência estável entre os maiores produtores de cimento internacionais.

Em junho de 2012, a InterCement Austria Holding GmbH, controlada pelo grupo brasileiro Camargo Corrêa, adquiriu o produtor de cimento Português Cimpor com um preço de oferta de 5,50 €. O grupo já tinha uma participação no capital de Cimpor - 33% - e este acordo permitiu o controlo total da Cimpor - 94%.

O acordo ocorreu quando ainda se faziam sentir os resultados da crise financeira de 2008, estando o ambiente macroeconómico europeu ainda a sofrer algumas consequências, especialmente na dívida soberana de Portugal e Espanha.

O principal objetivo deste trabalho é analisar se o preço pago por ação é o mais adequado bem como o valor das sinergias geradas. Pode-se concluir que o preço pago se encontra acima do preço obtido com esta avaliação.

**Palavras-Chave:** Cimpor, InterCement, Avaliação, Cimento, FCFF, WACC, Sinergias

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## **Glossary**

$\beta$  - Beta Levered

BV – Book Value

CAGR - Compounded Annual Growth Rate

CARC - Compound Annual Rate of Change

CAPEX – Capital Expenditures

CAPM - Capital Asset Pricing Model

D - Debt

D&A – Depreciation and Amortization

DCF - Discounted Cash Flow Method

D/E - Debt to Equity Ratio

D/V – Debt to Value Ratio

E - Equity

E/V – Equity to Value Ratio

EBIT - Earnings before Interest and Taxes

EBITDA - Earnings before Interest Taxes Depreciation and Amortization

EV - Enterprise Value

FCF - Free Cash Flow

FCFF - Free Cash Flows to the Firm

G - Growth rate

MV- Market Value

M&A - Mergers and Acquisitions

NOWC - Net Operating Working Capital

P/BV or PBV - Price to Book Value Ratio

P/E or PER - Price to Earnings Ratio

P/S - Price to Sales Ratio

Rd - Cost of Debt

Re - Cost of Equity

Rf - Risk Free rate

T – Taxes

Tc- Corporate Taxes

WACC - Weighted Average Cost of Capital

## 1. Introduction

The cases hereby presented intend to allow students to experience a Case Study in a Master Level class over a real life angle of Initial Public Offers and Mergers and Acquisitions, in general. The motivation for this subject is due to my interest in the M&A area and the influence of that type of deals in the world economy.

The case is about CIMPOR - CIMENTOS DE PORTUGAL, E.P. which was founded in 1976. Cimpor is a company in the concrete and cement industry. In the following years, the ownership structure suffered some changes and, in 1991, raised CIMPOR – CIMENTOS DE PORTUGAL, S.A. The firm settled its position in this kind of industry through an acquisition strategy of investments in other companies in several countries. But with the *subprime crisis*, the construction industry experienced a slowdown and consequently the concrete industry and, in 2012, occurred a turnover. The InterCement Austria Holding GmbH launched an IPO on all the capital, and Grupo Camargo Corrêa assumed the shareholder control.

The purpose of this project is to analyse the acquisition of InterCement and Cimpor, two big companies in the cement and concrete industry, in June 2012. This case focuses on the valuation of Cimpor and the synergies generated in the deal.

The choice of a teaching case study methodology was based on the development of this method in the last years. This will be considered as one of the approaches that can be used to better understand a specific problem. Nowadays, case studies are widely accepted as educational tools (Simons, 1980; Merriam, 1988; Stake, 1995) based on an oriented development of the concepts learned in a classroom environment.

Case Studies allowed the perception and stimulate the discussion and investigation on students through a real-world context problem. Starting from that point,

the case can be used as a facilitator to involve and transfer the learning responsibility from the instructor to the students.

The case hereby presented will try to use a real-world organization problem as a vehicle for discussion and investigation and for that it is necessary to use the knowledge found in the literature as well as the recommendations for building a proper case study provided by several authors.

Regarding the purpose of the case, it was structured as an instrumental case study and helps to solidify theoretical concepts and understand their application in a particular situation. According to Stake (1995) this can be defined by its secondary interest, supportive role and as a facilitator of our understanding of something else through an issue point of view or distil theory.

In terms of boundaries definition, and because it's a reproduction of real life situation, it seems to be suitable to adopt the suggestion of time and place made by Creswell (2003).

## **2. Case**

Cement is seen as a main input in the construction industry. This product is part of many different construction segments and it is possible to say that the market evolution is highly subject to economic cycles – grow faster in develop countries and quietly in mature economies. The investors and producers in the cement market are very exposed to volatility. Due to the product characteristics, there are no direct substitutes which do not permit any product differentiation. Therefore, the competition in the market is through prices and operational efficiency.

The main components are limestone and clay. Hence, and to reduce transportation costs, the limestone's fields influence the facilities location. The most important production input is the forge. The significant transformation occurs inside the forge and due to the chemical involved in the production process, the product life time is very

reduced. Due to these characteristics, it is a sector quite vulnerable to market fluctuations and forge's capacity.

This industry requires a significant cost of entry, which can generate three main issues as high minimum efficiency scale – increase productivity and face competition with periodic investments; difficulty in incrementing marginal production – necessary a huge increase in production; and a strong presence of fixed costs.

Because of cement features, the transportation through long distances is very costly. Therefore, the prices are determined locally and are influenced by the population growth, degree of competition, capacity utilization rates and GDP per capita. The GDP and the population set the consumption volume in each country. The competition degree is influenced by the business scale and also acts as a barrier to enter for beginners. Ultimately, when new capacity is built and if the volumes sold are not aligned with the expected ones, prices normally decrease and sometimes to certain levels below the average costs.

In the InterCement annual board meeting, some members show the need of expanding the group business geographically and in order to do that, they suggest the acquisition of another company with the characteristics pretended as an expand strategy.

InterCement Austria Holding GmbH have their business strategy based on the acquisition and holding of some investment positions in other companies in Austria or abroad. This is a joint stock company with an equity value of 35.000€ and it's owned by the Camargo Corrêa Group.

The company acts in different business areas such as cement, energy, transportation, construction and engineering, shoes and sports clothes, real estate, naval,

and textile. In the cement area, the group is present in several countries in South America and Angola.

Due to the strong presence in the Latin America, the past five years EBITDA margins presented significant values about 25%. Moreover, the financial structure is quite leveraged with a BB rating designated by the rating agencies.

The InterCement board, led by José Franco, approved the management strategy and a team of business analysts gathered and started to search. Cimpor was the chosen one.

Cimpor is one of the biggest cement group operating globally and its headquarter is located in Portugal. The company operates in several countries such as Portugal, Spain, Cabo Verde, Brazil, Morocco, Tunisia, Egypt, Turkey, Mozambique, South Africa, China and India. Brazil, Portugal and South Africa are the countries that most contribute to the company EBITDA. Cimpor also commercializes and produces concrete, mortars and aggregates as an effect of the vertical integration but, most of the revenues come from the cement production. As a result of an ambitious strategy, between 2006 and 2009, Cimpor acquisitions and investments increased the capacity in some countries.

The financial crisis (2009-2010) changed the company strategy resulting in investment restrictions to strength the financials and obtains credit in the markets. The reduced exposure to Europe and United States of America allowed Cimpor to keep a significant EBITDA margin when comparing with other cement producers.

In line with this strategy, Cimpor adopted a sustainable growth plan with the purpose of increasing capacity, environmental and safety conditions and also operational efficiency.

The following months were spent in meetings and doing some research and calculations relative to the price offered on the IPO.

Due to the announcement of the IPO and with the deadline of the deal, *Público* newspaper headline was “CIMPOR IPO IS REQUIRED AND ENDS ON JUNE 19”.

A group of workers in the Cimpor facility in Alhandra with a particular interest in finances saw this headline. They decide already to form a group work and analyse the price offered by InterCement.

Is the 5,50€ per share that InterCement paid advantageous to Cimpor?

### **3. Teaching Note**

#### **3.1 Literature Review**

##### **3.1.1 Mergers**

The global market is in constant exchange and it's necessary to find and redefine the company view. At different stages of the company life, resource decisions that once made economic sense can become problematic. There are some alternatives that can be used to increase the competition namely strategic alliances, mergers and acquisitions and a combination of both (Duysters and Hagedoorn, 2002).

Mergers and acquisitions and corporate restructuring are a big part of the corporate finance world and one of the most significant changes for a business due to the challenge that represents for the company (Reddy, 2012).

According to Vazirani (2015), mergers and acquisitions constitute one of the most attractive business strategies that are increasingly adopted by companies that want to improve their position in the global market trying to be more competitive.

### **3.1.1.1 Types of Mergers**

A merger is defined as a process of combination of assets, cultural values and management practices of two separate organizations to form a new one (Javidan et al., 2004). On the other hand, an acquisition is the process of buying out another business (Daniel & Metcalf, 2001). Although, Gaughan (2007) argue that a merger is a combination of two companies where only one of them survives and the acquiring company accepted the assets and liabilities of the acquired firm.

Researchers believe that strategically, the greater the similarities between companies, acquirer and acquired, the greater will be the economic gains with the acquisition (Lubatkin, 1988).

The term “merger” is used to wrap up several types of transaction which varies with the relation between the target and the acquirer and the method of payment. This can be divided in three different types:

#### ***Horizontal Integration***

This operation involves businesses that share the same line of production and technology this means that acquisition is made by another company in the same sector. It's associated with the excess capacity of a firm and consequently the need to increase market share. The main benefits are economies of scale in production and in distribution and the increase of market bargaining power. On occasion a horizontal merger can be opposed based on anticompetitive and antitrust barriers.

However, companies that perform this operation can face some challenges as the strategic and operational integration and the double costs.

#### ***Vertical Integration***

Vertical merger involves a variety of decisions where corporations must decide whether to provide certain products or services with internal resources or buy from third



parties (Harrigan, 1985). It's mostly composed by companies that share a buyer-seller relation.

This type of integration has a different purpose depending on the target firm line of business. Normally it aims to simplify the control, coordination and logistics of a company through an efficient market direct approach.

### ***Conglomerate Integration***

Conglomerate integration combines businesses with no specific relation or companies from different sector but allied strategically searching for a new market niche or a differentiated product that separately can't offer (Neven, D., 2005). It's directed to companies that aren't competitors neither have a buyer-seller relation. This type of integration it's based in the appearance of economies of scale and scope. The last ones appear during the firm life time associated with the increase of products or services variety.

#### **3.1.1.2 Reasons to Acquire**

According to Alexandridis, Petmezas and Travlos (2010), the primary objective of M&A is the generation of synergies that can impulse corporate growth, increase market power, boost profitability, and improve shareholders' wealth.

Over the last century, many economic theories, motives and hypotheses to explain M&A have been developed. These types of strategies are conducted during periods of uncertainty but taking into account the creation of value and/or benefits when comparing with the previous scenario.

In the perspective of Andrade, Motchell and Stafford (2001) this reasons can be related to efficiency. It can involve economies of scale and synergies, attempting to increase and create market power, market discipline, self-serving and to take advantage diversification, like exploitation of internal capital markets and managing risk.

However not all reasons to merge are good. Many M&A deals permit to the acquirer eliminate competitors and increase their market share in its product's market.

In the real-world corporations are complex organizations where is a clear separation between ownership and control (Motis J., 2007).

The motivations for M&A are not only shareholder exclusive. There is some research that supports that stock price of large bidders' drops when a bid is announced. This phenomenon can be explained, in the managers' point of view, by conflicts of interest and overconfidence.

The motivations for managers are different than for shareholders. Normally when a takeover or merger fails it can be associated to managerial motives. Generally, this result in a destruction of significant shareholder value amount.

However, the dominant rationale used to explain M&A is that acquiring firms seek to improve their financial performance through synergies that enhance revenues and lower costs.

### **3.1.1.3 The Takeover Process**

In an acquisition process is possible to value the target company in one of two ways: comparing the target to other comparable firms or based on project expected cash flows resulted from the acquisition and valuing them.

The first approach is simple to implement, it can be done by using a multiple of the industry (or comparable firm) but excluding the operational improvement and synergies efficiencies that will be implement (Seth, 1990). In the second approach it's necessary to take into account the discounting value added as an outcome of the merger.

In general, the price that is set for a target results from the sum of target's pre-bid market capitalization and the premium paid. From the bidders' point of view, a takeover is NPV positive when the premium paid is smaller than the synergies created.

### **3.1.2 Valuation**

Valuation is one of the most important issues in finance (Damodaran, 2006), it is ground on opinions more than in scientific facts and conditioned by the expectations of who guide them (Carabias and Fernández, 2006). Although there are several valuation approaches, the final result may be the same (Young's et. Al, 1999). However, the aspect to highlight and to obscure states the model choice.

#### **3.1.2.1 Discounted Cash Flow Approach**

The Discounted Cash Flow (DCF) method is the base model for valuations, integrating in other methods as relative valuation or option pricing (Damodaran, 2012) and it is considered as a conceptual accurate model – company is equated to a financial asset (Fernández, 2015).

The main objective is to determine the company's value (Koller, Goedhart & Wessels, 2010) and this can be analysed in two different approaches: the equity approach and firm approach – enterprise value.

According to Damoradan (2006), the most appropriated approach in order to estimate the value of an asset is through the cash flows present values and forecasting the Free Cash Flows to the Firm (FCFF).

This model is based on a forecast function and, thus the adequacy of the model depends on the rigor of the cash flows projections and risk measure calculations and also on the assumptions used to compute the cost of capital. The assumptions on that can lead to severe error in valuation because of the errors in the Return on Invested Capital,

Weighted Average Cost of Capital and growth rates (Goedhart, Moller and Wessels, 2005).

There has been some discussion on the use of DCF or relative valuations to value a firm.

### **Weighted Average Cost of Capital**

This model implies that future cash flows should be discounted at a rate that represent the opportunity cost of investing capital in assets of similar risk and duration (Kester and Morley, 1997), i.e. according to their riskiness.

Modigliani and Miller developed a theory to understand the effect of financial distress and taxes have an effect in the company's decisions concerning to the capital structure. The WACC is the most common tool to discount future cash flows taking into account the capital structure. The calculation of this opportunity cost requires the estimation of rates of return for equity and debt taking into account the respective proportional claim.

### **Capital Asset Pricing Model**

The Capital Asset Pricing Model (CAPM) is the preferred model to calculate the cost of equity in a project. Despite the consensus about the use of expected returns to valuation, regulation and capital budgeting and the risk premium as a function of systematic risk that is measure by the covariance with the market, some authors disagree.

Fama and French (1992) publish a study where discuss the correlation of stock returns with book-to-market ratios and firm size rather than measures of systematic risk as the model suggest. In turn, Kaplan's and Ruback's (1996) developed a study that values the High Leverage Transactions cash flows with a CAPM based discount rate. The conclusions of this study show that the implied risk premium was positively related with industry and firm betas.

This model will be used to calculate the cost of equity and, in order to compute that, it is required a risk-free rate, a risk premium and a beta.

### **Risk-Free Rate**

In a risk-free investment, the actual returns will be equal to the expected ones and there is no presence of reinvestment risk associated (Damodaran, 2008). The duration of the risk-free assets is suitable to matches with the duration of the cash flow in analyse. So, for a long run project, is advisable to discount the project cash flows at a 10-Year government bond rate. In the case of default risk associated with the government bond, the rate used should be without the default spread – bounds associated with the respective sovereign rating class.

Although, the long-term bond cannot be available in a specific currency and it's necessary to convert the cash flow to the respective one.

### **Risk Premium**

In any investment, the expected return is the sum of the risk-free rate and an extra return as a compensation for the risk. The equity risk premium, normally, it's estimated using the method of historical premiums earned by shares over default-free securities, in mature markets, during long periods of time (Damodaran, 2008).

Although there are some questions about the use of this method. The first is associated with the backward analyse in order to choose a time frame to recover the historical risk premium – a lower number of years considered result in more up-to-date estimations but with large standard errors. Also, the use of arithmetic or geometric averages in historical premiums and the risk-free rate chosen must be coherent with the one used to compute expected returns.

### **Beta**

A measure of risk that a certain investment sums a market portfolio is known as beta is required in the CAPM model (Damodaran, 2002). There are two methods that allowed to estimate beta: regress the returns on an asset against the ones of a

representative index for market portfolio or the use of average beta for the industry with market expectations included. The beta value is affected by the market index, time period and interval return used. Although, the major concern with this is that historical data don't take into account changes in firm features over time as recent leverage changes.

The Bottom-Up betas include the updated degrees of financial and operating leverage (Damodaran, 2002) and assume that the debt beta is zero – firm risk is borne out by the stockholders. Therefore, the unleveraged beta of the industry may be estimated using the estimates of unleveraged beta for industries already available (Copeland et al, 2000).

### **Cost of Debt**

To calculate the cost of debt financing related with a certain project is required the cost of debt (Damodaran, 2006) and it's evaluated by adding the risk-free rate to the firm's default spread. The market value of debt, combined with the cost of debt, is essential for the WACC calculation. However not all company's debt is public traded and, in that case is acceptable to use the book value of debt – market and book value of debt is normally close to another (Brigham and Ehrhardt, 2011). Despite that, such method is not allowed when the firm has debt trading in the market – bonds.

### **3.1.2.2 Terminal Value**

The terminal value is an important issue in the present value of a project and needs to be included (Kester and Morley, 1997). First of all, it's necessary to calculate the length of the forecasting time frame and then assume that the last cash flows will be calculated as a growing perpetuity. This is the most suitable method when the life time of the project is undefined (Ohlson and Zhan, 1999). The growth rate chosen must determine the annual investment and working capital requirements. Assuming that, in the long run, a firm growth is not expected to be faster than the country's economy, the proper terminal value growth rate should be approximately equal to the nominal GDP growth (Steiger, 2008).

Additional to that, the capital expenditures should be equal to depreciations and amortizations in all business life (Kaplan and Ruback, 1996). Since the perpetuity method depends highly on the growth rate used, there are some opinions defending the application to the EBITDA multiple to the last year EBITDA.

#### **3.1.2.4 Multiples**

The multiples' approach rely on the company's peers are valued by the market. For a good accuracy is necessary that the comparable firms used must be in the same risk level and have a similar Return on Invested Capital and growth. Another condition is that the value of the one firm varies in the same proportion and direction as the performance measure.

The multiples already embody updated market expectations on future cash flows and discount rates, under the previous assumptions and conditions, making this a more rigorous measure (Kaplan and Ruback, 1996).

The multiples' approach can be divided in two types: transaction and market (Vernimmen 2005). The transaction type is referent to a sample of past firm transactions while the market type is based in a sample of comparable firms. The market multiples can be divided by their fundamental determinants (Damodaran, 2006).

The list of multiples to choose is extensive and there are two main points to adopt when valuing a firm (Goedhart, Koller and Wessels (2005). First, the application of individual companies' multiples – i.e. the average industry disregards the fact that companies' growth rate, capital structures and ROIC may change drastically even in the same business area. Second, the use of enterprise value multiples over the market capitalization because of the capital structure affected in the last one.

Regardless of the multiples seems to be a good valuation method, the method choice depends on the benefits of using specific company information in the DCF method

in comparison to the costs of ignoring measures of market expectations in the comparable methods (Kaplam and Ruback, 1996).

Yet, the integrated analyse of DCF and multiples method can be advantageous for discussions about the firm strategic position to create value and comprehension on the key factors of value creation (Goedhart *et al.*, 2005).

### **3.1.3 Synergy**

Synergy can be defined as the additional value generated by combining two companies, how result in opportunities that, operating independently, would not be available (Damodaran, 2005). This can be defined in two types operating and financial synergies.

Operating synergies can affect the value of the companies involved in the process due to the impact in growth, returns and margins. The type of synergies can include economies of scale (normally result from horizontal mergers due to cost savings), stronger pricing power (increase of market share and consequently competition reduction), higher growth in existing or new markets and also in a combination of functional strengths.

In turn, financial synergies influence the cash flows and also the cost of capital. The combination of a company with a high return projection but insufficient cash with another one with excess cash can result in synergies. In this particular case, the synergy value can be the projections that the company with scarce cash would give up due to financial issues. The cash flows resulted from a combined firm will be more predictable and stable who reflects in an expected increase of the new company debt capacity. The benefits that emerge can be analysed in the perspective of a reduction in default risk (Lewellen, 1971). Taking advantage of tax law with the acquired firm's assets of with the net operating losses to sleek income may result in tax benefits. Diversification is



oftentimes a misbelieved issue. An investor can diversify on their own and, in that case not create any value.

The forecast of the combined firms' cash flows discounted at an appropriate rate – respective to the new firm and not to the old ones – and subtract the sum of both standalone firms before the merger happen result into the synergy value. After this value been achieved, it must be split between both acquired and target in the same proportion as the contribution for this synergy.

It seems to be fair to say that nearly all of synergy value goes to the acquired company's shareholder (Jensen and Ruback, 1983). Hereupon, the most common error in synergy's valuation is associating strengths or items to the shareholders' target firm when they had no role in creating that.

The distinguish between synergy and control value is an important issue in order to avoid the double-counting errors – the control value is the incremental value in the target firm resulting of the new management team and better governance guidelines. As a result, this value must be assigned to the acquiring company shareholders.

### **3.2 Case Summary**

The cement industry is a business highly influenced by economic cycles. Regarding the product characteristics – no direct substitute – the market competition is achieved through prices and operational efficiency.

In the last annual board meeting, InterCement outlined an expansion strategy through the acquisition of another company with the same characteristics and strategic geographic displayed.

After some market research, the chosen one was Cimpor. Cimpor have facilities different countries among all the world and that will allow to expand the InterCement industry with a lower cost.

The announcement of the IPO makes the headline of several media in Portugal and rouse the curiosity of a Cimpor group of workers. This group have a particular interest in finances and decided to form a team and analyse the offer.

Their main objective is to conclude if the 5,50€ per shares is advantageous to the company.

### **3.3 Objective**

The case presented intend to allow students to experience a Case Study in a Master Level class over a real life angle of Initial Public Offers and Mergers and Acquisitions, in general. This is a case designed to be used in a Mergers and Acquisitions class framed in the “Other types of Restructuring” program point. The major point of this case is to establish an opportunity to move beyond theoretical concepts learned to a real life situation problem.

The case objectives are:

- Estimate the company value through the Discount Cash Flows method;
- Construct the balance sheet and income statement;
- Determine the cost of capital;
- Estimate the value of the drivers;
- Analyse the industry peers’ multiples;
- Determine the synergy gain.

### **3.4 Steps for Resolution**

In order to solve the case presented, some steps need to be followed:

**1<sup>st</sup>** - Construct the Income Statements;

**2<sup>nd</sup>** - Identify the most accurate method to solve the case;

3<sup>rd</sup> - Determine the most appropriate cost of capital;

4<sup>th</sup> - Determine the value of shares;

5<sup>th</sup> - Calculate the synergies value.

The case will be composed by the case study itself, an excel spreadsheet and also teaching notes.

#### **4. Solution for students**

This topic aims to facilitate the resolution showing all the steps and assumptions made. The company valuation will be divided by countries where both companies operate. In this case, Portugal will be used as an example.

##### **Note:**

The deal in this case was completed on the 29<sup>th</sup> May 2012. Therefore, all the computations and projections will be made as if today was the 1<sup>st</sup> January 2012. The entire data based on what occur prior to 2012 or on what was projected to occur from 2012 onwards. The forecasted period is between 2012 and 2017. Also, the valuation will be done taking into account the risk and growth profiles from country to country, according to Sum-of-the-Parts of all the companies' assets.

Lastly, there were a split of assets between the merged firm and Votorantim – one of Cimpor shareholders -, a few months after the deal take place – consequence of anti-trust concerns about competition in Brazil. Yet, this operation would not be considered in this valuation because of the complexity level and inefficient for the purpose of the valuation.

#### **4.1 Cimpor Assumptions**

##### **4.1.1 Installed Capacity**

One of the most concerning issue in management decisions in the cement industry is the installed capacity. The decisions associated to capacity expand are highly dependent

on the last thirty years' usage and differ from country to country. Taking this into account, the model simplifies this complex process as considering installed capacity as a function of cement production and utilization rates forecast.

Concerning to utilization rates, it will assume that Cimpor will be aligned with the expected ones in the industry. The expected utilization rates<sup>1</sup> in 2017 are 72% (developed markets) and 74% (emerging markets) and the model assume that Cimpor's utilization rate, for each country, will converge progressively to that values.

Portugal	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Installed Capacity (10 <sup>3</sup> tonne)	7.157	7.034	6.490	5.947	5.403	4.860	4.316	3.773
Capacity Utilization	67,50%	51,80%	51,65%	52,83%	55,41%	59,30%	64,67%	72%

*Table I - Cimpor Assumptions: Portugal - Installed Capacity*

Source: Author and Cimpor Annual Report

Although, Mozambique and China will be excluded from this rule. Taking into account the utilization rate of 91%, for China, on average, in the years previous to 2012. So, the model will assume that the utilization rate will converge to 91%. In the Mozambique case, this rule will result in a decrease in installed capacity at the same time that sales raise. In this case, the Mozambique installed capacity will be forecasted to remain constant.

#### **4.1.2 Revenues and Prices**

In terms of total revenues, the calculations will be based on three variables: sales of cement and clinker; sales of concrete and aggregates; and other revenues. Sales of cement and clinker will be calculated based on the variation of sales in the previous years. The same assumption will be used to calculate the sales of concrete and aggregates. Although, there are a modification in this assumption in Brazil due to The Football World Cup (2014) and the Olympic Games (2016). Such events will have a positive impact on cement consumption and some analysts predicted an industry GARC of more than 9%

<sup>1</sup> Values retrieved from the Global Cement 2014 Outlook

between 2012 and 2017 so, this growth rate will be considered when predicting revenues in Brazil.

The model also assumes that, each year, the units of cement sold will progress in the same way and proportion as the cement consumption who result in a market share constant in the future.

The units of cement and clinker were computed based on the average values of units sold in the previous years and the respective variation. The same assumption was made to calculate the concrete and aggregate units sold. In terms of other revenues, it will be a percentage of total revenues as in 2011.

Due to the impossibility to find the information relative to prices of cement and clinker, concrete and aggregates for each country, the model will assume that the unit prices of concrete and aggregates are a fixed percentage of the cement and clinker ones for each country. The prices for each country were calculated based on the product of the unknown prices with the known quantities equal to the total revenues of 2011, using the price relation regained from the consolidated annual report. For 2012 onwards will be assumed a price variation according to inflation and the forecast price change ex-inflation.

Portugal	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Exchange Rate €	-	-	-	-	-	-	-	-
Price change ex-inflation			1,00%	-1,30%	-1,00%	0,10%	0,20%	0,00%
Inflation	1,39%	3,55%	2,78%	0,44%	-0,16%	0,51%	0,66%	1,16%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	4.557	3.700	3.352	3.142	2.994	2.882	2.791	2.716
Unit price (per 10 <sup>3</sup> tonne)	55 €	55 €	57 €	56 €	56 €	56 €	56 €	57 €
Concrete and Agregates	7.834	6.801	6.353	5.710	5.236	4.751	4.335	3.944
Unit price (per 10 <sup>3</sup> tonne)	21 €	21 €	22 €	22 €	21 €	22 €	22 €	22 €
Sales Revenues	426 €	378 €	329 €	300 €	279 €	264 €	252 €	242 €
Other Revenues	21 €	19 €	16 €	15 €	14 €	13 €	13 €	12 €
Total Revenues (10 <sup>6</sup> €)	447 €	397 €	345 €	315 €	292 €	277 €	264 €	254 €

Table II - Cimpor Assumptions: Portugal - Revenues and Prices in Million Euros

Source: Author and Cimpor Annual Report

#### 4.1.3 Costs

The changes in volume of cement sold across countries and the economic and financial crisis have a negative impact in the European countries revenues where the company operates. Nevertheless, the EBITDA margins were constant in every country.

Therefore, the model assume that margins will not change in the future due to the endurance to external negative factors. As a consequence of that, the EBITDA margins will be used for each country's forecast will be an average of the previous 5 years.

Portugal	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Total Revenues (10 <sup>6</sup> €)	447 €	397 €	345 €	315 €	292 €	277 €	264 €	254 €
Cash-costs	309 €	280 €	259 €	237 €	219 €	208 €	198 €	190 €
EBITDA	138 €	99 €	86 €	79 €	73 €	69 €	66 €	63 €

Table III - Cimpor Assumptions: Portugal - Costs in Million Euros

Source: Author and Cimpor Annual Report

However, some exceptions would be applied:

In India, the EBITDA margins were inconstant (18,80% - 2009; 6,70% -2011) but it is reasonable to say that Cimpor will recover its good margins until 2017.

Regarding to Turkey, the margin increased from 2008 until 2011 (10% to 18,90%). Although, the rate was 23,70% in 2007 and seems to be acceptable that the facility will reach this up to 2017.

In the case of China, it's reasonable to assume that Cimpor will continue to rise their EBITDA margin (5,9% - 14%; 2009-2011) through an operational efficiency and reach a margin of 23,61% (company average) in 2017.

Due to the consequences of the economic environment, it is plausible to think that Portugal, Spain and Egypt will not record historical EBITDA margins. So, the margins will converge progressively to average past values by 2017.

In conclusion, the scenario will be optimistic concerning to India, Turkey and China but conservative for the other countries due to the influence of the financial crisis in the historical values used in the calculations.

#### 4.1.4 Capex, D&A and Working Capital

To predict working capital investments for the following years, the model assumes that it will be calculated based on the average percentage of sales of the last years, for

each country. Analyzing the past two years working capital in all the countries it's possible to state that it is stable in every country.

Portugal	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Working Capital	75 €	68 €	61 €	54 €	49 €	46 €	47 €	48 €
IWC	-	-	7 € -	7 € -	6 € -	6 € -	3 €	1 €

Table IV - Cimpor Assumptions: Portugal - Working Capital in Million Euros

Source: Author and Cimpor Annual Report

The depreciation and amortizations, ideally, should be estimated taking into consideration the different assets and life time in each country. However, this information is not available by country and its remain lifetime who is extremely hard to forecast. With all these constraints, the depreciations were calculated based on the historical depreciation value per installed capacity – it's a stable value and good estimator.

The data concerning Fixed Tangible Assets among 2008 and 2011 was divided by country according the installed capacity.

Depreciations and CAPEX - Portugal	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross PPP	1.013.642	1.084.766	1.045.439	1.111.983	1.179.666	1.248.564	1.318.636	1.390.024	1.462.838
Acumulated Depreciation	148.762	176.880	320.480	373.639	425.812	477.019	527.276	576.601	625.013
Net Assets	864.880	907.886	724.959	738.344	753.854	771.545	791.360	813.423	837.825

Table V - Cimpor Assumptions: Portugal - Depreciation in Euros

Source: Author and Cimpor Annual Report

The most sensitive issues are the installed capacity and Capex because of their influence in the valuation. The best approach is to use an if scenario taking into account the investments plans, historical CAPEX and other specifications at the time in specific countries.

The division between maintenance and investment costs can't be applied because there is no country available information.

These scenarios were divided in:

If the installed capacity has been diminished or stable and its projected to continue in the future, the CAPEX can be based on the maintenance expenses related with a fixed rate (on historical values) to the forecasted installed capacity values considering the inflation of each country.

If the installed capacity has been increased and it's projected to continue, the same approach was applied as in the diminish/stable scenario.

If none of these scenarios can be adopted or considering specific country investment plans, it's required an individual approach:

It is project a new facility in Morocco in 2012 to face the increase in capacity in the next years. So, in order to reflect that in the CAPEX seems reasonable to add 15% of the CAPEX from 2013 to 2017 and add in 2012.

Relative to China, it was used the rate relative to 2010 and 2011 due to the large investments in prior years to increase the installed capacity.

Depreciations and CAPEX - Portugal	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	6.970	7.157	7.034	6.490	5.947	5.403	4.860	4.316	3.773
Exchange Rate €	-	-	-	-	-	-	-	-	-
Inflation		1,39%	3,55%	2,78%	0,44%	-0,16%	0,51%	0,66%	1,16%
CAPEX	23.026	27.659	16.990	16.087	15.587	15.193	14.710	14.222	13.681

Table VI - Cimpor Assumptions: Portugal - CAPEX in Euros

Source: Author and Cimpor Annual Report

#### 4.1.5 WACC

The approach used will be the Discounted Cash Flows and we use the CAPM to calculate the cost of equity and WACC will be the rate to discount the Free Cash Flow.

First is necessary to choose the risk-free rate. Considering all the questions about the impact of the financial crisis in Europe, the location of Cimpor's headquarters (Portugal, Eurozone) and the rumors on the default probability of European countries, the 10-year government German bond is the most appropriate rate. On the 2nd January 2012, it is quoted at 1.89%. However, the use of a local risk free rate implies that the foreign cash flows need to be discounted every year to the local currency, in this case the Euro.

Concerning to the equity risk premium, it will include the country premium and also the base premium for mature equity market for each country. The first one was withdrawn from the Damodaran site (as June 2012). The second one was based on the Damodaran recommendation for a developed economy.



To estimate Beta, it's necessary to taking into consideration the unlevered beta for the industry. This value was also from the Damodaran site and will be used to calculate the levered beta for Cimpor through the formula  $B_L = B_U * (1 + (1 - T_C) * \frac{D}{E})$ . The beta used for Cimpor' cost of capital will be 0.75.

The cost of debt is 3.89% and it's the result of a BBB rating with an implied spread of 2%. The model will also assume a leverage degree of 34%. This value is a result of the decrease of Cimpor's leverage in the past years and also the lack of issue new debt in the future.

To compute the WACC for each county, the values considered were 1.623 Million Euros as debt book value since the company has no trading debt in the market and a market capitalization of 3. 573 Million Euros.

WACC	Portugal
Risk free Rate	1,89%
Equity Risk Premium	6%
Country Risk Premium	4,88%
Unlevered Beta	0,75
Tax Rate	25,00%
D/E	0,45
Levered Beta	1,01
Cost of Equity	12%
E/V	0,68
Cost of Debt	3,89%
D/V	0,32
<b>WACC</b>	<b>9,05%</b>

Table VII - Cimpor Assumptions: Portugal - WACC  
Source: Author

#### 4.1.6 Terminal Value

The growth rates used were based on the CAGR calculation, for each country where both companies operate, through the PwC forecasts GDP per country through 2060. The value obtained where used as the terminal value growth rate.

Portugal	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	86 €	79 €	73 €	69 €	66 €	63 €	
Taxes	8 €	7 €	5 €	5 €	4 €	4 €	
IWC	- 7 €	- 6 €	- 6 €	- 3 €	1 €	1 €	
CAPEX	16 €	16 €	15 €	15 €	14 €	14 €	
FCFF	69 €	63 €	58 €	53 €	47 €	45 €	324 €
Discounting Factor	0,9170	0,8409	0,7711	0,7071	0,6484	0,5946	0,6633
PV	63 €	53 €	45 €	37 €	30 €	27 €	215 €
EV	<b>470 €</b>						

Table VIII - Cimpor Assumptions: Portugal - Terminal Value in Million Euros

Source: Author and Cimpor Annual Report

#### 4.1.7 Analyze the results obtained

The assumptions made previously combined with the DCF method result in a Market Capitalization of 3.190 Million Euros and an Enterprise value of 4.399 Million Euros. Taking into account this values and the number of shares, the share price will be 4,13€.

This valuation, comparing with the company's market price at the time (5,08€) and with the price offered (5,50€) is lower. Although, concerning to the market price, there can be a bias which might result in a different equity value. Also, the different WACC's and terminal growth rates used explains the difference in prices. The market analysts may have used an over pessimist scenario due to the financial crisis.

Cimpor Valuation		
Enterprise Value	€	4.399
Adjusted Net Debt	€	1.623
Equity Value	€	2.776
Number of Shares		672
Price per share		4,13 €

Table IX - Cimpor Valuation in Million Euros, except price per share

Source: Author

#### 4.2 InterCement Assumptions

The same approach used in Cimpor will be used in the InterCement valuation. In this case Argentina will be used as example.

#### 4.2.1 Revenues and Prices

Since there is no available information about the forecasts for Argentina's cement consumption it will be assumed that it will grow at a rate between South Africa and Brazil.

This is based on the income and cement consumption relationship, in 2010.

Argentina	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
<b>Sales</b>								
Cement and Clinker (10 <sup>^3</sup> tonne)	5.500	6.100	6.433	6.667	6.848	6.998	7.125	7.236
Unit price (per 10 <sup>^3</sup> tonne)	\$ 351	\$ 385	\$ 433	\$ 579	\$ 1.014	\$ 1.614	\$ 2.607	\$ 4.029
Concrete and Agregates (10 <sup>^3</sup> tonne)	2.000	2.100	2.153	2.188	2.216	2.238	2.257	2.273
Unit price (per 10 <sup>^3</sup> tonne)	\$ 135	\$ 148	\$ 166	\$ 223	\$ 390	\$ 621	\$ 1.003	\$ 1.550
Sales Revenues	\$ 423	\$ 462	\$ 3.142	\$ 4.346	\$ 7.805	\$ 12.682	\$ 20.837	\$ 32.679
Other Revenues	\$ 21	\$ 23	\$ 157	\$ 217	\$ 390	\$ 634	\$ 1.042	\$ 1.634
Total Revenues (10 <sup>^6</sup> €)	\$ 444	\$ 485	\$ 3.299	\$ 4.563	\$ 8.195	\$ 13.316	\$ 21.879	\$ 34.313

Table X - InterCement Assumption: Argentina - Revenues and Prices in local currency

Source: Author and InterCement Annual Report

#### 4.2.2 Costs

The assumption used to calculate InterCement future EBITDA margins are the same as in Cimpor. Also, the relation between prices is the same.

Argentina	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Total Revenues (10 <sup>^6</sup> €)	\$ 444	\$ 485	\$ 3.299	\$ 4.563	\$ 8.195	\$ 13.316	\$ 21.879	\$ 34.313
Cash-costs	\$ 1.752	\$ 2.119	\$ 2.474	\$ 3.422	\$ 6.146	\$ 9.987	\$ 16.409	\$ 25.735
EBITDA	\$ 564	\$ 682	\$ 825	\$ 1.141	\$ 2.049	\$ 3.329	\$ 5.470	\$ 8.578

Table XI - InterCement Assumptions: Argentina - Costs in local currency

Source: Author and InterCement Annual Report

#### 4.2.3 Capex, D&A and Working Capital

In terms of Capex, Working Capital and Depreciation & Amortizations, the assumptions are the same as in Cimpor valuation.

Depreciations and CAPEX (local currency)	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	7.820	8.146	8.473	8.799	9.126	9.452	9.779
Exchange Rate €	5,76	5,85	7,27	11,39	15,48	19,89	25,63
Inflation	9,78%	10,04%	10,62%	10,99%	16,80%	25,60%	19,95%
Gross PPP	6.067.559	6.719.307	7.469.862	8.331.490	9.349.190	10.440.427	11.589.280
Acumulated Depreciation	3.625.939	3.889.225	4.180.683	4.503.326	4.860.493	5.255.876	5.693.565
Net Assets	2.441.620	2.830.082	3.289.179	3.828.164	4.488.697	5.184.551	5.895.715
D&A		263.286	291.458	322.644	357.166	395.383	437.689
CAPEX	629.961	653.629	650.202	648.035	615.799	572.654	599.628

Table XII - InterCement Assumptions: Argentina - CAPEX, D&A and Working Capital in local currency

Source: Author and InterCement Annual Report

#### 4.2.4 WACC

The assumptions about the risk-free rate and the conversion of the foreign cash flows are the same as for Cimpor. The same procedures were used to compute the beta and the equity risk premium. In terms of Cost of debt, it will be higher because of the different rating (BB) who result in a different spread (4%). Also, the leverage degree will

be assumed to be the same as in 2011 (44%) and maintained in the future. The book value of equity is also considered to be maintained since no information concerning market capitalization will be available.

WACC	Argentina
Risk free Rate	1,89%
Equity Risk Premium	6%
Country Risk Premium	9,00%
Unlevered Beta	0,75
Tax Rate	35,00%
D/E	0,79
Levered Beta	1,14
Cost of Equity	18%
E/V	0,56
Cost of Debt	5,89%
D/V	0,44
<b>WACC</b>	<b>11,73%</b>

Table XIII - InterCement Assumptions: Argentina - WACC  
Source: Author

#### 4.2.5 Terminal Value

The assumption made were the same as in Cimpor.

Argentina	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	141 €	157 €	180 €	215 €	275 €	335 €	
Taxes	34 €	41 €	53 €	67 €	89 €	111 €	
IWC	11 €	17 €	3 €	3 €	1 €	1 €	
CAPEX	112 €	89 €	57 €	40 €	29 €	23 €	
FCFF	- 16 €	9 €	67 €	105 €	156 €	199 €	1.015 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,6187
PV	- 15 €	8 €	53 €	76 €	105 €	123 €	628 €
EV	<b>979 €</b>						

Table XIV - InterCement Assumptions: Argentina - Terminal Value in Million Euros  
Source: Author

#### 4.2.6 Analyze the results obtained

In the InterCement valuation, the Enterprise Value is 3.043 Million Euros and the Equity Value is 2.275 Million Euros. This value is highly influenced by the inflation and exchange rate specially in the Argentina case.

InterCement Valuation	
Enterprise Value	3.043 €
Adjusted Net Debt	768 €
Equity Value	2.275 €

Source: Author (in Million Euros)  
Table XV - InterCement Valuation in Million Euros

### 4.3 Analysis of Synergies

InterCement and Cimpor have their operations in different countries with the exception of Brazil so, it is illogical to check if there are synergies between both companies' assets. Accordingly, it only makes sense to find potential synergies in Brazil. Towards to the asset combination in Brazil, the type of synergy that can be account will be about cost savings.

Concerning to other possibilities, an operation synergy due to a strong pricing power and increase in market share. Although, the factories are installed in different regions combined with the high transportation costs will result in prices as a function of the demand/supply relation on a regional level – industrial context doesn't permit gains in pricing power.

The market exposure can be translated in cash flows less volatiles who bring a decrease in the global business risk.

Economies of scale between both companies will be achieved over cost savings.

The estimation of this synergy was based on three studies: one for PWC concerning the percentage fully achieved of announced cost savings – 40%; another from the Boston Consulting Group about the synergies in the construction of that – 5.6% and finally in one concerning the past deals in this sector and the respective synergy – 2-4% target sales.

Due to the characteristics of the cement industry – stability in market share – the revenues provided by synergies are not allowed.

In order to compute the synergies associated is necessary to compute the Equity Value for Cimpor (as a combined firm) and compare that value with the pre-deal Cimpor Equity Value. The same methodology used to calculate Cimpor and InterCement value will be applied for the combined company.

Equity Value	
<b>Cimpor (A)</b>	2.776 €
<b>InterCement (B)</b>	2.275 €
<b>(A)+(B)</b>	5.051 €
<b>Price target</b>	7,52 €

Table XVI - Equity Value in Million Euros, except the price target  
Source: Author

The sum of both companies is valued at 7,52€ per share, which is higher than the Cimpor share price by itself.

Equity Value	
<b>Combined Firm (C)</b>	5.787 €
<b>(A)+(B)</b>	5.051 €
<b>Synergy</b>	736 €
<b>Synergy per share</b>	1,10 €

Table XVII - Equity Value - Synergies in Million Euros, except the synergy per share  
Source: Author

The synergies value can be obtained from the difference between of the merged company – stated as a C – and the sum of the separated companies – stated as A and B. The result of that will be 736€ Million Euros or 1,10€ per share.

#### 4.4 Relative Valuation

The multiples' approach aims to analyze the market value of Cimpor and InterCement peers.

One of the most important issues is the multiples and peers' choice. This approach will be on the P/E multiples and EV/EBITDA with emphases in the second. The peers chosen have their business in the production of cement, concrete and aggregates who result in a risk profile similar. The only difference can be assessed by the company geographic location exposure.

Peers	Sales Growth		EBITDA Margins		Leverage Net Debt/EBIT DA	EV/EBITDA		P/E	ROIC	Geographic Exposure
	2010	2011	2010	2011		2012E	2012E			
CRH	-1%	5%	9%	9%	2,10	8,03	18,41	6%	Europe and North America	
Italcementi	-7%	1%	17%	16%	3,00	6,98	36,66	NA	Europe, North America, Africa and Asia	
HeidelbergCement	6%	10%	19%	18%	3,33	7,47	16,64	13%	Europe, North America, Africa and Asia	
Lafarge	2%	3%	22%	21%	3,72	7,48	16,36	14%	Europe, North America, Latin America, Africa and Asia	
Buzzi Unicem	-1%	5%	15%	15%	2,66	13,6	53,69	3%	Europe and North America	
Average	-0,20%	5%	16%	16%	2,96	8,71	28,35	9%		
Cimpor	7%	2%	26%	27%	27%	7,67	14,41	17%	Europe, Latin America, Africa and Asia	

Table XVIII - Relative Valuation - Peers

Source: Bloomberg and Author

Using the multiples in the table above and performing Cimpor relative valuation achieve a result that is around the value performed in the DCF method valuation. This occur because the equity value obtained in the DCF method is not as much different than this one.

	EV/EBITDA	P/E
	2012	2012
Enterprise Value	5.584 €	
Equity Value	3.315 €	3.484 €
Share Price	3,38 €	5,18 €

Table XIX - Relative Valuation in Million Euros, except share price

Source: Bloomberg

#### 4.5 After the IPO

After the IPO, InterCement reinforced their position in Cimpor's capital. The operation occurs at a price offer below 22% of the IPO price, per share. Since the IPO, Cimpor share prices have been falling on the stock exchange. The liquidity problems and a non-dividend policy, in 2015, create a division and some minority shareholders' complaint about that. Nowadays, Cimpor shares are quoted as 0,24€ (close price at 30 December 2016) and present several negative financial ratios.

#### 5. Conclusion

Throughout this case is possible to see that the industry cement is relevant and an important industry in the world. The first conclusion that can be made is that the market overvalues Cimpor's shares. The price per share obtained with the DCF method in this work - 4,13€ - is significantly lower than the market price.

Considering the price offer in the deal of 5,50€ per share, the premium implied in the potential synergies that are expected to rise with the deal increase.

Observing the deal from the InterCement perspective, the deal improved their situation. In the Cimpor perspective it can create value to its shareholders due to the exposure to certain markets, low degree of indebtedness and operational efficiency. Although, the possibility of split assets – Votorantim refuse to sell their assets in the deal – can threaten the company strategic market exposure.

Regardless of that, this kind of risk can be insignificant since Camargo Corrêa assumed the control of 94% of Cimpor capital. Globally, this deal can be advantageous for both companies since the value created with the joint synergies will increase share prices and consequently the company value.



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## 7. Appendixes

### 7.1 Appendix 1 – Population Forecast per Country

	Population Forecast per country										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Angola	17.043	17.559	18.076	18.592	19.109	19.625	20.197	20.769	21.340	21.912	22.484
Argentina	41.343	41.761	42.179	42.596	43.014	43.432	43.821	44.211	44.600	44.990	45.379
Brazil	201.103	203.352	205.600	207.849	210.097	212.346	214.398	216.451	218.503	220.556	222.608
Cape Verde	516	524	531	539	546	553	561	568	576	583	
China	1.330.141	1.336.415	1.342.690	1.348.964	1.355.239	1.361.513	1.366.119	1.370.726	1.375.332	1.379.939	1.384.545
Egypt	80.472	82.075	83.678	85.281	86.884	88.487	90.042	91.596	93.151	94.705	96.260
India	1.173.108	1.188.826	1.204.543	1.220.261	1.235.978	1.251.696	1.266.575	1.281.455	1.296.334	1.311.214	1.326.093
Marroco	31.627	31.966	32.305	32.645	32.984	33.323	33.650	33.976	34.303	34.629	34.956
Mozambique	22.417	22.994	23.571	24.149	24.726	25.303	25.963	26.623	27.283	27.943	28.603
Paraguay	6.376	6.892	7.409	7.925	8.442	8.783	7.355	7.927	8.498	9.070	7.192
Portugal	10.736	10.754	10.772	10.789	10.807	10.825	10.825	10.826	10.826	10.826	10.842
South Africa	49.109	48.944	48.780	48.615	48.451	48.286	48.335	48.384	48.432	48.481	48.530
Spain	46.506	46.834	47.162	47.490	47.818	48.146	48.520	48.894	49.268	49.642	50.016
Tunisia	46.506	46.834	47.162	47.490	47.818	48.146	48.520	48.894	49.268	49.642	50.016
Turkey	77.804	78.748	79.692	80.635	81.579	82.523	83.370	84.217	85.063	85.910	86.757

Source: *The Global Cement Report, BESI Research*

### 7.2 Appendix 2 – Annual per capita Cement Consumption

	Annual per capita Cement Consumption (kg per capita)							
	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	309	327	357	372	399	411	420	433
Cape Verde	632	617	615	616	619	627	636	655
China	1395	1517	1570	1601	1625	1641	1649	1666
Egypt	635	541	514	512	512	512	514	530
India	210	214	219	225	231	236	241	248
Marroco	459	474	479	483	486	488	491	493
Mozambique	50	53	57	61	63	64	65	67
Portugal	543	457	399	359	332	315	316	316
South Africa	219	239	244	247	250	252	254	259
Spain	532	439	386	356	337	330	331	324
Tunisia	701	659	633	617	622	628	634	647
Turkey	735	829	844	859	871	883	895	917

Source: *International Monetary Fund*

### 7.3 Appendix 3 – Inflation (as %)

	Inflation (as %)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Angola	14,48%	13,48%	10,29%	8,78%	7,30%	10,28%	19,11%	15,22%	12,89%	10,90%
Argentina	10,46%	9,78%	10,04%	10,62%	10,99%	16,80%	25,60%	19,95%	17,43%	12,24%
Brazil	5,04%	6,64%	5,40%	6,20%	6,33%	9,03%	8,74%	6,13%	5,70%	5,23%
Cape Verde	2,10%	4,50%	2,50%	1,50%	-0,20%	0,10%	0,80%	1,30%	1,80%	2,00%
China	3,30%	5,40%	2,65%	2,62%	1,99%	1,44%	1,80%	2,00%	2,20%	2,60%
Egypt	11,69%	11,09%	8,65%	6,91%	10,10%	11,00%	9,61%	9,45%	9,02%	7,47%
India	9,50%	9,54%	9,94%	9,44%	5,93%	4,93%	5,29%	5,33%	5,54%	5,33%
Morocco	1,00%	0,90%	1,30%	1,90%	0,40%	1,60%	1,50%	2,00%	2,00%	2,00%
Mozambique	12,70%	10,40%	2,10%	4,20%	2,30%	2,40%	6,00%	5,60%	5,60%	5,60%
Paraguay	4,70%	8,30%	3,70%	2,70%	5,00%	2,90%	3,80%	4,50%	4,50%	4,50%
Portugal	1,39%	3,55%	2,78%	0,44%	-0,16%	0,51%	0,66%	1,16%	1,38%	1,54%
South Africa	4,26%	4,26%	5,65%	5,75%	6,07%	4,59%	6,48%	6,27%	5,60%	5,60%
Spain	1,80%	3,19%	2,44%	1,41%	-0,15%	-0,50%	-0,38%	1,05%	1,13%	1,30%
Tunisia	3,30%	3,50%	5,10%	5,80%	4,90%	4,90%	4,00%	3,90%	3,80%	3,70%
Turkey	8,57%	6,47%	8,89%	7,49%	8,86%	7,67%	9,79%	8,81%	7,30%	6,90%

Source: *International Monetary Fund*

## 7.4 Appendix 4 – Exchange Rates (EUR €)

	Exchange rates (EUR€)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Angola	69,26	67,51	74,26	72,76	71,86	71,84	72,26	72,54	72,97	73,43
Argentina	5,20	5,76	5,85	7,27	11,39	15,48	19,89	25,63	33,38	43,48
Brazil	2,22	2,42	2,70	3,26	3,22	3,36	3,48	3,62	3,76	3,91
Cape Verde	110,30	110,24	110,26	110,25	110,25	110,27	110,28	110,27	110,27	111,78
China	8,98	8,99	8,12	8,23	8,57	8,81	8,99	9,21	9,41	9,83
Egypt	7,32	8,10	7,72	8,58	9,51	9,67	10,11	10,68	11,19	11,42
India	60,45	66,68	69,95	80,38	87,75	92,85	97,54	101,93	106,91	111,54
Morocco	11,17	11,26	11,09	11,17	11,23	11,27	11,30	11,48	11,64	11,80
Mozambique	43,76	40,44	36,69	39,95	41,62	43,22	44,60	46,26	47,89	49,56
Paraguay	3.460,70	3.239,04	3.394,82	3.340,59	3.390,94	3.393,00	3.388,85	3.403,23	3.447,10	3.484,25
Portugal	-	-	-	-	-	-	-	-	-	-
South Africa	9,72	10,09	10,55	12,82	14,19	14,86	15,51	16,18	16,86	17,57
Spain	-	-	-	-	-	-	-	-	-	-
Tunisia	1,90	1,96	2,16	2,44	2,64	2,81	2,99	3,18	3,37	-
Turkey	1,99	2,33	2,31	2,53	3,10	3,23	3,39	3,54	3,70	3,87

Source: *Bloomberg and International Monetary Fund*

## 7.5 Appendix 5 – Market Share

	Market Share		
	2009	2010	2011
Brazil	8,80%	8,80%	8,60%
Cape Verde	72,10%	81,00%	81,50%
China	0,10%	0,10%	0,10%
Egypt	8,60%	7,40%	6,40%
India	0,50%	0,50%	0,50%
Morocco	8,10%	7,80%	7,50%
Mozambique	77,00%	81,10%	78,00%
Portugal	55,80%	55,50%	53,80%
South Africa	12,60%	10,50%	10,50%
Spain	10,50%	10,50%	11,40%
Tunisia	23,40%	23,40%	25,50%
Turkey	5,30%	5,50%	5,50%

Source: *Cimpor Annual Reports*

## 7.6 Appendix 6 – Tax Rates and Growth Rates

	Damodaran	GDP (PPP) in current US\$ billions - source: 'PwC forecasts of GDP (PPP), January, 2011				
	Marginal Tax Rate	2015	2020	2060	CAGR 2015-2060	CAGR 2020-2060
Angola	35%	154.521	213.085	1.064.100	4,38%	4,10%
Argentina	35%	844.267	1.055.782	3.805.449	3,40%	3,26%
Brazil	34%	2.656.858	3.385.432	12.054.725	3,42%	3,23%
Cape Verde	29%	2.518	3.368	12.732	3,67%	3,38%
China	25%	15.923.626	22.847.135	114.320.131	4,48%	4,11%
Egypt	25%	611.713	799.891	3.285.580	3,81%	3,60%
India	32,45%	5.750.467	8.270.673	53.414.318	5,08%	4,77%
Morocco	29%	203.372	274.559	1.046.852	3,71%	3,40%
Mozambique	32%	32.367	51.216	309.818	5,15%	4,60%
Portugal	25%	258.106	305.033	619.931	1,97%	1,79%
South Africa	34,55%	656.709	832.703	2.603.792	3,11%	2,89%
Spain	30%	1.449.619	1.694.101	4.541.856	2,57%	2,50%
Tunisia	30%	122.408	161.365	606.291	3,62%	3,36%
Turkey	20%	1.307.034	1.734.609	7.675.898	4,01%	3,79%

Source: *Damodaran and PwC forecasts of GDP (PPP)*

## 7.7 Appendix 7 – Cement Price Change Ex-Inflation YoY

Cement Price change Ex-Inflation YoY						
	2012	2013E	2014E	2015E	2016E	2017E
Western Europe	1,00%	-1,30%	-1,00%	0,10%	0,20%	0,00%
Eastern Europe	-1,00%	-1,20%	-0,20%	-0,70%	0,50%	0,00%
Former Soviet Union	8,20%	-2,30%	-1,10%	-0,20%	0,90%	0,00%
North America	0,90%	3,00%	1,50%	2,20%	1,70%	0,90%
Latin America	0,60%	-2,70%	0,70%	0,30%	0,10%	0,00%
MENA	-1,80%	-0,40%	-2,30%	-0,70%	0,40%	0,00%
Sub-Saharan Africa	-2,00%	-3,90%	-1,40%	-1,50%	-0,20%	0,00%
China	-18,50%	-3,10%	1,20%	0,50%	-0,50%	-0,50%
India	1,70%	-11,10%	0,10%	2,00%	2,40%	0,00%
North Asia	6,20%	-0,70%	-0,40%	-0,20%	0,00%	0,00%
South Asia	-2,30%	-3,00%	-1,20%	-0,80%	0,00%	-0,10%
Australia/Pacific	-1,30%	-2,40%	-1,50%	-1,10%	-0,50%	0,00%
World (EX-China)	0,60%	-2,90%	-0,80%	0,00%	0,70%	0,00%

Source: ICR Research; Global cement 2014 outlook

## 7.8 Appendix 8 – Cimpor Valuation: Brazil Forecasted Cash Flows in local currency:

Brazil Cimpor	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	201.103	203.352	205.600	207.849	210.097	212.346	214.398	216.451
Cement consumption per capita (kg)	309	327	357	372	399	411	420	433
Exchange Rate €	2,22	2,42	2,70	3,26	3,22	3,36	3,48	3,62
Price change ex-inflation			0,60%	-2,70%	0,70%	0,30%	0,10%	0,00%
Inflation	5,04%	6,64%	5,40%	6,20%	6,33%	9,03%	8,74%	6,13%
Installed Capacity (10 <sup>3</sup> tonne)	6.511	6.630	7.410	8.190	8.970	9.749	10.529	10.923
Capacity Utilization	79,90%	86,80%	85,08%	80,86%	76,62%	72,62%	68,94%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	5.327	5.626	6.304	6.622	6.872	7.080	7.259	7.415
Unit price (per 10 <sup>3</sup> tonne)	229 BRL	265 BRL	314 BRL	391 BRL	414 BRL	473 BRL	533 BRL	588 BRL
Concrete and Agregates (10 <sup>3</sup> tonne)	1.502	1.708	1.825	1.909	1.974	2.028	2.075	2.115
Unit price (per 10 <sup>3</sup> tonne)	88 BRL	102 BRL	121 BRL	151 BRL	159 BRL	182 BRL	205 BRL	226 BRL
Sales Revenues	1.351 BRL	1.664 BRL	2.202 BRL	2.879 BRL	3.162 BRL	3.715 BRL	4.293 BRL	4.841 BRL
Other Revenues	68 BRL	83 BRL	110 BRL	144 BRL	158 BRL	186 BRL	215 BRL	242 BRL
Total Revenues (10 <sup>6</sup> €)	1.419 BRL	1.748 BRL	2.312 BRL	3.023 BRL	3.320 BRL	3.901 BRL	4.508 BRL	5.083 BRL
<b>Cash-costs</b>								
EBITDA	423 BRL	508 BRL	578 BRL	756 BRL	830 BRL	975 BRL	1.127 BRL	1.271 BRL
Depreciation/Amortization	64 BRL	83 BRL	121 BRL	190 BRL	245 BRL	245 BRL	178 BRL	93 BRL
EBIT	359 BRL	424 BRL	457 BRL	565 BRL	585 BRL	797 BRL	998 BRL	1.177 BRL
Taxes	122 BRL	144 BRL	155 BRL	192 BRL	199 BRL	271 BRL	339 BRL	400 BRL
Working Capital	194 BRL	233 BRL	209 BRL	201 BRL	159 BRL	133 BRL	110 BRL	91 BRL
IWC	-	39 BRL	24 BRL	8 BRL	42 BRL	26 BRL	23 BRL	18 BRL
CAPEX	137 BRL	239 BRL	263 BRL	310 BRL	298 BRL	296 BRL	292 BRL	297 BRL

## Depreciations and CAPEX in local currency:

Depreciations and Capex (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	6.280	6.511	6.630	7.410	8.190	8.970	9.749	10.529	10.923
Exchange Rate €	2,22	2,22	2,42	2,70	3,26	3,22	3,36	3,48	3,62
Inflation		5,04%	6,64%	5,40%	6,20%	6,33%	9,03%	8,74%	6,13%
Gross PPP	2.247.973	2.279.088	2.307.158	2.606.740	2.951.035	3.344.444	3.787.357	4.284.776	4.842.255
Accumulated Depreciation	1.304.213	1.359.555	1.378.744	1.500.057	1.690.462	1.935.676	2.114.082	2.242.944	2.336.427
Net Assets	943.760	919.533	928.414	1.106.683	1.260.573	1.408.768	1.673.275	2.041.832	2.505.828
D&A		63.888	83.221	121.313	190.405	245.214	178.406	128.862	93.482
CAPEX	115.802	137.491	239.053	263.151	309.546	298.407	296.033	292.334	297.070

## Terminal Value in Million Euros:

Brazil Cimpor	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	214 €	232 €	258 €	290 €	324 €	351 €	
Taxes	57 €	59 €	62 €	81 €	98 €	111 €	
IWC	-	9 €	2 €	13 €	8 €	7 €	5 €
CAPEX	97 €	95 €	93 €	88 €	84 €	82 €	
FCFF	68 €	80 €	116 €	129 €	149 €	163 €	1.859 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,8139
PV	63 €	68 €	92 €	94 €	100 €	101 €	1.513 €
EV	2.031 €						

## 7.9 – Appendix 9 – Cimpor Valuation: Cape Verde

### Forecasted Cash Flows in local currency:

Cape Verde	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	
Population (10 <sup>3</sup> )	516	524	531	539	546	553	561	568	
Cement consumption per capita (kg)	632	617	615	616	619	627	636	655	
Exchange Rate €	110,30	110,24	110,26	110,25	110,27	110,28	110,27	110,27	
Price change ex-inflation			-2,00%	-3,90%	-1,40%	-1,50%	-0,20%	0,00%	
Inflation	2,10%	4,50%	2,50%	1,50%	-0,20%	0,10%	0,80%	1,30%	
Installed Capacity (10 <sup>3</sup> tonne)									
Capacity Utilization									
<b>Sales</b>									
Cement and Clinker (10 <sup>3</sup> tonne)	234	227	224	221	220	218	217	216	
Unit price (per 10 <sup>3</sup> tonne)	10.677 CVE	11.349 CVE	11.400 CVE	11.120 CVE	10.943 CVE	10.789 CVE	10.854 CVE	10.995 CVE	
Concrete and Agregates (10 <sup>3</sup> tonne)	227	221	218	216	215	214	213	212	
Unit price (per 10 <sup>3</sup> tonne)	4.107 CVE	4.365 CVE	4.386 CVE	4.277 CVE	4.210 CVE	4.151 CVE	4.176 CVE	4.230 CVE	
Sales Revenues	3.431 CVE	3.541 CVE	3.506 CVE	3.386 CVE	3.308 CVE	3.243 CVE	3.247 CVE	3.275 CVE	
Other Revenues	172 CVE	177 CVE	175 CVE	169 CVE	165 CVE	162 CVE	162 CVE	164 CVE	
Total Revenues (10 <sup>6</sup> €)	3.602 CVE	3.718 CVE	3.681 CVE	3.556 CVE	3.474 CVE	3.405 CVE	3.409 CVE	3.439 CVE	
<b>Cash-costs</b>									
EBITDA	3.022 CVE	3.098 CVE	2.761 CVE	2.667 CVE	2.605 CVE	2.554 CVE	2.557 CVE	2.579 CVE	
EBITDA	408 CVE	452 CVE	920 CVE	889 CVE	868 CVE	851 CVE	852 CVE	860 CVE	
Depreciation/Amortization	- CVE	- CVE	- CVE	- CVE	- CVE	- CVE	- CVE	- CVE	
EBIT	408 CVE	452 CVE	920 CVE	889 CVE	868 CVE	851 CVE	852 CVE	860 CVE	
Taxes	117 CVE	130 CVE	265 CVE	256 CVE	250 CVE	245 CVE	245 CVE	247 CVE	
Working Capital	276 CVE	33 CVE	222 CVE	219 CVE	224 CVE	233 CVE	242 CVE	252 CVE	
IWC	-	-	243 CVE	189 CVE	-	2 CVE	4 CVE	9 CVE	9 CVE
CAPEX	-	-	-	-	-	-	-	-	

### Terminal Value in Million Euros:

Cape Verde	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	8 €	8 €	8 €	8 €	8 €	8 €	
Taxes	2 €	2 €	2 €	2 €	2 €	2 €	
IWC	2 €	0 €	0 €	0 €	0 €	0 €	
CAPEX	- €	- €	- €	- €	- €	- €	
FCFF	4 €	6 €	6 €	5 €	5 €	5 €	48 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,7609
PV	4 €	5 €	4 €	4 €	4 €	3 €	37 €
EV	<b>61 €</b>						

## 7.10 Appendix 10 – Cimpor Valuation: China

### Forecasted Cash Flows in local currency:

China	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	1.330.141	1.336.415	1.342.690	1.348.964	1.355.239	1.361.513	1.366.119	1.370.726
Cement consumption per capita (kg)	1.395	1.517	1.570	1.601	1.625	1.641	1.649	1.666
Exchange Rate €	8,98	8,99	8,12	8,23	8,57	8,81	8,99	9,21
Price change ex-inflation			-18,50%	-3,10%	1,20%	0,50%	-0,50%	-0,50%
Inflation	3,30%	5,40%	2,65%	2,62%	1,99%	1,44%	1,80%	2,00%
Installed Capacity (10 <sup>3</sup> tonne)	5.270	5.962	5.923	5.883	5.844	5.805	5.765	5.726
Capacity Utilization	73,10%	73,80%	76,39%	80,26%	83,46%	86,23%	88,72%	91%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	4.105	3.893	4.524	4.722	4.877	5.005	5.115	5.211
Unit price (per 10 <sup>3</sup> tonne)	¥ 265	¥ 279	¥ 211	¥ 212	¥ 228	¥ 239	¥ 247	¥ 257
Concrete and Agregates (10 <sup>3</sup> tonne)	-	-	-	-	-	-	-	-
Unit price (per 10 <sup>3</sup> tonne)	¥ -	¥ -	¥ -	¥ -	¥ -	¥ -	¥ -	¥ -
Sales Revenues	¥ 953	¥ 1.147	¥ 954	¥ 1.003	¥ 1.114	¥ 1.198	¥ 1.265	¥ 1.340
Other Revenues	¥ 48	¥ 57	¥ 48	¥ 50	¥ 56	¥ 60	¥ 63	¥ 67
Total Revenues (10 <sup>6</sup> €)	¥ 1.000	¥ 1.205	¥ 1.001	¥ 1.053	¥ 1.169	¥ 1.258	¥ 1.328	¥ 1.407
<b>Cash-costs</b>								
EBITDA	¥ 873	¥ 986	¥ 751	¥ 790	¥ 877	¥ 943	¥ 996	¥ 1.055
EBITDA	¥ 157	¥ 161	¥ 250	¥ 263	¥ 292	¥ 314	¥ 332	¥ 352
Depreciation/Amortization	¥ 75	¥ 83	¥ 83	¥ 93	¥ 96	¥ 106	¥ 108	¥ 108
EBIT	¥ 82	¥ 78	¥ 167	¥ 170	¥ 197	¥ 209	¥ 224	¥ 243
Taxes	¥ 20	¥ 19	¥ 42	¥ 43	¥ 49	¥ 52	¥ 56	¥ 61
Working Capital	¥ 251	¥ 381	¥ 327	¥ 348	¥ 381	¥ 411	¥ 440	¥ 473
IWC	-	¥ 130	¥ -54	¥ 21	¥ 33	¥ 30	¥ 29	¥ 33
CAPEX	¥ 54	¥ 127	¥ 126	¥ 109	¥ 112	¥ 111	¥ 123	¥ 127

## Depreciations and CAPEX in local currency:

Depreciations and Capex (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	2.010	5.270	5.962	5.923	5.883	5.844	5.805	5.765	5.726
Exchange Rate €	8,98	8,98	8,99	8,12	8,23	8,57	8,81	8,99	9,21
Inflation		3,30%	5,40%	2,65%	2,62%	1,99%	1,44%	1,80%	2,00%
Gross PPP	4.917.325	7.308.826	7.914.936	8.119.840	8.330.953	8.548.851	8.772.965	9.002.645	9.238.861
Acumulated Depreciation	2.156.501	4.359.966	4.729.921	4.813.071	4.906.219	5.001.918	5.107.754	5.215.687	5.324.048
Net Assets	2.760.824	2.948.860	3.185.015	3.306.769	3.424.734	3.546.933	3.665.211	3.786.958	3.914.813
D&A		75.360	83.292	83.150	93.148	95.699	105.835	107.933	108.361
CAPEX	328.084	54.015	127.056	126.477	108.515	112.176	111.343	123.057	126.516

## Terminal Value in Million Euros:

China	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	31 €	32 €	34 €	36 €	37 €	38 €	
Taxes	5 €	5 €	6 €	6 €	6 €	7 €	
IWC	-	7 €	3 €	4 €	3 €	4 €	
CAPEX	16 €	13 €	13 €	13 €	14 €	14 €	
FCFF	17 €	11 €	11 €	14 €	14 €	14 €	192 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,8948
PV	15 €	9 €	9 €	10 €	9 €	9 €	171 €
EV	<b>233 €</b>						

## 7.11 Appendix 11 – Cimpor Valuation: Egypt

### Forecasted Cash Flows in local currency:

Egypt	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	80.472	82.075	83.678	85.281	86.884	88.487	90.042	91.596
Cement consumption per capita (kg)	635	541	514	512	512	512	514	530
Exchange Rate €	7,32	8,10	7,72	8,58	9,51	9,67	10,11	10,68
Price change ex-inflation			-1,80%	-0,40%	-2,30%	-0,70%	0,40%	0,00%
Inflation	11,69%	11,09%	8,65%	6,91%	10,10%	11,00%	9,61%	9,45%
Installed Capacity (10 <sup>3</sup> tonne)	4.005	4.013	3.944	3.875	3.807	3.738	3.669	3.600
Capacity Utilization	85,90%	67,70%	76,97%	75,26%	74,36%	73,95%	73,86%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	3.657	3.226	3.036	2.917	2.831	2.764	2.710	2.664
Unit price (per 10 <sup>3</sup> tonne)	453 EGP	414 EGP	421 EGP	498 EGP	594 EGP	666 EGP	766 EGP	886 EGP
Concrete and Agregates (10 <sup>3</sup> tonne)	19	35	50	64	77	90	103	115
Unit price (per 10 <sup>3</sup> tonne)	174 EGP	159 EGP	162 EGP	192 EGP	229 EGP	256 EGP	295 EGP	341 EGP
Sales Revenues	1.659 EGP	1.342 EGP	1.287 EGP	1.466 EGP	1.700 EGP	1.864 EGP	2.107 EGP	2.400 EGP
Other Revenues	83 EGP	67 EGP	64 EGP	73 EGP	85 EGP	93 EGP	105 EGP	120 EGP
Total Revenues (10 <sup>6</sup> €)	1.742 EGP	1.409 EGP	1.351 EGP	1.539 EGP	1.785 EGP	1.957 EGP	2.212 EGP	2.520 EGP
Cash-costs	1.023 EGP	937 EGP	1.013 EGP	1.154 EGP	1.339 EGP	1.468 EGP	1.659 EGP	1.890 EGP
EBITDA	636 EGP	405 EGP	338 EGP	385 EGP	446 EGP	489 EGP	553 EGP	630 EGP
Depreciation/Amortization	71 EGP	58 EGP	45 EGP	53 EGP	63 EGP	75 EGP	88 EGP	104 EGP
EBIT	565 EGP	347 EGP	293 EGP	332 EGP	383 EGP	415 EGP	465 EGP	526 EGP
Taxes	141 EGP	87 EGP	73 EGP	83 EGP	96 EGP	104 EGP	116 EGP	131 EGP
Working Capital	294 EGP	301 EGP	310 EGP	372 EGP	446 EGP	489 EGP	553 EGP	630 EGP
IWC	-	7 EGP	9 EGP	62 EGP	73 EGP	44 EGP	63 EGP	78 EGP
CAPEX	70 EGP	149 EGP	134 EGP	143 EGP	148 EGP	139 EGP	137 EGP	135 EGP

## Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	3.900	4.005	4.013	3.944	3.875	3.807	3.738	3.669	3.600
Exchange Rate €	7,32	7,32	8,10	7,72	8,58	9,51	9,67	10,11	10,68
Inflation		11,69%	11,09%	8,65%	6,91%	10,10%	11,00%	9,61%	9,45%
Gross PPP	4.302.656	4.366.391	4.901.054	5.228.165	5.579.627	5.962.092	6.377.674	6.827.844	7.313.734
Acumulated Depreciation	1.602.297	1.647.700	1.520.195	1.565.137	1.618.331	1.681.295	1.755.822	1.844.035	1.948.449
Net Assets	2.700.359	2.718.691	3.380.859	3.663.028	3.961.296	4.280.797	4.621.852	4.983.809	5.365.285
D&A		70.755	57.761	44.941	53.195	62.964	74.527	88.214	104.414
CAPEX	65.734	69.539	149.089	134.303	143.375	148.224	139.437	136.581	135.374



## Terminal Value in Million Euros:

Egypt	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	44 €	45 €	47 €	51 €	55 €	59 €	
Taxes	9 €	10 €	10 €	11 €	11 €	12 €	
IWC	1 €	7 €	8 €	5 €	6 €	7 €	
CAPEX	17 €	17 €	16 €	14 €	14 €	13 €	
FCFF	16 €	11 €	14 €	21 €	23 €	27 €	152 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,6564
PV	15 €	10 €	11 €	15 €	16 €	17 €	100 €
EV	182 €						

## 7.12 Appendix 12 – Cimpor Valuation: India

### Forecasted Cash Flows in local currency:

India	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	1.173.108	1.188.826	1.204.543	1.220.261	1.235.978	1.251.696	1.266.575	1.281.455
Cement consumption per capita (kg)	210	214	219	225	231	236	241	248
Exchange Rate €	60,45	66,68	69,95	80,38	87,75	92,85	97,54	101,93
Price change ex-inflation			1,70%	-11,10%	0,10%	2,00%	2,40%	0,00%
Inflation	9,50%	9,54%	9,94%	9,44%	5,93%	4,93%	5,29%	5,33%
Installed Capacity (10 <sup>3</sup> tonne)	1.149	1.167	1.174	1.180	1.187	1.194	1.200	1.207
Capacity Utilization	89,30%	71,30%	78,07%	77,02%	76,15%	75,37%	74,66%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	949	927	916	909	904	900	896	893
Unit price (per 10 <sup>3</sup> tonne)	₹ 1.180	₹ 1.332	₹ 1.563	₹ 1.747	₹ 2.023	₹ 2.291	₹ 2.594	₹ 2.856
Concrete and Agregates (10 <sup>3</sup> tonne)	-	-	-	-	-	-	-	-
Unit price (per 10 <sup>3</sup> tonne)	-	-	-	-	-	-	-	-
Sales Revenues	₹ 2.912	₹ 3.387	₹ 1.432	₹ 1.589	₹ 1.828	₹ 2.061	₹ 2.325	₹ 2.551
Other Revenues	₹ 146	₹ 169	₹ 72	₹ 79	₹ 91	₹ 103	₹ 116	₹ 128
Total Revenues (10 <sup>6</sup> €)	₹ 3.057	₹ 3.557	₹ 1.504	₹ 1.668	₹ 1.920	₹ 2.164	₹ 2.442	₹ 2.678
<b>Cash-costs</b>								
EBITDA	₹ 260	₹ 227	₹ 376	₹ 417	₹ 480	₹ 541	₹ 610	₹ 670
Depreciation/Amortization	₹ 384	₹ 434	₹ 514	₹ 563	₹ 634	₹ 673	₹ 669	₹ 665
EBIT	₹ -124	₹ -207	₹ -138	₹ -146	₹ -154	₹ -132	₹ -58	₹ 5
Taxes	₹ -42	₹ -70	₹ -47	₹ -50	₹ -52	₹ -45	₹ -20	₹ 2
Working Capital	₹ 719	₹ 353	₹ 556	₹ 575	₹ 622	₹ 651	₹ 746	₹ 849
IWC	-	₹ -366	₹ 203	₹ 19	₹ 46	₹ 30	₹ 94	₹ 104
CAPEX	₹ 166	₹ 597	₹ 204	₹ 224	₹ 232	₹ 240	₹ 246	₹ 250

### Depreciations and CAPEX in local currency:

Depreciations and Capex (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	1.180	1.149	1.167	1.174	1.180	1.187	1.194	1.200	1.207
Exchange Rate €	60,45	60,45	66,68	69,95	80,38	87,75	92,85	97,54	101,93
Inflation		9,50%	9,54%	9,94%	9,44%	5,93%	4,93%	5,29%	5,33%
Gross PPP	10.723.619	9.836.618	11.006.539	11.745.531	12.557.517	13.447.674	14.421.281	15.487.137	16.655.035
Accumulated Depreciation	6.221.552	5.867.881	6.577.445	7.091.763	7.655.141	8.289.391	8.962.777	9.631.322	10.296.363
Net Assets	4.502.067	3.968.737	4.429.094	4.653.768	4.902.376	5.158.283	5.458.504	5.855.815	6.358.672
D&A	384.220	434.020	514.318	563.378	634.250	673.386	668.545	665.042	
CAPEX	219.434	166.056	596.719	203.881	224.350	232.084	240.183	245.934	250.408

## Terminal Value in Million Euros:

India	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	5 €	5 €	5 €	6 €	6 €	7 €	
Taxes	-	1 €	1 €	1 €	0 €	0 €	
IWC	3 €	0 €	1 €	0 €	1 €	1 €	
CAPEX	3 €	3 €	3 €	3 €	3 €	2 €	
FCFF	0 €	3 €	3 €	3 €	3 €	3 €	33 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,8619
PV	0 €	2 €	2 €	2 €	2 €	2 €	29 €
EV	40 €						

## 7.13 Appendix 13 – Cimpor Valuation: Morocco

### Forecasted Cash Flows in local currency:

Morocco	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>^3</sup> )	31.627	31.966	32.305	32.645	32.984	33.323	33.650	33.976
Cement consumption per capita (kg)	459	474	479	483	486	488	491	493
Exchange Rate €	11,17	11,26	11,09	11,17	11,23	11,27	11,30	11,48
Price change ex-inflation			-1,80%	-0,40%	-2,30%	-0,70%	0,40%	0,00%
Inflation	1,00%	0,90%	1,30%	1,90%	0,40%	1,60%	1,50%	2,00%
Installed Capacity (10 <sup>^3</sup> tonne)	1.327	1.290	1.377	1.464	1.550	1.637	1.724	1.811
Capacity Utilization	90,40%	81,50%	90,68%	87,15%	83,62%	80,22%	77,01%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>^3</sup> tonne)	1.135	1.209	1.248	1.276	1.296	1.313	1.328	1.340
Unit price (per 10 <sup>^3</sup> tonne)	820 MRO	832 MRO	828 MRO	840 MRO	824 MRO	832 MRO	848 MRO	865 MRO
Concrete and Agregates	396	361	345	322	304	285	269	252
Unit price (per 10 <sup>^3</sup> tonne)	315 MRO	320 MRO	314 MRO	321 MRO	316 MRO	320 MRO	327 MRO	339 MRO
Sales Revenues	1.055 MRO	1.122 MRO	1.142 MRO	1.175 MRO	1.165 MRO	1.184 MRO	1.213 MRO	1.244 MRO
Other Revenues	53 MRO	56 MRO	57 MRO	59 MRO	58 MRO	59 MRO	61 MRO	62 MRO
Total Revenues (10 <sup>^6</sup> €)	1.108 MRO	1.178 MRO	1.199 MRO	1.234 MRO	1.223 MRO	1.243 MRO	1.274 MRO	1.306 MRO
Cash-costs	591 MRO	662 MRO	899 MRO	926 MRO	917 MRO	932 MRO	955 MRO	980 MRO
EBITDA	465 MRO	461 MRO	300 MRO	309 MRO	306 MRO	311 MRO	318 MRO	327 MRO
Depreciation/Amortization	64 MRO	84 MRO	56 MRO	38 MRO	26 MRO	18 MRO	12 MRO	8 MRO
EBIT	401 MRO	377 MRO	244 MRO	270 MRO	280 MRO	293 MRO	306 MRO	318 MRO
Taxes	115 MRO	108 MRO	70 MRO	78 MRO	80 MRO	84 MRO	88 MRO	91 MRO
Working Capital	276 MRO	298 MRO	303 MRO	314 MRO	325 MRO	336 MRO	347 MRO	363 MRO
IWC	-	22 MRO	4 MRO	11 MRO	11 MRO	11 MRO	11 MRO	16 MRO
CAPEX	61 MRO	44 MRO	80 MRO	39 MRO	40 MRO	40 MRO	41 MRO	42 MRO

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	1.280	1.327	1.290	1.377	1.464	1.550	1.637	1.724	1.811
Exchange Rate €	11,17	11,17	11,26	11,09	11,17	11,23	11,27	11,30	11,48
Inflation		0,90%	1,30%	1,90%	0,40%	1,60%	1,50%	2,00%	2,00%
Gross PPP	2.150.982	2.423.061	2.477.438	2.743.065	2.929.922	3.130.559	3.345.816	3.576.575	3.823.770
Acumulated Depreciation	1.247.941	1.445.439	996.935	1.053.064	1.091.465	1.117.689	1.135.566	1.147.741	1.156.143
Net Assets	903.041	977.622	1.480.503	1.690.001	1.838.457	2.012.870	2.210.250	2.428.834	2.667.627
D&A		63.524	83.898	56.129	38.401	26.224	17.877	12.175	8.402
CAPEX	111.678	60.765	44.027	79.638	38.721	39.510	40.356	41.017	41.689

### Terminal Value in Million Euros:

Morocco	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	27 €	28 €	27 €	28 €	28 €	28 €	
Taxes	6 €	7 €	7 €	7 €	8 €	8 €	
IWC	0 €	1 €	1 €	1 €	1 €	1 €	
CAPEX	7 €	3 €	4 €	4 €	4 €	4 €	
FCFF	13 €	16 €	16 €	16 €	16 €	15 €	136 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,7627
PV	12 €	14 €	12 €	11 €	11 €	10 €	104 €
EV		173 €					

## 7.14 Appendix 14 – Cimpor Valuation: Mozambique

### Forecasted Cash Flows in local currency:

Mozambique	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E	
Population (10 <sup>3</sup> )	22.417	22.994	23.571	24.149	24.726	25.303	25.963	26.623	
Cement consumption per capita (kg)	50	53	57	61	63	64	65	67	
Exchange Rate €	43,76	40,44	36,69	39,95	41,62	43,22	44,60	46,26	
Price change ex-inflation			-2,00%	-3,90%	-1,40%	-1,50%	-0,20%	0,00%	
Inflation	12,70%	10,40%	2,10%	4,20%	2,30%	2,40%	6,00%	5,60%	
Installed Capacity (10 <sup>3</sup> tonne)	732	858	993	1.127	1.262	1.396	1.531	1.665	
Capacity Utilization	39,20%	51,40%	103,45%	94,27%	86,41%	79,71%	73,96%	69%	
<b>Sales</b>									
Cement and Clinker (10 <sup>3</sup> tonne)	884	976	1.027	1.062	1.090	1.113	1.132	1.149	
Unit price (per 10 <sup>3</sup> tonne)	4.127 MZM	4.497 MZM	4.499 MZM	4.506 MZM	4.545 MZM	4.584 MZM	4.849 MZM	5.121 MZM	
Concrete and Agregates (10 <sup>3</sup> tonne)	129	143	151	156	160	164	167	169	
Unit price (per 10 <sup>3</sup> tonne)	1.587 MZM	1.730 MZM	1.570 MZM	1.712 MZM	1.799 MZM	1.884 MZM	2.057 MZM	2.253 MZM	
Sales Revenues	3.853 MZM	4.636 MZM	4.857 MZM	5.054 MZM	5.243 MZM	5.410 MZM	5.833 MZM	6.265 MZM	
Other Revenues	713 MZM	858 MZM	898 MZM	935 MZM	970 MZM	1.001 MZM	1.079 MZM	1.159 MZM	
Total Revenues (10 <sup>6</sup> €)	4.566 MZM	5.494 MZM	5.755 MZM	5.989 MZM	6.212 MZM	6.410 MZM	6.912 MZM	7.424 MZM	
<b>Cash-costs</b>									
EBITDA	499 MZM	954 MZM	1.439 MZM	1.497 MZM	1.553 MZM	1.603 MZM	1.728 MZM	1.856 MZM	
Depreciation/Amortization	360 MZM	292 MZM	215 MZM	279 MZM	345 MZM	425 MZM	522 MZM	643 MZM	
EBIT	139 MZM	662 MZM	1.223 MZM	1.219 MZM	1.208 MZM	1.177 MZM	1.206 MZM	1.213 MZM	
Taxes	44 MZM	212 MZM	391 MZM	390 MZM	387 MZM	377 MZM	386 MZM	388 MZM	
Working Capital	341 MZM	659 MZM	496 MZM	449 MZM	388 MZM	334 MZM	286 MZM	247 MZM	
IWC	-	318 MZM	-	163 MZM	-	61 MZM	-	48 MZM	-
CAPEX	683 MZM	1.416 MZM	425 MZM	413 MZM	450 MZM	487 MZM	507 MZM	532 MZM	

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	685	732	858	993	1.127	1.262	1.396	1.531	1.665
Exchange Rate €	43,76	43,76	40,44	36,69	39,95	41,62	43,22	44,60	46,26
Inflation		12,70%	10,40%	2,10%	4,20%	2,30%	2,40%	6,00%	5,60%
Gross PPP	4.435.342	4.746.553	6.676.152	7.346.448	8.061.845	8.830.496	9.655.955	10.542.000	11.492.648
Accumulated Depreciation	2.573.265	2.831.482	3.989.630	4.205.013	4.483.636	4.828.495	5.253.957	5.775.570	6.418.342
Net Assets	1.862.077	1.915.071	2.686.522	3.141.435	3.578.209	4.002.001	4.401.998	4.766.430	5.074.306
D&A		360.101	292.381	215.383	278.624	344.858	425.462	521.613	642.772
CAPEX	512.998	683.269	1.415.562	424.578	413.227	449.696	487.329	506.975	532.125

### Terminal Value in Million Euros:

Mozambique	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	39 €	37 €	37 €	37 €	39 €	40 €	
Taxes	11 €	10 €	9 €	9 €	9 €	8 €	
IWC	4 €	1 €	1 €	1 €	1 €	1 €	
CAPEX	12 €	10 €	11 €	11 €	11 €	12 €	
FCFF	21 €	19 €	19 €	18 €	20 €	21 €	200 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,8308
PV	20 €	16 €	15 €	13 €	13 €	13 €	167 €
EV	256 €						

## 7.15 Appendix 15 – Cimpor Valuation: Portugal

### Forecasted Cash Flows in local currency:

Portugal	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Exchange Rate €	-	-	-	-	-	-	-	-
Price change ex-inflation			1,00%	-1,30%	-1,00%	0,10%	0,20%	0,00%
Inflation	1,39%	3,55%	2,78%	0,44%	-0,16%	0,51%	0,66%	1,16%
<b>Sales</b>								
Cement and Clinker (10 <sup>^3</sup> tonne)	4.557	3.700	3.352	3.142	2.994	2.882	2.791	2.716
Unit price (per 10 <sup>^3</sup> tonne)	55 €	55 €	57 €	56 €	56 €	56 €	56 €	57 €
Concrete and Agregates	7.834	6.801	6.353	5.710	5.236	4.751	4.335	3.944
Unit price (per 10 <sup>^3</sup> tonne)	21 €	21 €	22 €	22 €	21 €	22 €	22 €	22 €
Sales Revenues	426 €	378 €	329 €	300 €	279 €	264 €	252 €	242 €
Other Revenues	21 €	19 €	16 €	15 €	14 €	13 €	13 €	12 €
Total Revenues (10 <sup>^6</sup> €)	447 €	397 €	345 €	315 €	292 €	277 €	264 €	254 €
<b>Cash-costs</b>								
EBITDA	138 €	99 €	86 €	79 €	73 €	69 €	66 €	63 €
Depreciation/Amortization	55 €	54 €	53 €	52 €	51 €	50 €	49 €	48 €
EBIT	82 €	46 €	33 €	27 €	22 €	19 €	17 €	15 €
Taxes	21 €	12 €	8 €	7 €	5 €	5 €	4 €	4 €
Working Capital	75 €	68 €	61 €	54 €	49 €	46 €	47 €	48 €
IWC	-	-	7 € -	6 € -	6 € -	3 €	1 €	1 €
CAPEX	28	17	16	16	15	15	14	14

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	6.970	7.157	7.034	6.490	5.947	5.403	4.860	4.316	3.773
Exchange Rate €	-	-	-	-	-	-	-	-	-
Inflation		1,39%	3,55%	2,78%	0,44%	-0,16%	0,51%	0,66%	1,16%
Gross PPP	1.013.642	1.084.766	1.045.439	1.111.983	1.179.666	1.248.564	1.318.636	1.390.024	1.462.838
Accumulated Depreciation	148.762	176.880	320.480	373.639	425.812	477.019	527.276	576.601	625.013
Net Assets	864.880	907.886	724.959	738.344	753.854	771.545	791.360	813.423	837.825
D&A		55.186	54.163	53.159	52.174	51.206	50.257	49.326	48.411
CAPEX	23.026	27.659	16.990	16.087	15.587	15.193	14.710	14.222	13.681

### Terminal Value in Million Euros:

Portugal	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	86 €	79 €	73 €	69 €	66 €	63 €	
Taxes	8 €	7 €	5 €	5 €	4 €	4 €	
IWC	-	7 € -	6 € -	3 €	1 €	1 €	
CAPEX	16 €	16 €	15 €	15 €	14 €	14 €	
FCFF	69 €	63 €	58 €	53 €	47 €	45 €	328 €
Discounting Factor	0,9170	0,8409	0,7711	0,7071	0,6484	0,5946	0,6664
PV	63 €	53 €	45 €	37 €	30 €	27 €	219 €
EV	<b>474 €</b>						

## 7.16 Appendix 16 – Cimpor Valuation: South Africa

### Forecasted Cash Flows in local currency:

South Africa	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	49.109	48.944	48.780	48.615	48.451	48.286	48.335	48.384
Cement consumption per capita (kg)	219	239	244	247	250	252	254	259
Exchange Rate €	9,72	10,09	12,82	14,19	14,86	15,51	16,18	16,86
Price change ex-inflation			-2,00%	-3,90%	-1,40%	-1,50%	-0,20%	0,00%
Inflation	4,26%	4,26%	5,65%	5,75%	6,07%	4,59%	6,48%	6,27%
Installed Capacity (10 <sup>3</sup> tonne)	1.465	1.582	1.627	1.671	1.716	1.760	1.805	1.849
Capacity Utilization	52,00%	65,40%	78,18%	77,81%	77,08%	76,14%	75,10%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	1.152	1.230	1.272	1.300	1.322	1.340	1.355	1.368
Unit price (per 10 <sup>3</sup> tonne)	R 995	R 994	R 1.029	R 1.045	R 1.093	R 1.126	R 1.197	R 1.272
Concrete and Aggregates (10 <sup>3</sup> tonne)	683	729	754	770	783	794	803	811
Unit price (per 10 <sup>3</sup> tonne)	R 383	R 382	R 503	R 565	R 619	R 666	R 738	R 818
Sales Revenues	R 1.408	R 1.501	R 1.687	R 1.795	R 1.931	R 2.038	R 2.215	R 2.403
Other Revenues	R 70	R 75	R 84	R 90	R 97	R 102	R 111	R 120
Total Revenues (10 <sup>6</sup> €)	R 1.478	R 1.576	R 1.771	R 1.885	R 2.028	R 2.140	R 2.326	R 2.524
Cash-costs	R 835	R 899	R 1.328	R 1.414	R 1.521	R 1.605	R 1.744	R 1.893
EBITDA	R 580	R 594	R 443	R 471	R 507	R 535	R 581	R 631
Depreciation/Amortization	R 131	R 134	R 167	R 182	R 187	R 192	R 197	R 202
EBIT	R 449	R 461	R 276	R 290	R 320	R 343	R 385	R 429
Taxes	R 126	R 129	R 77	R 81	R 90	R 96	R 108	R 120
Working Capital	R 150	R 177	R 179	R 185	R 192	R 201	R 210	R 220
IWC	-	R 27	R 3	R 5	R 7	R 9	R 10	R 10
CAPEX	R 52	R 64	R 69	R 80	R 87	R 97	R 105	R 114

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	1.640	1.465	1.582	1.627	1.671	1.716	1.760	1.805	1.849
Exchange Rate	9,72	9,72	10,09	12,82	14,19	14,86	15,51	16,18	16,86
Inflation		4,26%	4,26%	5,65%	5,75%	6,07%	4,59%	6,48%	6,27%
Gross PPP	2.215.833	2.107.830	2.221.170	2.387.814	2.581.667	2.799.580	3.032.932	3.294.036	3.579.124
Accumulated Depreciation	1.285.566	1.257.393	1.327.359	1.494.271	1.675.930	1.862.986	2.054.960	2.251.879	2.453.642
Net Assets	930.267	850.437	893.811	893.543	905.737	936.594	977.972	1.042.157	1.125.482
D&A		131.405	133.602	166.912	181.659	187.056	191.974	196.919	201.764
CAPEX	82.241	51.613	64.304	69.081	80.021	87.434	96.564	104.700	113.618

### Terminal Value in Million Euros:

South Africa	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	35 €	33 €	34 €	34 €	36 €	37 €	
Taxes	6 €	6 €	6 €	6 €	7 €	7 €	
IWC	0 €	0 €	0 €	1 €	1 €	1 €	
CAPEX	5 €	6 €	6 €	6 €	6 €	7 €	
FCFF	23 €	21 €	22 €	21 €	22 €	23 €	254 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,7959
PV	21 €	18 €	17 €	16 €	15 €	14 €	202 €
EV	<b>303 €</b>						

## 7.17 Appendix 17 – Cimpor Valuation: Spain

### Forecasted Cash Flows in local currency:

Spain	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	46.506	46.834	47.162	47.490	47.818	48.146	48.520	48.894
Cement consumption per capita (kg)	532	439	386	356	337	330	331	324
Exchange Rate €	-	-	-	-	-	-	-	-
Price change ex-inflation			1,00%	-1,30%	-1,00%	0,10%	0,20%	0,00%
Inflation	1,80%	3,19%	2,44%	1,41%	-0,15%	-0,50%	-0,38%	1,05%
Installed Capacity (10 <sup>3</sup> tonne)	3.132	3.211	3.102	2.994	2.885	2.777	2.668	2.560
Capacity Utilization	81,20%	63,00%	71,05%	69,69%	69,40%	69,80%	70,69%	72%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	2.856	2.397	2.204	2.086	2.002	1.938	1.886	1.843
Unit price (per 10 <sup>3</sup> tonne)	54 €	56 €	58 €	58 €	57 €	57 €	57 €	57 €
Concrete and Agregates	5.773	5.440	5.283	5.052	4.870	4.675	4.497	4.321
Unit price (per 10 <sup>3</sup> tonne)	21 €	21 €	22 €	22 €	22 €	22 €	22 €	22 €
Sales Revenues	272 €	250 €	244 €	232 €	221 €	212 €	205 €	201 €
Other Revenues	14 €	12 €	12 €	12 €	11 €	11 €	10 €	10 €
Total Revenues (10 <sup>6</sup> €)	286 €	262 €	256 €	244 €	232 €	223 €	215 €	211 €
Cash-costs	240 €	215 €	192 €	183 €	174 €	167 €	161 €	158 €
EBITDA	33 €	35 €	64 €	61 €	58 €	56 €	54 €	53 €
Depreciation/Amortization	43 €	53 €	41 €	32 €	25 €	19 €	15 €	12 €
EBIT	11 €	18 €	23 €	29 €	33 €	36 €	39 €	41 €
Taxes	3 €	5 €	7 €	9 €	10 €	11 €	12 €	12 €
Working Capital	57 €	61 €	52 €	44 €	37 €	32 €	27 €	23 €
IWC	-	4 €	9 €	8 €	7 €	6 €	5 €	4 €
CAPEX	27 €	39 €	37 €	36 €	35 €	34 €	33 €	32 €

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	3.220	3.132	3.211	3.102	2.994	2.885	2.777	2.668	2.560
Exchange Rate €	-	-	-	-	-	-	-	-	-
Inflation		1,80%	3,19%	2,44%	1,41%	-0,15%	-0,50%	-0,38%	1,05%
Gross PPP	486.548	488.145	495.208	544.644	594.769	645.253	696.095	747.440	799.304
Accumulated Depreciation	192.919	212.780	174.649	215.533	247.343	272.092	291.348	306.330	317.986
Net Assets	293.629	275.365	320.559	329.111	347.426	373.161	404.747	441.110	481.318
D&A		43.003	52.548	40.884	31.810	24.749	19.256	14.982	11.656
CAPEX	20.997	26.719	39.335	37.349	35.823	34.896	34.113	33.307	32.060

### Terminal Value in Million Euros:

Spain	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	€ 64	€ 61	€ 58	€ 56	€ 54	€ 53	
Taxes	€ 7	€ 9	€ 10	€ 11	€ 12	€ 12	
IWC	-€ 9	-€ 8	-€ 7	-€ 6	-€ 5	-€ 4	
CAPEX	€ 37	€ 36	€ 35	€ 34	€ 33	€ 32	
FCFF	€ 29	€ 24	€ 20	€ 16	€ 14	€ 12	117 €
Discounting Factor	0,9290	0,8631	0,8019	0,7450	0,6921	0,6430	0,7433
PV	27 €	21 €	16 €	12 €	9 €	8 €	87 €
EV	<b>180 €</b>						

## 7.18 Appendix 18 – Cimpor Valuation: Tunisia

### Forecasted Cash Flows in local currency:

Tunisia	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	46.506	46.834	47.162	47.490	47.818	48.146	48.520	48.894
Cement consumption per capita (kg)	701	659	633	617	622	628	634	647
Exchange Rate €	1,90	1,96	2,16	2,44	2,64	2,81	2,99	3,18
Price change ex-inflation			-1,80%	-0,40%	-2,30%	-0,70%	0,40%	0,00%
Inflation	3,30%	3,50%	5,10%	5,80%	4,90%	4,90%	4,00%	3,90%
Installed Capacity (10 <sup>3</sup> tonne)	1.668	1.751	1.851	1.951	2.051	2.151	2.251	2.351
Capacity Utilization	89,30%	87,30%	93,92%	89,13%	84,80%	80,86%	77,28%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	1.737	1.738	1.739	1.739	1.739	1.739	1.739	1.740
Unit price (per 10 <sup>3</sup> tonne)	72 TZS	76 TZS	78 TZS	82 TZS	85 TZS	88 TZS	92 TZS	96 TZS
Concrete and Agregates (10 <sup>3</sup> tonne)	820	1.098	1.284	1.429	1.550	1.656	1.749	1.834
Unit price (per 10 <sup>3</sup> tonne)	28 TZS	29 TZS	33 TZS	39 TZS	44 TZS	49 TZS	54 TZS	60 TZS
Sales Revenues	148 TZS	164 TZS	179 TZS	200 TZS	215 TZS	234 TZS	254 TZS	275 TZS
Other Revenues	7 TZS	8 TZS	9 TZS	10 TZS	11 TZS	12 TZS	13 TZS	14 TZS
<b>Total Revenues (10<sup>6</sup>€)</b>	<b>156 TZS</b>	<b>172 TZS</b>	<b>188 TZS</b>	<b>210 TZS</b>	<b>226 TZS</b>	<b>245 TZS</b>	<b>267 TZS</b>	<b>289 TZS</b>
Cash-costs	104 TZS	117 TZS	141 TZS	157 TZS	169 TZS	184 TZS	200 TZS	217 TZS
EBITDA	23 TZS	24 TZS	47 TZS	52 TZS	56 TZS	61 TZS	67 TZS	72 TZS
Depreciation/Amortization	12 TZS	12 TZS	14 TZS	16 TZS	17 TZS	19 TZS	21 TZS	22 TZS
EBIT	11 TZS	12 TZS	33 TZS	37 TZS	39 TZS	42 TZS	46 TZS	50 TZS
Taxes	3 TZS	3 TZS	10 TZS	11 TZS	12 TZS	13 TZS	14 TZS	15 TZS
Working Capital	25 TZS	21 TZS	28 TZS	32 TZS	35 TZS	38 TZS	41 TZS	44 TZS
IWC	-	-	4 TZS	7 TZS	4 TZS	3 TZS	3 TZS	3 TZS
CAPEX	11 TZS	21 TZS	22 TZS	24 TZS	25 TZS	26 TZS	27 TZS	28 TZS

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	1.640	1.668	1.751	1.851	1.951	2.051	2.151	2.251	2.351
Exchange Rate €	1,90	1,90	1,96	2,16	2,44	2,64	2,81	2,99	3,18
Inflation		3,30%	3,50%	5,10%	5,80%	4,90%	4,90%	4,00%	3,90%
Gross PPP	471.676	515.073	538.892	578.341	621.204	667.665	717.921	772.079	830.384
Accumulated Depreciation	273.654	307.259	322.039	335.693	351.443	368.842	387.753	408.298	430.610
Net Assets	198.022	207.814	216.853	242.648	269.761	298.823	330.168	363.781	399.774
D&A	12.396	12.134	13.654	15.749	17.400	18.910	20.546	22.312	
CAPEX	9.717	11.301	20.717	22.094	23.993	25.169	25.975	27.029	28.140

### Terminal Value in Million Euros:

Tunisia	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	22 €	22 €	21 €	22 €	22 €	23 €	
Taxes	5 €	5 €	4 €	5 €	5 €	5 €	
IWC	3 €	2 €	1 €	1 €	1 €	1 €	
CAPEX	10 €	10 €	10 €	9 €	9 €	9 €	
FCFF	3 €	6 €	6 €	7 €	8 €	8 €	82 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,7895
PV	3 €	5 €	5 €	5 €	5 €	5 €	65 €
<b>EV</b>	<b>93 €</b>						

## 7.19 Appendix 19 – Cimpor Valuation: Turkey

### Forecasted Cash Flows in local currency:

Turkey	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>^3</sup> )	77.804	78.748	79.692	80.635	81.579	82.523	83.370	84.217
Cement consumption per capita (kg)	735	829	844	859	871	883	895	917
Exchange Rate €	1,99	2,33	2,31	2,53	3,10	3,23	3,39	3,54
Price change ex-inflation			-1,80%	-0,40%	-2,30%	-0,70%	0,40%	0,00%
Inflation	8,57%	6,47%	8,89%	7,49%	8,86%	7,67%	9,79%	8,81%
Installed Capacity (10 <sup>^3</sup> tonne)	3.027	3.005	3.246	3.487	3.728	3.969	4.210	4.451
Capacity Utilization	87,30%	98,70%	95,90%	90,82%	86,05%	81,67%	77,66%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>^3</sup> tonne)	2.884	3.034	3.113	3.167	3.208	3.241	3.270	3.294
Unit price (per 10 <sup>^3</sup> tonne)	78 TRY	93 TRY	99 TRY	106 TRY	113 TRY	121 TRY	133 TRY	145 TRY
Concrete and Agregates (10 <sup>^3</sup> tonne)	2.807	2.914	2.970	3.007	3.036	3.059	3.079	3.095
Unit price (per 10 <sup>^3</sup> tonne)	30 TRY	36 TRY	38 TRY	44 TRY	58 TRY	64 TRY	75 TRY	85 TRY
Sales Revenues	308 TRY	386 TRY	422 TRY	470 TRY	539 TRY	589 TRY	665 TRY	740 TRY
Other Revenues	57 TRY	71 TRY	78 TRY	87 TRY	100 TRY	109 TRY	123 TRY	137 TRY
<b>Total Revenues (10<sup>^6</sup>€)</b>	<b>364 TRY</b>	<b>457 TRY</b>	<b>500 TRY</b>	<b>557 TRY</b>	<b>638 TRY</b>	<b>698 TRY</b>	<b>789 TRY</b>	<b>877 TRY</b>
Cash-costs	264 TRY	313 TRY	375 TRY	418 TRY	479 TRY	524 TRY	591 TRY	658 TRY
EBITDA	63 TRY	73 TRY	125 TRY	139 TRY	160 TRY	175 TRY	197 TRY	219 TRY
Depreciation/Amortization	45 TRY	39 TRY	43 TRY	54 TRY	57 TRY	52 TRY	47 TRY	43 TRY
EBIT	19 TRY	34 TRY	82 TRY	86 TRY	102 TRY	123 TRY	150 TRY	176 TRY
Taxes	4 TRY	7 TRY	16 TRY	17 TRY	20 TRY	25 TRY	30 TRY	35 TRY
Working Capital	51 TRY	47 TRY	72 TRY	85 TRY	93 TRY	96 TRY	110 TRY	118 TRY
IWC	-	5 TRY	25 TRY	14 TRY	8 TRY	3 TRY	14 TRY	8 TRY
CAPEX	13 TRY	16 TRY	18 TRY	23 TRY	32 TRY	39 TRY	47 TRY	56 TRY

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	2.430	3.027	3.005	3.246	3.487	3.728	3.969	4.210	4.451
Exchange Rate €	1,99	1,99	2,33	2,31	2,53	3,10	3,23	3,39	3,54
Inflation		8,57%	6,47%	8,89%	7,49%	8,86%	7,67%	9,79%	8,81%
Gross PPP	909.102	972.890	1.025.932	1.090.201	1.160.232	1.236.679	1.320.334	1.411.712	1.511.292
Accumulated Depreciation	527.436	580.362	613.091	656.490	710.285	767.515	819.287	866.464	909.237
Net Assets	381.666	392.528	412.841	433.711	449.947	469.164	501.047	545.248	602.055
D&A	44.548	38.678	43.399	53.795	57.230	51.772	47.177	42.773	
CAPEX	10.192	12.855	16.061	18.215	23.120	32.416	39.077	46.533	55.629

### Terminal Value in Million Euros:

Turkey	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	54 €	55 €	51 €	54 €	58 €	62 €	
Taxes	7 €	7 €	7 €	8 €	9 €	10 €	
IWC	11 €	5 €	2 €	1 €	4 €	2 €	
CAPEX	8 €	9 €	10 €	12 €	14 €	16 €	
FCFF	28 €	34 €	32 €	33 €	31 €	34 €	297 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,7710
PV	26 €	29 €	25 €	24 €	21 €	21 €	229 €
EV	<b>376 €</b>						



## 7.20 Appendix 20 – InterCement Valuation: Argentina

### Forecasted Cash Flows in local currency:

Argentina	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>3</sup> )	41.343	41.761	42.179	42.596	43.014	43.432	43.821	44.211
Cement consumption per capita (kg)	249	268	282	289	300	305	309	317
Exchange Rate €	5,2	5,76	5,85	7,27	11,39	15,48	19,89	25,63
Price change ex-inflation			0,60%	-2,70%	0,70%	0,30%	0,10%	0,00%
Inflation	10,46%	9,78%	10,04%	10,62%	10,99%	16,80%	25,60%	19,95%
Installed Capacity (10 <sup>3</sup> tonne)	7.051	7.820	8.146	8.473	8.799	9.126	9.452	9.779
Capacity Utilization	78,00%	78,00%	78,96%	78,68%	77,83%	76,68%	75,38%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>3</sup> tonne)	5.500	6.100	6.433	6.667	6.848	6.998	7.125	7.236
Unit price (per 10 <sup>3</sup> tonne)	\$ 351	\$ 385	\$ 433	\$ 579	\$ 1.014	\$ 1.614	\$ 2.607	\$ 4.029
Concrete and Agregates (10 <sup>3</sup> tonne)	2.000	2.100	2.153	2.188	2.216	2.238	2.257	2.273
Unit price (per 10 <sup>3</sup> tonne)	\$ 135	\$ 148	\$ 166	\$ 223	\$ 390	\$ 621	\$ 1.003	\$ 1.550
Sales Revenues	\$ 423	\$ 462	\$ 3.142	\$ 4.346	\$ 7.805	\$ 12.682	\$ 20.837	\$ 32.679
Other Revenues	\$ 21	\$ 23	\$ 157	\$ 217	\$ 390	\$ 634	\$ 1.042	\$ 1.634
Total Revenues (10 <sup>6</sup> €)	\$ 444	\$ 485	\$ 3.299	\$ 4.563	\$ 8.195	\$ 13.316	\$ 21.879	\$ 34.313
Cash-costs	\$ 1.752	\$ 2.119	\$ 2.474	\$ 3.422	\$ 6.146	\$ 9.987	\$ 16.409	\$ 25.735
EBITDA	\$ 564	\$ 682	\$ 825	\$ 1.141	\$ 2.049	\$ 3.329	\$ 5.470	\$ 8.578
Depreciation/Amortization	\$ -	\$ -	\$ 263	\$ 291	\$ 323	\$ 357	\$ 395	\$ 438
EBIT	\$ 564	\$ 682	\$ 561	\$ 849	\$ 1.726	\$ 2.972	\$ 5.074	\$ 8.141
Taxes	\$ 197	\$ 239	\$ 197	\$ 297	\$ 604	\$ 1.040	\$ 1.776	\$ 2.849
Working Capital	\$ 329	\$ 398	\$ 465	\$ 589	\$ 618	\$ 672	\$ 691	\$ 712
IWC	\$ -	\$ 69	\$ 67	\$ 124	\$ 29	\$ 54	\$ 19	\$ 21
CAPEX	\$ -	\$ -	\$ 654	\$ 650	\$ 648	\$ 616	\$ 573	\$ 600

### Depreciations and CAPEX in local currency:

Depreciations and CAPEX (local currency)	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	7.820	8.146	8.473	8.799	9.126	9.452	9.779
Exchange Rate €	5,76	5,85	7,27	11,39	15,48	19,89	25,63
Inflation	9,78%	10,04%	10,62%	10,99%	16,80%	25,60%	19,95%
Gross PPP	6.067.559	6.719.307	7.469.862	8.331.490	9.349.190	10.440.427	11.589.280
Accumulated Depreciation	3.625.939	3.889.225	4.180.683	4.503.326	4.860.493	5.255.876	5.693.565
Net Assets	2.441.620	2.830.082	3.289.179	3.828.164	4.488.697	5.184.551	5.895.715
D&A		263.286	291.458	322.644	357.166	395.383	437.689
CAPEX	629.961	653.629	650.202	648.035	615.799	572.654	599.628

### Terminal Value in Million Euros:

Argentina	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	141 €	157 €	180 €	215 €	275 €	335 €	
Taxes	34 €	41 €	53 €	67 €	89 €	111 €	
IWC	11 €	17 €	3 €	3 €	1 €	1 €	
CAPEX	112 €	89 €	57 €	40 €	29 €	23 €	
FCFF	- 16 €	9 €	67 €	105 €	156 €	199 €	1.015 €
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,6187
PV	- 15 €	8 €	53 €	76 €	105 €	123 €	628 €
EV	<b>979 €</b>						

## 7.21 Appendix 21 – InterCement Valuation: Brazil

### Forecasted Cash Flows in local currency:

Brazil InterCement	2010	2011	2012E	2013E	2014E	2015E	2016E	2017E
Population (10 <sup>^3</sup> )	201.103	203.352	205.600	207.849	210.097	212.346	214.398	216.451
Cement consumption per capita (kg)	309	327	357	372	399	411	420	433
Exchange Rate €	2,22	2,42	2,70	3,26	3,22	3,36	3,48	3,62
Price change ex-inflation			0,60%	-2,70%	0,70%	0,30%	0,10%	0,00%
Inflation	5,04%	6,64%	5,40%	6,20%	6,33%	9,03%	8,74%	6,13%
Installed Capacity (10 <sup>^3</sup> tonne)	7.564	8.205	9.079	9.954	10.828	11.703	12.577	13.018
Capacity Utilization	78,00%	78,00%	80,09%	77,49%	74,48%	71,43%	68,49%	74%
<b>Sales</b>								
Cement and Clinker (10 <sup>^3</sup> tonne)	5.900	6.400	7.272	7.714	8.065	8.360	8.614	8.838
Unit price (per 10 <sup>^3</sup> tonne)	200 BRL	233 BRL	276 BRL	344 BRL	364 BRL	415 BRL	468 BRL	517 BRL
Concrete and Agregates (10 <sup>^3</sup> tonne)	1.600	2.900	4.078	5.183	6.235	7.249	8.230	9.185
Unit price (per 10 <sup>^3</sup> tonne)	77 BRL	90 BRL	106 BRL	132 BRL	140 BRL	160 BRL	180 BRL	199 BRL
Sales Revenues	1.304 BRL	1.749 BRL	2.441 BRL	3.338 BRL	3.809 BRL	4.629 BRL	5.515 BRL	6.394 BRL
Other Revenues	65 BRL	87 BRL	122 BRL	167 BRL	190 BRL	231 BRL	276 BRL	320 BRL
Total Revenues (10 <sup>^6</sup> €)	1.369 BRL	1.837 BRL	2.563 BRL	3.505 BRL	3.999 BRL	4.861 BRL	5.790 BRL	6.714 BRL
Cash-costs	1.039 BRL	1.394 BRL	1.923 BRL	2.629 BRL	2.999 BRL	3.646 BRL	4.343 BRL	5.035 BRL
EBITDA	334 BRL	449 BRL	641 BRL	876 BRL	1.000 BRL	1.215 BRL	1.448 BRL	1.678 BRL
Depreciation/Amortization	- BRL	- BRL	124 BRL	132 BRL	141 BRL	150 BRL	159 BRL	170 BRL
EBIT	334 BRL	449 BRL	517 BRL	744 BRL	859 BRL	1.066 BRL	1.288 BRL	1.509 BRL
Taxes	114 BRL	153 BRL	176 BRL	253 BRL	292 BRL	362 BRL	438 BRL	513 BRL
Working Capital	195 BRL	261 BRL	327 BRL	442 BRL	489 BRL	521 BRL	550 BRL	584 BRL
IWC	- BRL	66 BRL	66 BRL	114 BRL	47 BRL	31 BRL	29 BRL	34 BRL
CAPEX	- BRL	296 BRL	311 BRL	324 BRL	337 BRL	343 BRL	349 BRL	363 BRL

### Depreciations and CAPEX in local currency:

Depreciations and Capex (local currency)	2011	2012	2013	2014	2015	2016	2017
Installed Capacity	8.205	9.079	9.954	10.828	11.703	12.577	13.018
Exchange Rate €	2,42	2,70	3,26	3,22	3,36	3,48	3,62
Inflation	6,64%	5,40%	6,20%	6,33%	9,03%	8,74%	6,13%
Gross PPP	2.855.283	3.041.874	3.249.680	3.467.614	3.675.821	3.898.208	4.135.849
Accumulated Depreciation	1.706.301	1.830.199	1.962.150	2.102.679	2.252.341	2.411.732	2.581.483
Net Assets	1.148.982	1.211.675	1.287.530	1.364.935	1.423.480	1.486.476	1.554.366
D&A		123.898	131.951	140.528	149.663	159.391	169.751
CAPEX	296.448	311.233	324.294	337.491	342.526	348.564	363.431

### Terminal Value in Million Euros:

Brazil InterCement	2012	2013	2014	2015	2016	2017	Terminal Value
EBITDA	237	269	310	362	416	464	
Taxes	65	78	91	108	126	142	
IWC	24	35	15	9	8	9	
CAPEX	115	100	105	102	100	100	
FCFF	32	57	100	143	182	212	2.012
Discounting Factor	0,9231	0,8521	0,7866	0,7261	0,6703	0,6188	0,7708
PV	30	48	79	104	122	131	1.551
EV	<b>2.065 €</b>						

## 7.22 Appendix 22 – Cimpor and InterCement WACC

WACC	Angola	Argentina	Brazil Intercement	Brazil	Cape Verde	China	Egypt
Risk free Rate	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%
Equity Risk Premium	6%	6%	6%	6%	6%	6%	6%
Country Risk Premium	4,88%	9,00%	2,63%	2,63%	3,72%	1,05%	7,50%
Unlevered Beta	0,75	0,75	0,75	0,75	0,75	0,75	0,75
Tax Rate	35,00%	35,00%	34,00%	34,00%	28,75%	25,00%	25,00%
D/E	0,45	0,79	0,79	0,45	0,45	0,45	0,45
Levered Beta	0,97	1,14	1,14	0,97	0,99	1,01	1,01
Cost of Equity	12%	18%	11%	9%	11%	8%	15%
E/V	0,68	0,56	0,56	0,68	0,68	0,68	0,68
Cost of Debt	3,89%	5,89%	5,89%	3,89%	3,89%	3,89%	3,89%
D/V	0,32	0,44	0,44	0,32	0,32	0,32	0,32
WACC	8,93%	11,73%	7,85%	6,91%	8,33%	6,35%	11,08%

India	Morocco	Mozambique	Portugal	South Africa	Spain	Tunisia	Turkey
1,89%	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%
6%	6%	6%	6%	6%	6%	6%	6%
3,00%	3,60%	3,72%	4,88%	1,73%	3,00%	3,00%	3,60%
0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75
33,99%	28,75%	32,00%	25,00%	28,00%	30,00%	30,00%	20,00%
0,45	0,45	0,45	0,45	0,45	0,45	0,45	0,45
0,97	0,99	0,98	1,01	1,00	0,99	0,99	1,02
10%	11%	11%	12%	9%	10%	10%	11%
0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68
3,89%	3,89%	3,89%	3,89%	3,89%	3,89%	3,89%	3,89%
0,32	0,32	0,32	0,32	0,32	0,32	0,32	0,32
7,59%	8,33%	8,29%	9,05%	6,99%	7,64%	7,64%	8,44%

## 7.23 Appendix 23 – New Company WACC

WACC New Company	Angola	Argentina	Brazil Intercement	Brazil	Cape Verde	China	Egypt
Risk free Rate	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%
Equity Risk Premium	6%	6%	6%	6%	6%	6%	6%
Country Risk Premium	4,88%	9,00%	2,63%	2,63%	3,72%	1,05%	7,50%
Unlevered Beta	0,75	0,75	0,75	0,75	0,75	0,75	0,75
Tax Rate	35,00%	35,00%	34,00%	34,00%	28,75%	25,00%	25,00%
D/E	0,51	0,51	0,51	0,51	0,51	0,51	0,51
Levered Beta	1,00	1,00	1,00	1,00	1,02	1,03	1,03
Cost of Equity	12%	16%	10%	10%	11%	8%	15%
E/V	0,66	0,66	0,66	0,66	0,66	0,66	0,66
Cost of Debt	4,19%	4,19%	4,19%	4,19%	4,19%	4,19%	4,19%
D/V	0,34	0,34	0,34	0,34	0,34	0,34	0,34
WACC	8,82%	11,46%	7,52%	7,52%	8,26%	6,34%	10,94%

India	Morocco	Mozambique	Portugal	South Africa	Spain	Tunisia	Turkey
1,89%	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%	1,89%
6%	6%	6%	6%	6%	6%	6%	6%
3,00%	3,60%	3,72%	4,88%	1,73%	3,00%	3,00%	3,60%
0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75
33,99%	28,75%	32,00%	25,00%	28,00%	30,00%	30,00%	20,00%
0,51	0,51	0,51	0,51	0,51	0,51	0,51	0,51
1,00	1,02	1,01	1,03	1,02	1,02	1,02	1,05
10%	11%	11%	12%	9%	10%	10%	11%
0,66	0,66	0,66	0,66	0,66	0,66	0,66	0,66
4,19%	4,19%	4,19%	4,19%	4,19%	4,19%	4,19%	4,19%
0,34	0,34	0,34	0,34	0,34	0,34	0,34	0,34
7,52%	8,26%	8,21%	8,97%	6,95%	7,58%	7,58%	8,38%

**7.24 Appendix 24 – Cimpor Valuation in Million Euros**

Cimpor Valuation	
Enterprise Value	€ 4.399
Adjusted Net Debt	€ 1.623
Equity Value	€ 2.776
Number of Shares	672
Price per share	4,13 €

**7.25 Appendix 25 – InterCement Valuation in Million Euros**

InterCement Valuation	
Enterprise Value	3.043 €
Adjusted Net Debt	768 €
Equity Value	2.275 €

**7.26 Appendix 26 – Synergies Valuation in Million Euros****Independent Companies:**

Equity Value	
Cimpor (A)	2.776 €
InterCement (B)	2.275 €
(A)+(B)	5.051 €
Price target	7,52 €

**Combined Company:**

Equity Value	
Combined Firm (C)	5.787 €
(A)+(B)	5.051 €
Synergy	736 €
Synergy per share	1,10 €