Equity Research

Inapa – Investimentos, Participações e Gestão, S.A.

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CATÓLICA LISBON
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EQUITY RESEARCH

Inapa

Paper

Sell

June 2012

Portugal

A mature company with a highly leveraged story

Inapa is one of the largest paper distributors in Europe, assuming a leading position in terms of market share in several European markets. Following the industry trend, Inapa engaged in a consolidation process through acquisitions in order to reach new geographies and complementary businesses. Moreover, the considerable debt level drives financial costs up and eats up the end result. This does not allow the company to distribute dividends and thus contributes for the low attractiveness of this stock to investors.

- **Operations capitalized**: In October of the last year the company raised 54m€ of capital by issuing 300m preferred shares. Inapa's weak operating performance has been affected by the increasing competition, low volumes and stumpy margins.
- **Feeble cash flow generation**: Even though according to forecasts, Inapa's operating performance will improve due to the growth of complementary businesses and to the operating efficiency program took by the company, the cash flow generation is still weak.
- **Stock's underperformance:** Persisting with the obstacle of stock liquidity, the stock presented a decrease of 63% in stock price during the year of 2011.

Recommendation: Sell

Share price: EUR 0,17

Closing price as 22-04-2012

Target price: EUR 0,11

Closing price as YE12

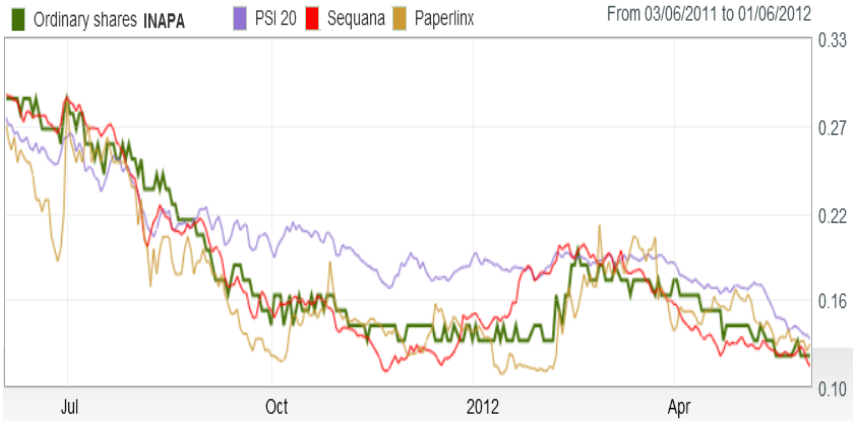
Market Cap (m€): 25,5

Outstanding shares (m): 150

52 Week range: 0,12-0,34

Source: Bloomberg

Inapa vs. Benchmark



Source: Company's website

Analyst: Bárbara Barreto

i. Preface

This dissertation symbolizes the end of a hard working period in which I was challenged to apply my knowledge in Equity Valuation and encouraged to search for a greater and deeper understanding on this subject. I had the fortune to have people who throughout this process were always available and glad to help me clarify my doubts. To those people I would like to express my gratitude: to Professor José Tudela Martins for the support orientation, for the helpful feedback, for his constant availability to schedule meetings and for motivate me to always give a further step; to Dr. Hugo Rua, Inapa's Investor Relations Officer, for all data and information provided, for his kindness when answering my infinite number of emails and for the relevant comments; to Professor José Filipe Correa Guedes for its availability and promptitude to help; to my colleagues of the major in Finance for the productive and constructive discussions; and to my family and friends for all the support given.

ii. Contents

1. Introduction

The purpose of this dissertation is to evaluate Inapa – Investimentos, Participações e Gestão, S.A., which is a Portuguese listed company. This evaluation will be translated into a buy or sell recommendation based on the market value of the shares.

The structure of the dissertation addresses the most relevant points in equity research and it comprises four main chapters: Literature Review, company and industry overview, equity valuation and valuation comparison.

In the Literature Review the main studies and publications on the business valuation models field will be presented, highlighting the main differences among methods and doing a deeper exposition of the methodologies used in Inapa's valuation.

Then, there will be a company and industry's analysis, in order to provide a deeper learning on the Inapa's evolution, strategy, stock market performance and ownership as well as its operational performance. Moreover, industry and macroeconomic projections were also covered.

Afterward, a financial-economic model based on the Adjusted Present Value will be developed, explanations about the model choice will be given and assumptions will be clarified.

Finally, Inapa's valuation will be compared with a recognized investment bank, which in this case will be BPI (Banco Português de Investimento). This comparison analysis' objective is to understand the different sources of value and respective assumptions that can lead to different target values.

2. Literature Review

2.1. Valuation

Valuation is often entitled as the "heart of finance" (Damodaran, 2006). Its main purpose is to compare the value achieved with the stock market price so that analysts are capable of giving recommendations of whether investors must hold, buy or sell shares (Fernández, 2007).

Therefore, value and price must be understand as two different concepts, where the price represents the market price originated by demand and supply forces, and the intrinsic value, also called fundamental value, corresponds to the value that an analyst

with access to all information reaches when using a perfect valuation model. However, due to future uncertainty that can be perceived in the forecasted factors that compose the future cash flows, it is difficult to reach a single and true intrinsic value (Damodaran, 2006).

The demand for accounting research in investment decisions is directly affected by the degree of market efficiency investors believe being facing i.e. degree varies between strong, semi-strong and weak form according to the speed of price adjustment to news (Lee, 2001). (Lee, 2001) also affirms that prices adjust to the intrinsic value through a process rather than instantly – "Market efficiency is a journey, not a destination".

Moreover, if strong market efficiency is assumed, valuation stops having a purpose.

Over the last years, a vast number of valuation approaches have been developed, which lead analysts to a valuation overload problem. A solution purposed by (Young, Sullivan, Nokhasten, & Holt, 1999) is to understand that most valuation techniques end up by being mathematically equivalent. In addition, (Damodaran, 2006) recognizes that, even though valuation models may range from the simple to complex and different assumptions may be made, they do have several characteristics in common.

1.2. Key valuation models

As research in valuation is enormous, (Damodaran, 2002) and (Fernández, 2007) purpose a segmentation of the main valuation models into four groups with similar characteristics.

The **Asset-Based Valuation** computes the value of the firm's assets using their current accounting estimates. The **Discounted Cash Flow** (DCF) estimates the value of an asset by discounting the asset's future cash flows at the appropriate discount rate. The **Relative Valuation** uses comparable firms' common variables for instance, earnings, sales or cash flows, in order to measure the value of an asset. And finally, the **Contingent Claim Models** takes into consideration option pricing models to value assets that contain option characteristics.

Furthermore, the distinction between enterprise and equity value models is addressed by (Young, Sullivan, Nokhasten, & Holt, 1999) .

Table 1: Key Valuation Models

Asset-Based Valuation	Discounted Cash Flow Models		Relative Valuation		Contingent Claim Models
	Equity Valuation	Firm Valuation	Equity Valuation	Firm Valuation	
• Liquidation value • Book Value • Adjusted Book Value • Substantial Value	• Dividends (DDM) • Free Cash Flow to the Equity (FCFE)	• Free Cash Flow to the Firm (FCFF) • Capital Cash Flow (CCF) • APV • Excess Return Models	• Free Cash Flow Yield • EV/EBITDA • EV/EBIT • EV/Sales	• Dividend Yield • Price to Earnings Ratio (PER) • Price to Book Value • Price to Cash Flow Ratio	• Black Scholes • Investment option • Expand the project • Delay the investment • Alternative uses

Source: Damodaran (2002) and Fernández (2007)

1.2.1. Asset-Based Valuation

As the name indicates this method seeks to determine the value of the firm's stocks through the value of its assets. The idea is to focus mainly on assets in place and to value them separately in order to add its values in the end to reach the firm's value (Damodaran, 2006).

1.2.1.1. Book Value

The company's book value is characterized by the sum of capital and reserves, which is referred as the shareholders' equity (Fernández, 2007).

The use of this approach avoids doing forecasts about the future which may be "shaky". However, whenever we are facing a company with potential excess returns and growth opportunities this valuation may result in an underestimation of value (Fernández, 2007).

In addition, attempts to reach a fair value and to include future prospects have been done for instance, by including expected earnings in the book value calculation (Damodaran, 2006).

1.2.1.2. Liquidation Value

The liquidation valuation is often used in a particular situation in which the company is going to be liquidated immediately, its assets sold and its debt paid-off. Its value is reached by taking the expenses inherent to this process from the adjusted book-value (Fernández, 2007). Even though, theoretically this value should reach the same result of a DCF approach, the urgency associated to it may lead to a discount in value (Damodaran, 2006).

1.2.1.3. Substantial Value

On the opposite side, we have the substantial value that assumes the company continues to operate by valuing its assets' replacement value. Thus, it can also be classified as the potential investment needed to build a company with identical conditions to the one being valued (Fernández, 2007).

1.2.2. Discounted Cash Flow Models

The DCF models seek to establish the value of the company by doing forecasts of its future cash flows and discounting them at the rate that properly reflects the cash flow riskiness.

Therefore, the value of the firm cannot be derived directly from financial statements but from expectations that can be interpreted as the future cash flows (Vélez-Pareja & Tham). In order to reflect this concept (Fernández, 2007) derived the following formula:

$$EV = \frac{CF_1}{1+k} + \frac{CF_2}{(1+k)^2} + \frac{CF_3}{(1+k)^3} + \cdots + \frac{CF_n + RV_n}{(1+k)^n} \qquad RV_n = \frac{CF_n \,.\, (1+g)}{R-g}$$

Where: CF_i= Cash flow generated by the company in the period i

k = Appropriate discount rate for the cash flows' risk

RV_n = Residual value of the company in year n

g = Expected cash flows growth rate at the post-horizon period

The residual value, often called terminal value, can only be computed when the company reaches a steady state. In other words, a state where the growth is considered

to be stable and where the firm characteristics match this requirement. This fulfillment depends for instance, of the reinvestment rate used to compute the cash flows. In addition we will be facing a constant cost of capital and consequent constant debt ratio.
Furthermore, (Damodaran, 2006) states that the growth rate applied in the model has to be lower than or equal to the economy growth rate.
To understand the exact point when this steady state is reached is a really important task so that an accurate estimation of the terminal value can be done since it has a big weight in the company's total enterprise value. (Young, Sullivan, Nokhasten, & Holt, 1999), found that its importance in the total value varies from 75% to 99% depending on the number of explicit period years and cost of capital used.
The enterprise-value formula, described above, embodies the basis for all discounted-cash flow approaches since they differ in the cash flow level of risk and thus a different discount rate has to be applied.

Table 2: DCF models' discount rate

Cash flows	Valuation models	Appropriate discount rate
Free cash flow (FCF)	FCFF	$WACC$
	APV	$R_U + R_D$
	EVA	$WACC$
	Dynamic ROE	R_E
Equity cash flow (ECF)	FCFE	R_E
	DDM	R_E
Capital cash flow (CCF)	CCF	$WACC_{BT}$

1.2.2.1. Firm DCF Models

The Firm DCF models value the whole business considering both assets in place and growth assets, which provide investment return and the FCFF, the APV and the Excess Return models will be further developed.

1.2.2.1.1. FCFF – Free Cash Flow to the Firm

The FCFF model discounts the cash flows available to all investors – cash flow before debt repayments and reinvestment needs – at the discount rate that reflects the equity and debt side of financing, which is the cost of capital (WACC). Thus it is independent of capital structure.
In addition the FCFF is computed in the following way:

$$FCFF = EBIT(1-t) + Depreciation - CAPEX - Changes\ in\ Net\ Working\ Capital$$

Where: t = tax rate

$CAPEX$ = Capital expenditures

Moreover, the tax benefits of debt are being integrated in two different ways. Initially when using the after-tax cost of debt to the cost of capital computation. Moreover, it is also reflected in the cost of equity, since whenever higher debt levels are considered equity holders demand higher rates of return in order to reward the lack of priority in cash flow claims in relation to the debt holders.

Even though this model returns the enterprise value, it is also possible to get the equity value through the process of incorporating the value of non-operating assets – assets which earnings are not included in the net income such as cash, marketable securities and minority interests - and subtracting the value of all non-equity claims. Besides all debt, these non-equity claims contain, the capitalized leases, unfunded pension plans as well as health care obligations.

1.2.2.1.1.1. The cost of capital

The cost of capital is no more than the weighted average of all the financing components used by the firm that can include debt, equity and hybrid securities. The computation of the WACC requires the values for the risk-free rate, equity risk premium and levered beta. Therefore, the famous risk-return model– CAPM - that defines the expected return to equity holders based on the non-diversifiable risk (beta) can be used. The formula that links the CAPM to the "real world" is given by the single index model in the form of:

$$R_E = r_f + \beta_{Levered} \times (r_M - r_f)$$

$$\beta_{Levered} = \beta_{Unlevered} \times \left[1 + (1 - t)\frac{Debt}{Equity}\right]$$

Where: R_E = Cost of equity

r_f = Risk-free rate

t = Tax rate

(Modigliani & Miller, 1963) assume that the firm keeps its debt-to-value ratio constant and that the WACC can be computed in the following way:

$$WACC_{After-tax} = \frac{Equity}{Debt + Equity} \times R_E + \frac{Debt}{Debt + Equity} \times R_D \times (1 - t)$$

Where: R_D = Cost of debt

The WACC-based models face an obstacle of implementation when the firm's debt-to-value ratio varies. With the aim of overcoming this barrier, two different assumptions were developed: Milles & Ezzel focused on the fixed-market value debt ratio; while Harris & Pringle on the case where the company adjusts its debt ratio continuously. However I will not focus on these ideas and I will follow the recommendations from (Koller, Goedhart, & Wessels) to use the APV in such cases – which I will approach in the next section of this dissertation.

1.2.2.1.1.2. The Beta

The beta estimation is the biggest obstacle in the use of the CAPM model. The beta itself represents the level of exposure to systematic risk, i.e. the one that is not possible to diversify.

Furthermore, it is also a measure of relative risk since it expresses the exposure to non-diversifiable risk in relation to all market securities. However, as it is not possible to find an efficient portfolio (with no diversifiable risk) that represents the market as a whole, the use of "market proxies" as solution appeared. The most common market proxy used is the S&P500, the question lies on whether the S&P500-related beta is bigger or smaller than the "real" beta. (MacQueen) argue that the error estimation is not enough to be materialized and that without the presence of a reasonable alternative there is no point for not using market proxies as our benchmark.

On the other hand, (Rosenberg & Rudd) point out the importance of non-traded assets, for instance projects, bonds, real estate and human capital whose are not reflected in the S&P500 index.

Regarding the beta measurement, it has been estimated by using a regression of the historical stock prices of the company with the market returns movements of the market proxy. As only the already publicly-traded companies have access to historical prices, the private companies will have to use the average beta of 1.0., i.e. investors expect the average return.

(Rosenberg & Rudd) propose that the beta movements are correlated mainly with four factors described in the table above:

Table 3: Predictors' correlation with beta

Predictors	Correlation with beta
Growth	+
Earnings Variability	+
Financial Leverage	+
Size	-

Source: Rosenberg and Rudd

In addition, there are considerable differences in betas between industries. Analysts usually argue that these differences lie on the balance sheet characteristics and thus on the company capital structure. However (Rosenberg & Rudd) state that it is only related to the business risk. Furthermore, Damodaran made use of these differences to assign a level of risk to each different industry.

1.2.2.1.1.3. The Equity Risk Premium (ERP)

The return a company may expect to receive from another investment with the same level of risk is called, the opportunity cost, which entails two different components: time value and risk premium. The risk premium is the excess return of a diversified portfolio that can be earned by bearing a certain level of risk (Luehrman, 1997). In addition it can be determined by the "investor risk aversion, information uncertainty and perceptions of macroeconomic risk" (Damodaran, 2012).

The most used approach of estimating ERP is the use of average historical returns. Though, (Damodaran, 2012) found some limitations concerning countries with no historical data available, which is the case of emerging markets. As a solution the author developed two approaches, the survey approach, where it is asked directly to managers and investors their perceptions about the ERP value and the implied approach from where one can take the current equity prices to do the estimation. (Fernández, Aguierramalloa, & Correa, 2011) ran a survey with 6.014 answers on required equity risk premium perceptions about 54 countries. The answers were provided by professors, analysts and managers.

In practice, the ERP used ranges between 3.5 and 10 percent (Fernández, 2006). However, the use of historical data as a predictor generates a 6 percent ERP (Rosenberg & Rudd). Moreover, the country risk premium is many times added to the equity risk premium estimation as a way of reflecting the risk inherent in having the companies' operations in a certain country.

1.2.2.1.1.4. The Risk-free Rate

The risk-free rate is the time value component of the opportunity cost referred above.
Moreover in a risk-free investment, the actual return is always equivalent to the expected return. The importance of the risk-free rate in valuation lies on the cost of equity and cost of debt estimation.
In order to do a correct assessment of this rate two basic conditions must be fulfilled: there can be neither a default risk nor a reinvestment risk (Damodaran, 2008). The compliance with these criteria leads to the use of government zero-coupon bond rates as risk-free rate.
The decision of whether to use short or long term government bonds depends on the duration of the cash flows under valuation and usually a match of both is done. Thus, when perpetuity is beneath observation, the use of 10-year government bonds is suggested.
Furthermore, whenever long-term government bonds are not traded or when it had some default risk associates, problems in the risk-free estimation arise. Hence (Damodaran, 2008) proposes in the first case exchanging the currency into one that does not face this problem or the usage of forward market and fundamentals. In the second case the suggestion is to deduct the default spread from the risk free rate - value that can be found in default spread's table developed by credit rating agencies, i.e. Moody's, Standard&Poor's.

1.2.2.1.1.5. The Cost of Debt

The cost of debt is one of the WACC's building blocks and little research had been done on this topic. Usually this building block is addressed by taking the promised yield on the newest debt issued and using it as the cost of debt. However this approach may be overestimating both the WACC and the cost of debt whenever the debt repayment is not free of risk, with the exception for highly graded companies. In this way, the cost of debt should be discounted of any "expected default loss", which depends directly of the firm's probability of default (Cooper & Davydenko, 2007).
Therefore, the expected return on debt can be expressed in the following way:

Cost of debt = Promised yield – Yield equivalent of expected default loss

Moreover, (Cooper & Davydenko, 2007) add that this method may lead to biased results due to its disability of capture specific information from the firm and market.

1.2.2.1.2. APV – Adjusted Present Value

As it is accepted by a vast majority of authors, the adjusted present value comes as a solution to the weaknesses associated to the use of simply accounting criteria in valuation (Fernández, 2007).

The idea behind this discounted cash flow method is to evaluate separately the cash flows from debt financing and from the operating assets, rather than include the leverage effects directly in the cost of capital value.

APV = Present Value of Total Free Cash Flows + Present Value of Financial Costs and Benefits

Every time a company decides to fund its operations with debt it is appropriating a tax benefit associated to the tax deductibility of interest expenses. However, on the down side, as the level of debt increases the risk of bankruptcy also does.

Moreover the APV is characterized for being a very versatile method that helps managers to explore the origin of the values by discriminating its components separately – "the APV is exceptionally transparent" (Luerhman, 1997).

In order to perform this analysis one can start by valuing the company as it was all equity-financed by taking the free cash flow to the firm and discounting it at the unlevered cost of equity. The second step is known by having a big source of controversy, which is the tax shields estimation. Finally the probability of bankruptcy and cost of financial distress are estimated (Damodaran, 2006).

1.2.2.1.2.1. Tax shields

The source of debate appears at the time of defining the discount of rate of the tax shields. (Modigliani & Miller, 1963) were the first authors taking into account this benefit from debt financing and they propose to discount the tax savings at the risk-free rate whenever the requirement of no growth is fulfilled.

In addition, Harris and Pringle recommend the use of the unlevered cost of equity (Ru) as discount rate since they state that the interest tax shields have the same systematic risk as the firm's underlying cash flows.

Later on, Myres, (Luerhman, 1997), (Damodaran, 2006) offered a different perspective of assessing the risk of the tax saving cash flows has as risky as debt and so discounting it at the cost of debt. However, (Luerhman, 1997) says that tax shields are a somewhat more uncertain than interest payments and principal, which leads to the suggestion that the discount rate used should be higher than the cost of debt.

Moreover, Miles and Ezzell (1980, 1985) suggest the use of two different discount rates, the cost of debt for the first year and the unlevered cost of equity for the following years.

While all these authors focused either on a fixed market-value leverage ratio or on a continuously-adjusted leverage ratio, (Fernandez, 2007) suggests that firms define as a target a fixed book-value leverage ratio. This approach is supported by the following facts: the company is more valuable; book-value ratios are the main hub of credit rating agencies; debt level is independent of stock market movements and it is easier to follow companies that are not quoted in the stock exchange market. Under this approach the use of cost of equity as discount rate is proposed.

In summary, the tax shields estimation depends on the debt policy adopted by the firm.

1.2.2.1.2.2. Bankruptcy costs

(Damodaran, 2006) was the first to propose the deduction of the expected bankruptcy costs in the value of the firm. These costs represent from 10% to 25% of the firm value and can be classified either as direct or indirect. The direct costs are associated to the lawyers', auditors' fees, while the indirect costs can appear due to higher costs of financing or even as a result of bad reputation that can lead stakeholders – customers, employees, suppliers and lenders - to be resilient in not doing business with the company. However, the appearance of collateral helped minimizing the problem of credit rationing for companies with high probability of costly bankruptcy (Wang, 2000).

The problem of the estimation of these bankruptcy costs appear through the difficulty of knowing the cost itself and its probability of occurrence since the following equation is true:

PV (Expected Bankruptcy Cost) = (Probability of Bankruptcy).(PV Bankruptcy cost)

One of the approaches suggested by (Damodaran, 2006) in order to reach the probability of bankruptcy is to "estimate a bond rating, at each level of debt and use the empirical estimates of default probabilities for each rating". This bond rating is estimated according to the interest coverage ratio. However, (Hilscher & Wilsony, 2012) believe credit ratings by themselves are not capable of assessing the default risk. They state that credit ratings are a systematic risk measure which is "economically distinct from long-run idiosyncratic default risk"

Moreover, several authors tried to estimate the costs associated to the default occurrence. (Lewis, 2008) said that these costs represent 15,6% of the firm value in an ex-post view and 1,4% in a ex-ante approach.

(Korteweg, 2007) purposes a more customized analysis of the bankruptcy costs by the type of industry and associates different costs for different capital structures.

1.2.2.1.2.3. APV vs. WACC

One of the most discussed themes in valuation is whether to use the APV or the FCFF.

APV is characterized by (Luerhman, 1997) as being a less restraining model than the FCFF since it works every time the FCFF does and even when it does not, more precisely in variable capital structure situations. In addition, the managerial instrument that comes associated to this method, due to the understanding of the value sources, is seen as a plus point.

Moreover, when high leverage transactions, i.e. leverage buy-outs, recapitalizations, are being evaluated, the APV is also considered to be the best approach (Arzac, 1996).

(Sabal, 2007) added that the APV must be used when tax legislations include high taxes for non-corporate profits and whenever emergent markets are being considered due to the opportunistic feature of leverage in these countries.

Regarding the present value of the tax shields computed in the APV approach, there is no need to chose a single and constant tax rate, as in the WACC approach, since the tax shields are obtained period-by-period which can be seen as more realistic (Sabal, 2007).

Supporting the WACC-based models side, it is still the most convenient method for discounting the perpetuity and when a target capital structure for the long term is defined. Furthermore, the APV faces other limitations such as not being the most

appropriate method for project valuations (Damodaran, 2006). Another situation where the APV may introduce some bias in the analysis is when there is income from stocks, since they can be taxed at the different rate if the investor records it as a personal tax return, overestimating the net advantage of borrowing.

However the results from the two methodologies can converge in a situation where the cash flows are perpetuities, a single and constant tax rate is applied and where a fixed debt-to-value ratio is found (Sabal, 2007).

1.2.2.1.3. Excess Return Models

Excess return models basic feature is the separation of returns into normal and the ones that exceed or beneath the cost of capital. This characteristic allows analysts to know whether the company is creating or destroying value.

Moreover, these models are capable of reaching similar values of the discounted cash flow model if similar assumptions about growth and reinvestment are done (Damodaran, 2002).

1.2.2.1.3.1. EVA – Economic Value Added

The Economic Value Added measures the excess return generated by an investment or by a set of investments. In addition, the building blocks needed for its computation are the return on capital, the cost of capital and the capital invested, all on the investments that are being analyzed (Damodaran, 2002).

EVA = (Return on Capital Invested – Cost of Capital) (Capital Invested)

= After-tax operating income – (Cost of Capital) (Capital Invested)

In this way, it is simple to understand that the economic value added is a simple expansion of the net present value method.

1.2.2.1.3.2. Dynamic ROE

The dynamic ROE follows the same principles as the EVA with the difference that is focused on equity values, allowing to know whether the company is creating value for shareholders (Damodaran, 2002).

1.2.2.2. Equity DCF Models

The equity discounted cash flow models have the advantage of valuing directly the firm's equity value without having to do adjustments for "non-operating assets, debt or capitalized operating leases" (Koller, Goedhart, & Wessels).

1.2.2.2.1. FCFE – Free Cash Flow to the Equity

The Free Cash Flow to the Equity model discounts the cash flows from assets after debt repayments and reinvestment needs at the cost of equity, instead of using the weighted average cost of capital.

FCFE = Net Income + Depreciation - Capital Expenditures – Change in non-cash - Working Capital – (New Debt Issued – Debt repayments)

Moreover in order to use the FCFE model to value a listed company, strong corporate governance is required due to the fact that stockholders will be more aware about the cash available for dividends and may put pressure under management.

The obstacle in the use of this method appears when debt levels are expected to change over time since the estimation of debt repayments and new debt issues may become difficult. Thus, in these cases (Damodaran, 2006) recommends the use of the FCFF model where these issues do not exist as it is a pre-debt cash flow.

1.2.2.2.2. DDM- Dividend Discount Model

The Dividend Discount Model computes the value of the company by discounting the value of expected dividends at the cost of equity. In order to find the value for expected dividends a big concern has to be addressed, which is to delineate the assumptions about payout ratios and earnings' future growth rates (Damodaran, 2006).

This method is frequently seen as attractive to investors due to the high tangibility of dividends when compared to other type of cash flows. Another important point in this valuation technique is the fact that dividends present a positive correlation with stock market movements (Pourheydari, Aflatooni, & Nikbakhat, 2008).

However, this approach may reach to overestimated results in situations where companies decide to hold cash that was available for stockholders or even in the reverse

circumstance where companies fund themselves to distribute dividends (Damodaran, 2006)

1.2.3. Relative Valuation

Relative valuation is a very popular and simple method in equity valuation. Under this approach one can value an asset based on the essential concept in economics where perfect substitutes should be sold for the same price (Baker & S.Ruback, 1999).

Even though (Young, Sullivan, Nokhasten, & Holt, 1999) describe it more as a guide to investor's short-term willingness to pay, the authors recognize it can be used as a highly regarded valuation approach. Furthermore, this method is often seen as a complement of the discounted cash flow technique with the purpose of improving the level of accuracy in the DCF forecasts (Goedhart, Koller, & Wessels, 2005).

Moreover, when used separately, the discounted cash flow and the relative valuations results may converge if the market is correct. Thus, when using multiples one is relying on the markets to estimate the intrinsic value and the difference between the two methods comes from the level of market efficiency (Damodaran, 2006).

However, as any valuation approach, it presents three main implementation challenges according to (Baker & S.Ruback, 1999): determining the basis of substitutability i.e. value drivers; measuring the multiple and choosing a set of comparable companies.

Different value drivers yield different performance levels. (Liu, Nissim, & Thomas, 2007), (Lie & Lie, 2002) and (Goedhart, Koller, & Wessels, 2005) had been studying whether PER multiple outperforms enterprise-value multiples, although no consensus had been reached.

Moreover when forecasting is taken into account, it is widely reported that performance improves, meaning that forward multiples outperform trailing multiples. (Kim & Ritter, 1999) obtained more accurate valuations in IPOs processes when using PER multiples based on forecasted earnings than when using trailing earnings multiples.

Furthermore, whenever analysts want to compare companies in different markets, the PEG ratio is usually applied, where the PER is divided by the expected growth rate in earnings per share (Damodaran, 2006).

Whenever the industry average is used to estimate multiples, the fact that companies present different prospects for growth, for returns on invested capital and capital structure is being disregarded (Goedhart, Koller, & Wessels, 2005). As a solution,

(Baker & S.Ruback, 1999) purpose the use of a harmonic mean, as a way of fighting the overestimation in value caused by the simple mean.

The choice upon the peer group should be based on finding companies with similar cash flows, growth expectations and risk, that may belong or not to the industry where the company fits (Damodaran, 2006). However, (Alford, 1992) observed that comparable firms chosen on an industry basis have smallest estimation errors when using the P/E multiple.

In the end of the screening process, it is possible to reach a peer group as small as one (Goedhart, Koller, & Wessels, 2005).

1.2.3.1. PER vs. Enterprise-Value Multiples

As it was referred above, the comparison between PER and enterprise-value multiples' performance had been target of discussion among several authors and a summary of the conclusions can be seen below:

Table 4: PER and EV performance conclusions

	PER >=< EV	Does performance increase with cash adjustments?
(Lie & Lie, 2002)	<	No
(Goedhart, Koller, & Wessels, 2005)	<	Yes
(Liu, Nissim, & Thomas, 2007)	>	Na

Source: Lie & Lie (2002), Goedhart, Koller & Wessels (2006) and Liu, Nissim & Thomas (2007)

(Lie & Lie, 2002) and (Goedhart, Koller, & Wessels, 2005) concluded that asset based multiples usually produce more accurate and less biased estimates than sales and earnings multiples. The authors argue that multiples based on earnings, as it is the case of the PER, are easily manipulated due to changes in capital structure.

In addition earnings may include non-operating items, for instance write-offs and one-time events, which can lead to ambiguous conclusions if no adjustments are done.

The superiority of enterprise-value multiples is claimed due to the fact that both equity and debt are valued and thus are less vulnerable to changes in capital structure. However, (Goedhart, Koller, & Wessels, 2005) still purposed the adjustment of these multiples for excess cash and other non-operating items, operating leases, employee stock options and pensions. (Lie & Lie, 2002) do not share the same opinion since the

authors argue that there are no improvements in the value estimates resulting from an adjustment of companies' cash levels.

On the other hand, (Liu, Nissim, & Thomas, 2007) defend a completely different position from the previous authors, stating that multiples based on forecasted earnings outperform multiples based on EBITDA and book values. Moreover, the authors analyzed the effects of adding depreciations and amortizations to earnings, resulting in an operating cash flow value driver, and concluded that performance diminishes when comparing with EBITDA. EBITDA limitations of not considering working capital requirements or capital expenditures can help understanding this position.

1.2.4. Contingent Claim Models

The contingent claim valuation allows to take into account flexibility and it is especially important for projects that have a high level of uncertainty and opportunities associated (Copeland & Keenan, 1998).

This tool is also an important component in the business decision-making, since it is used to decide whether and how to explore an opportunity, for instance, in R&D investments decisions (Luehrman, 1997).

(Copeland & Keenan, 1998) define a number of situations that are capable of generating real options in order to help analysts recognizing them. Even though the pulp and paper sector is included in this list this method will be not used to value Inapa since the "timing of forest harvesting" does not have a big impact in a paper distributor as Inapa.

1.3. The Model Choice

Empirical evidence shows that financial analysts choose their valuation methodologies according to: industry characteristics, familiarity with a valuation model and its acceptability to clients. Moreover, the choice usually lies between the PER multiple, which is broadly used, and an explicit multiperiod DCF method. However, there are still analysts who select the comparative valuation model as their favorite model (Demirakos, Strong, & Walker, 2004). Furthermore, the decisions upon the valuation models selected to evaluate Inapa's share price, and the assumptions inherent on it will be explained along the dissertation.

2. Company presentation

Inapa - Investimentos, Participações e Gestão, S.A is a company whose operations are driven by the paper sector. Its core business is paper distribution, a market in which it is the fourth biggest European player. Although the company was founded in 1965 as a paper producer, since 2000 it has focused only on the distribution activity, letting companies like Sappi, Storaenso, Portucel/Soporcel, M-Real, Lecta, Burgo, and UPM be responsible for the production. In 2007 the company decided to expand its business to the areas of packaging and visual communication, which implementation could take advantage of synergies and complement the offer of the company by turning it into a "full service provider". Even though these are recent areas, they are already contributing to the company's results and a big future growth is expected.

Moreover, Inapa's profile is characterized by the large amount of acquisitions it pursued since the 1970's, which led the company to a top position in the European market. The company operates in Portugal, Spain, Germany, France, Switzerland, Luxembourg, Belgium and Angola, although only the first five countries are considered to be the core markets (see appendix 1).

Figure 1: Sales by business area in 2011

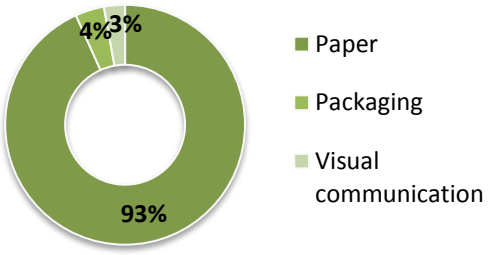


Figure 2: Sales by country in 2011

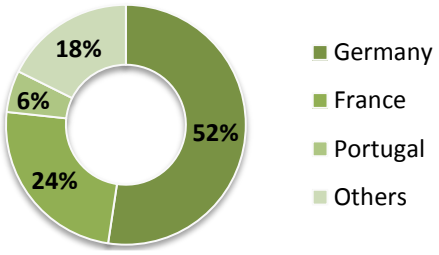
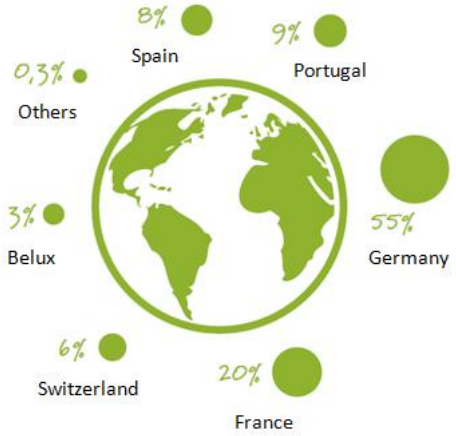


Figure 3: Employees by country in 2011



Source: Inapa's financial report 2011

2.1. Business areas

2.1.1. Paper

Inapa's core business is the sale and distribution of paper products to the graphic industry, editors, enterprises and offices. The company offers 12.000 paper references and its paper type assortment is mainly divided into: coated, offset, cutsize, digital, cardboard and carbonless. With almost one million tons sold every year, the company presents a 50% share in the Portuguese market. In Spain, it recently became the third player in the market with the acquisition of EBIX, holding now 20% market share.

In what concerns the countries with the biggest weight in the company's sales composition - France and Germany - Inapa lines the second and third place, respectively. Moreover, Inapa has 300 trucks in circulation per day and a 180 thousand square meters storage area that allows the company to do more than 5000 deliveries a day in less than 24 hours.

The acquisition processes pursued by the company led it to enjoy even bigger economies of scale and thus take advantage of a higher bargaining power over producers, which is important due to the big impact producers' prices can have on its margins. In addition, the important role that Inapa played in the consolidation of the European paper merchant market took the company to the top three largest players among its five core markets.

The group is seen as a reference service provider to the graphic segment due to its deep knowledge of the paper industry and expertise in logistics. Inapa increased its product range outside the paper category through the offer of graphics supplies like paints, cleaners, additives, printing blankets, sheets and coatings, among others. These new offers, combined with the technical advice provided by the company as a service to its 70.000 clients, contribute to the "full service provided" status owned by the enterprise.

2.1.2. Complementary businesses

The analysis of the complementary businesses as a whole informs that one of the main reasons this segment plays such an important role in the company is the fact that they enclose higher margins than the paper segment and thus will have a positive impact in the company's profitability.

2.1.2.1. Packaging

The packaging segment enjoys of a logistic model that is very similar to the one found in Inapa's core business. In addition it offers the supply and distribution of solutions and packaging materials. Inapa not only added to its product range boxes, movies, braces, fillings, ribbons, bags, stickers and machinery, but it went further by including a customized packaging service as well as fulfillment and logistic services.

Moreover, it is the complementary business that is contributing the most to the company's results, representing 5,1% of EBIT. This area already counts with 90 workers and the sales have registered a double-digit growth over the last years.

The sector's growth potential is characterized by the high fragmentation and increasing need for "safe and versatile packaging". Despite the area's potential, the packaging segment is only present in Germany, France and Portugal.

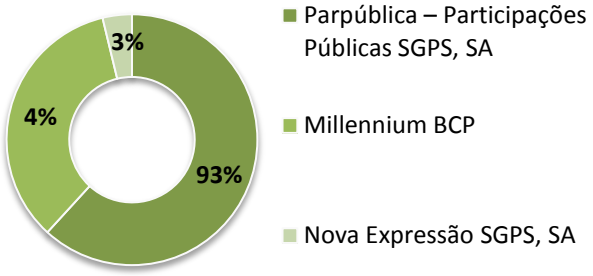
However, in 2011 the company took advantage of the highly fragmented market and engaged in the acquisition of 100% of Semaq, which is a French company based on the packaging business that presents an increase in sales potential of 10,9 Million Euros.

2.1.2.2. Visual Communication

The Visual Communication, also known as Viscom, distributes a full range of products and services to one of the most dynamic markets in the printing industry. Its offers go from the large format digital printing to the flatbed printing so that the company is capable to reach different publicity segments (e.g. outdoor) inside visual communication. Moreover, the company goes beyond the materials that are printed by also selling printers, inks, toners, software and their technical support. This segment has 57 employees, contributed to 4,5% of EBIT in 2011 and its sales are growing 9% a year. In addition, the increasing weight in the company's EBIT results from the low market coverage since this segment is only present in Germany.

2.2. Shareholder structure

Figure 4: Shareholder structure



Source: Inapa's financial report 2011

Inapa's ordinary shares with voting rights are entitled of 52,96% of the share capital that is divided according to the figure on the side, which means that the company's free float represents 47,04% of the share capital.

2.3. Performance indicators

Table 5: Performance indicators

Million Euros	2008	2009	2010	2011
Sales	1044,2	937,8	980,3	986,5
EBITDA	40,0	24,9	30,5	23,3
EBIT	33,3	23,6	24,0	17,3
Net income	1,1	2,2	2,0	-5,9
Gross margin	183,4	170,3	181,2	174,0
Margin EBITDA	3,9%	3,2%	3,1%	2,4%
Margin EBIT	3,3%	2,6%	2,5%	1,8%
Profit margin	0,2%	0,3%	0,2%	-0,6%
Book D/E	80%	78%	78%	70%
Net debt/EBITDA	11,7	13,9	14,1	15,3
ROE	0,7%	1,5%	2,4%	-2,9%
ROCE	11,8%	10,4%	10,6%	8,8%
Dividend payout	0%	0%	0%	0%

Source: Inapa's financial reports 2011, 2010, 2009 and 2008

For a better understanding of the company's performance over the years, the table above is presented with the main indicators. The year of 2011 registered the worst profitability and debt levels of the last four years.

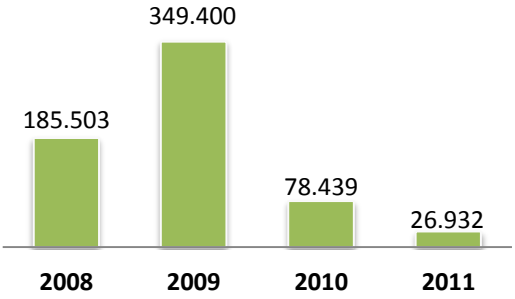
The increasing contribution of the complementary businesses to the company portfolio is reflected on the increasing sales level. However this improvement came with an increase in the operational costs which were not managed in the most efficient way.

Despite the effort done by the company to decrease its financial costs until 2010, in the year of 2011 there was an increase of 9% in this item, which led to a negative net income in this year. The decrease in the debt ratio was caused by a capital increase done by the company for this effect, but further information will be given on this topic in other section of the dissertation. In addition, the company presents alarming net debt/EBITDA levels, which are above the industry average. This may suggest that the company may not be able to service its debt. Moreover, the company had not been paying any dividends and it expects to keep this policy until have its financial structure stabilized.

2.4. Stock market performance

Inapa entered PSI 20 Index in 2010, although it only stood there for one year since it left the index in 2011. The fall in the number of shares traded in 2011 was a consequence of this fact, given that the company's exposure in the market diminished.

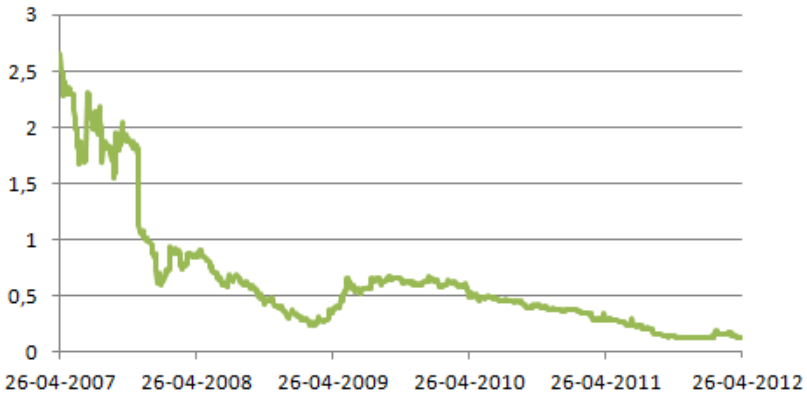
Figure 5: Outstanding shares traded
(Thousand shares)



Source: Inapa's financial report 2011

The outstanding shares prices registered a fall of 63% in 2011 when compared with 2010, from 0,375 Euros to 0,14 Euros.

Figure 6: Inapa's prices evolution



Source: Bloomberg

2.5. Risk factors

Inapa is exposed to the risks associated to the activity sector where it operates, namely paper prices fluctuations, mismatches of demand and supply, changes of consumption patterns and the way the economy behaves. The most relevant risks for Inapa in the last period were the lack of power to reflect the increasing producers' prices in the final price and the increasing transportation costs derived from the rise in fuel prices.
Moreover, despite the fact that Inapa is present in several countries, its exposition to exchange rate risk is limited since the aggregated value of sales in a currency different from the Euro (Swiss Franc, Dollar, Kwanza) only accounts for 7,2% of the group's total sales.

3. Industry overview

3.1. Paper and packaging segment

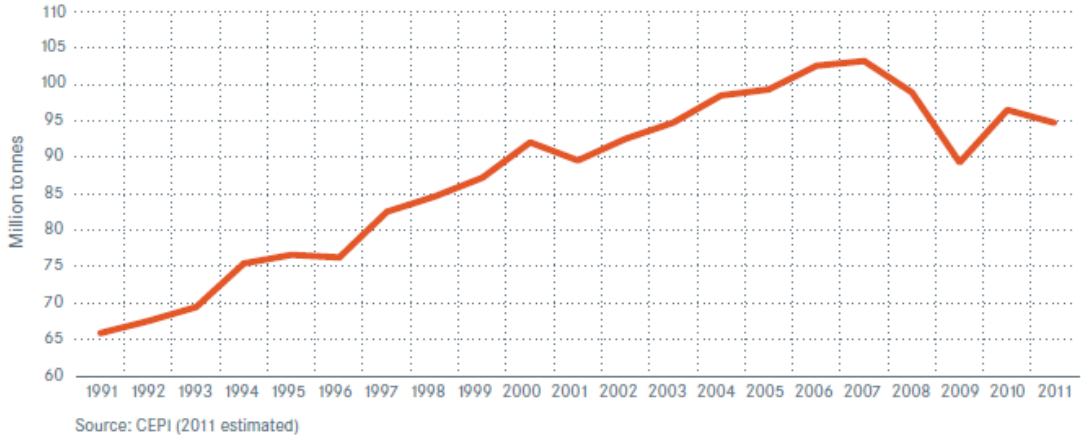
An overview of the most important facts in the paper industry will be done by focusing on the variables that drive production and consumption, and consequently prices and quantities.

3.1.1. Production

The economic recession in Europe caused paper and board production in the CEPI countries (Confederation of European Paper Industries) to decline by 2% in 2011. Despite the decrease in production, the European tons produced are similar to the majority of the paper production countries, with the exception of South Korea and China. In fact, it was estimated that the world paper production in 2011 only grew 0,5% in comparison to the previous year[1].

[1] CEPI Preliminary Statistics 2011, European Pulp and Paper industry

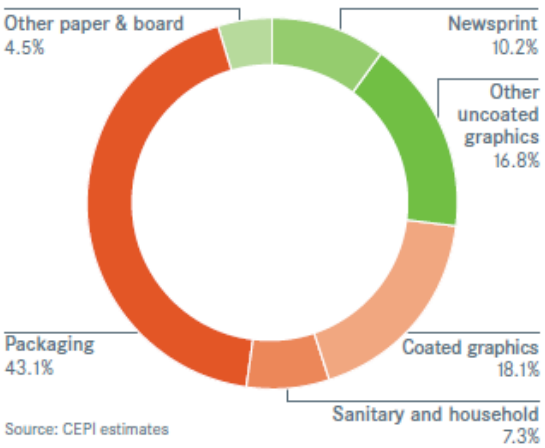
Figure 7: Production of paper and paper board in CEPI countries



The increasing levels of production in China led it to be the number one in the market in what concerns to paper and paperboard exportations. In contrast to European countries and to North America where demand exceeded the production capacity, China still has forests in the Western side of the country, which capacity is not fully exploited. Moreover, the high inventory coming from China can be explained by the fact that the Chinese market is really fragmented, with only 20% of the domestic capacity coming from the ten largest producers. Therefore, small producers are operating to cover their fixed costs[2].

Regarding the packaging segment, it represents 43,1% of the paper and board production in CEPI countries in 2011, which may explain the high growth rates associated to this segment. The newsprint represents only 10,2%, which matches the consumption levels that will be explained below[3].

Figure 8: Production of paper and paper board by grade in CEPI countries in 2011



3.1.2. Consumption

Paper consumption has followed different patterns across paper segments (see appendix 2), even though overall it was reported to be linked to the growth of Real GDP (see appendix 3). The technological advance felt in the last years caused the newsprint paper

[2] Deloitte Compass 2011, Global forest, Paper and Packaging Sector Outlook
[3] CEPI Preliminary Statistics 2011, European Pulp and Paper Industry

consumption to decline drastically and to become a risky area for companies operating within this segment. On the other hand, concerning the market for paper and paperboard, the consumption is still globally strong, with China and India contributing to this fact. These emergent countries have increasing needs and consumption levels that are rising at exponential rates. Moreover, the appearance of China as a consumer and producer of paper products is starting to have a substantial impact in the industry's structure.

In Europe the demand for 2012 is expected to decrease, and according to Moody's Investors Service there will be a decline of 5% in European paper volumes and a 2% fall in the European paper-based packaging volumes. The decreasing consumption levels are easily explained by the European economic situation, with the Real GDP growth rate decreasing and the ratings of several European countries being downgraded. According to Inapa's presentation, the packaging segment presents a growth trend driven by changes in consumption patterns, with a potential increase of 2% until 2014 (see appendix 3).

3.1.3. Prices

Being Inapa a paper distributor company it is positioned in the end of the chain. Thus, the paper prices that Inapa practices are dependent of the prices practiced by paper producers and thus of the evolution of pulp prices. The table above presents the pulp prices in a ten years range (2002-2012) measured in Euros per metric ton.

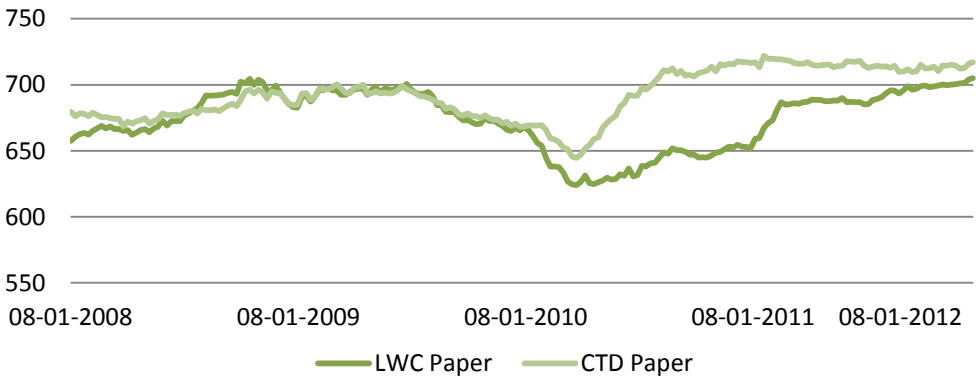
Figure 9: Pulp prices evolution

Source: World Bank

Concerning the final paper prices, Moody's research anticipates a 3% and a 5% decline in packaging prices across Europe. Moreover the historical evolution of LWC paper and

CTD paper prices, which are coated paper types, are presented bellow in Euros per metric ton:

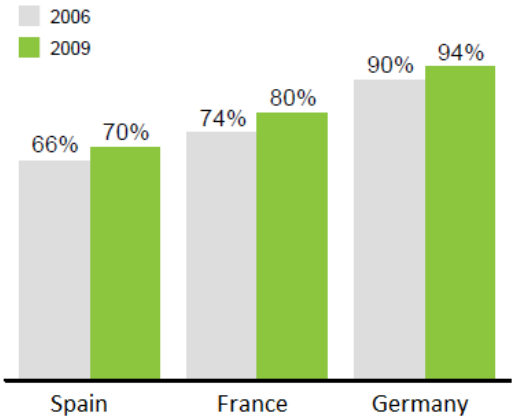
Figure 10: Paper prices evolution



Source: Bloomberg

3.1.4. Competition

Figure 11:Market Share Distributors

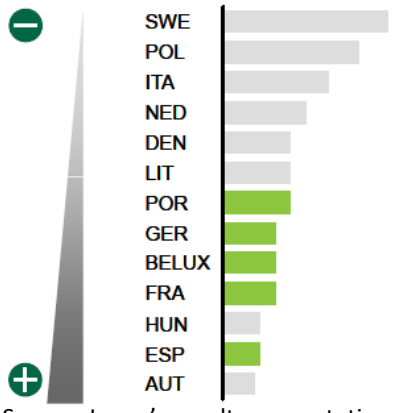


Source: Inapa's results presentation

The distribution sector had been object of increasing competition among market players. This can be seen as a reflection of the decrease in consumption levels as well as of the growing diversification of competitors, and so producers are now expanding their activities into the distribution segment. However, big distributors like Inapa were able to reinforce their position in the market and there is still space to grow through acquisitions.

3.1.5. Consolidation

Figure 12:Market fragmentation



Source: Inapa's results presentation

Consolidation in Europe is unavoidable and studies reveal that it will be done by companies themselves instead of having private equity investors unrolling this process[4]. In addition the packaging segment also owns a fragmented

[4] Deloitte Compass 2011, Global forest, Paper and Packaging Sector Outlook

structure. Moreover, Inapa is already following this market trend and the consolidation potential of the countries where the company operates in the paper segment is underlined in green in the image above.

3.2. Visual communication segment

The visual communication segment is the one that presents the highest growth rate in the graphic industry, since it includes not only the printing materials but also the consumables, the sale of the actual printing machinery, and the software and their maintenance.

4. Valuation Methodology

In order to determine Inapa's equity value two different methods were used: the Adjusted Present Value (APV) and the Multiples. The high leverage problem that characterizes Inapa was a decisive factor when choosing the APV since the company went through a deleverage process and its debt-to-enterprise value reduced from 78% to 70% in 2011 and it is still expected to diminish to 68%. Moreover, this is the Discounted Cash Flow method that better accesses debt effects, such as taxation and bankruptcy costs, by evaluating them separately instead of including them on the discount rate. As these factors can have a considerable impact on the company's value, I chose to proceed with a more accurate valuation like the APV.

The relative valuation will be used as a support tool in order to have some comparison base and to understand how comparable companies are being quoted in the market. The explicit period choice has to take into account the steady state characteristics, although never forgetting that the higher the number of years, the more the assumptions that have to be made and the larger the probability of being far from reality. Therefore, the explicit period chosen for the valuation was 5 years, meaning that I will project Inapa's cash flows from 2012 to 2016. In the case of Inapa, the factor that has the biggest weight in the cruise year definition is its capital structure, which according to my analysis will already be stable by then since it will be within the industry's range of values. In addition, its capital expenditures will also equal its depreciation levels and its growth rate will not be higher than the sum of GDP growth and inflation.

5. Valuation assumptions

5.1. Discount rates

Table 6: Cost of equity

Risk free rate	1,72%
Equity risk premium	6,5%
Levered beta	1,22
Cost of equity	8,72%

The risk free rate considered was the 10 years Germany Treasury Bonds. The choice upon European government bonds was based on the fact that Inapa's operations are majorly concentrated in Europe and thus its revenues' currency is the Euro. Moreover, the Germany's government bonds are the only ones considered to be default free in this market.

The equity risk premium used was 6,5%, which is based on the survey ran by (Fernández, Aguierramalloa, & Correa, 2011). As Inapa's investors are in their majority of Portuguese nationality, the equity risk premium chosen was the one that represents the required rate of return for Portuguese investors. In this case, the lack of historical data was not considered to be a problem due to the few years of existence the Portuguese Stock Index (PSI 20), when compared to other countries.

Moreover, as according to Damodaran the country risk premium for Germany and France, countries where operations predominate, are 0%, meaning that the risk associated to the company's operations is automatically reflected on the equity risk premium.

The levered beta estimation was done by an elimination process until reaching the solution that gives the best indication of the company's undiversified risk. With this purpose, three different betas were considered: Industry beta, peer group beta and regression beta.

I started by computing a regression with the returns of the MSCI Europe Index as the independent variable, since Inapa has a large presence in seven European countries, and Inapa's returns as the dependent variable. The data used was taken from Bloomberg and daily returns from 26/04/2007 until 25/04/2012 were used.

However, due to the Inapa's low number of stock exchange transactions, the regression beta reached was 0,27, which is considerably low when compared to the following methods and thus it will not be used.

According to Damodaran estimates, the average beta for the Paper and Forest products is 1,36. Even though this estimation was done with a sample of 32 companies inserted in Inapa's core business sector, its sample is based on USA companies and thus by itself it is not a good predictor.

In order to estimate the peer group beta, I used Sequana and Paperlinx as comparable companies since they operate in the same industry of Inapa and follow similar business models in what concerns to their business areas (further explanations about the peer group choice will be given in the Relative Valuation section).

Despite being a highly recognized beta estimation method, it is highly affected by the different capital structures assumed by the companies. In this way, adjustments of deleveraging and leveraging the betas were done so that different capital structures did not affect the risk level, reaching a levered beta of 1,1.

Table 7: Peer group beta adjustments

Peer group	Levered beta	Tax rate	D/E	Unlevered beta	Inapa's levered beta
Sequana	1,28	30%	3,05	0,41	
Paperlinx	0,87	30%	1,87	0,38	
Weighted average Beta (variable: market capitalization)	1,08			0,4	**1,077**

Moreover, for valuation purposes an average between the peer group beta and the industry was done so that the closest peers of Inapa can be taken into account, reaching a final beta of 1,22.

Table 8: Cost of debt

	2011	E2012	E2013	E2014	E2015	E2016
Interest coverage ratio	0,834	1,332	1,148	1,094	1,094	1,099
Rating	CCC	B-	CCC	CCC	CCC	CCC
Spread	8,8%	6,8%	8,8%	6,8%	3,8%	1,3%
Cost of debt	10,47%	8,47%	10,47%	10,47%	10,47%	10,47%

Regarding the company spreads, the Damodaran's table that links interest coverage ratio to ratings was used (see appendix 5). The cost of debt was obtained by adding the risk free rate to the spread of each year.

5.2. Cash flow drivers

Table 9: Macroeconomic forecasts

	E2012	E2013	E2014	E2015	E2016
Real GDP growth rate					
Germany	0,6%	1,7%	2,1%	2,0%	2,0%
France	0,0%	1,2%	1,9%	2%	1,9%
Portugal	-4,0%	-2,1%	0,2%	1,7%	1,9%
Spain	-1,2%	-0,6%	0,8%	2,0%	2,4%
Switzerland	1,4%	1,8%	1,8%	1,8%	1,8%
Weighted average by sales	0,1%	1,2%	1,8%	2,0%	2,0%
Inflation (HICP)					
Germany	1,9%	1,8%	1,8%	1,8%	1,8%
France	2,2%	1,9%	1,9%	1,9%	1,9%
Portugal	3,1%	1,6%	1,2%	1,8%	1,8%
Spain	1,8%	1,4%	1,4%	1,4%	1,5%
Switzerland	0,9%	1,0%	1,0%	1,0%	1,0%
Weighted average by sales	1,9%	1,7%	1,7%	1,7%	1,7%

Source: Ernst & Young Eurozone Forecast 2012

This data was taken from Ernst & Young Eurozone Forecast – Spring Edition March 2012 and the weighted average was computed by taking the proportion of sales per country as a constant (see appendix 6). Luxembourg, Belgium and Angola did not enter in this analysis as result of their low relevance in total sales.

5.3. Operations, sales and costs

5.3.1. Sales

Inapa's sales are driven by the tons sold and the prices practiced. However, due to information constraints, I will only be able to forecast the sales as a whole, since price information was not provided. Moreover, the sales evolution does not follow the same path across business areas, the complementary businesses are increasing their weight in Inapa's total sales and therefore these differences will be taken into consideration.

According to information provided by the company, a variation of 10% in paper prices will have an impact between 2% and 3% in the final price of the product.

Table 10: Sales by business area

Million Euros	2010	2011	E2012	E2013	E2014	E2015	E2016
Paper	924,7	924,4	925,4	936,3	953,2	971,9	991,3
Packaging	31,9	36.8	47,9	54,2	70,5	76,9	83,8
Viscom	23,2	25,1	26,9	28,8	30,8	32,6	33,2
Other activities	0,281	0,029	0	0	0	0	0
Total	980,2	986,4	1.000,3	1.019,4	1.054,6	1.081,5	1.108,4

Table 11: Sales growth by business area

Million Euros	2011	E2012	E2013	E2014	E2015	E2016
Paper	0%	0%	1%	2%	2%	2%
Packaging	13%	30%	9%	9%	8%	2%
Viscom	7%	7%	7%	7%	6%	2%
Total	1%	2%	3%	2%	2%	2%

It is observable that paper consumption is highly correlated with the country GDP and for these reasons sales are growing according to the Real GDP growth rate weighted by the sales per country (see appendix 3).

The young nature of the complementary businesses inside the company explains the high growth rates of sales since it still has market potential to explore. The 30% growth in packaging is due to the incorporation of 10,9 Million Euros from the acquisition of a French packaging company - Semaq.

Table 12: Business areas weight in total sales

	2011	E2012	E2013	E2014	E2015	E2016
Paper	95%	93%	92%	90%	90%	89%
Packaging	4%	5%	5%	7%	7%	8%
Viscom	3%	3%	3%	3%	3%	3%

According to my analysis and to the table above, the company will be capable of pursuing with its strategy of increasing the weight of the complementary businesses in its portfolio.

5.3.2. Provision of services and other income

Table 13: Provision of services and other income

Million Euros	2010	2011	E2012	E2013	E2014	E2015	E2016
Provision of services	11,3	11,6	11,6	11,7	12,0	12,2	12,4
Other income	25,8	27,3	27,3	27,6	28,1	28,7	29,3

The services' provision and other income that came mainly from prompt payment discounts are considered to be linked with inflation and so their growth is attached to this variable growth.

5.3.3. Operational costs

5.3.3.1. Cost of sales

Inapa's cost of sales structure had been fairly rigid over the years, representing between 82% and 83% of sales. It is the operational cost that has the biggest weight in the company's profit and loss statement and so an analysis by business area will be performed.

The company's gross margins differ between business areas due to the diverse stages in the business life-cycle. Being an already mature business, the paper distribution's gross margins present lower levels than in the complementary businesses case.

Moreover, Inapa is exposed to the price movements practiced by the manufactures. In 2011, the company's gross margins reached minimum historical levels because they were not able to pass the producers' price increase to the consumers' final price. However, this situation is not expected to persist and so an average of the last 3 years was considered, and gross margins are expected to remain constant.

Table 14: Gross margin by business area

	2009	2010	2011	E2012	E2013	E2014	E2015	E2016
Paper	17,0%	17,3%	16,7%	17,0%	17,0%	16,9%	17,0%	17,0%
Packaging	26,7%	30,0%	26,5%	27,7%	28,1%	27,4%	27,7%	27,8%
Viscom	26,1%	25,0%	22,9%	24,7%	24,2%	23,9%	24,3%	24,1%

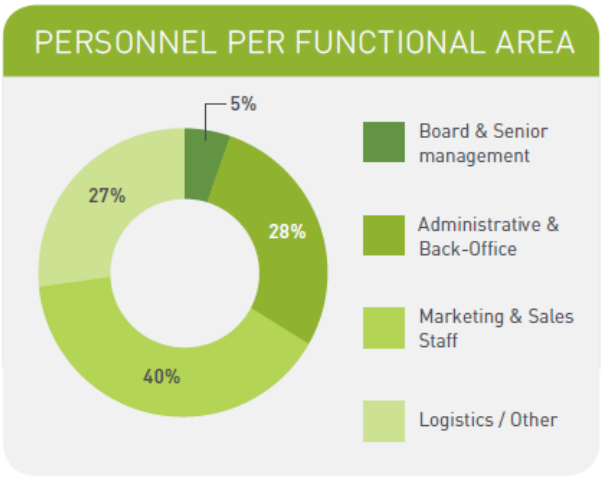
Table 15: Cost of sales by business area

Million Euros	E2012	E2013	E2014	E2015	E2016
Paper	768,7	777,8	791,8	807,4	823,4
Packaging	35,9	40,5	52,3	56,9	61,9
Viscom	22,6	24,0	25,6	27,0	27,5
Total	827,3	842,4	869,8	891,4	913,0

5.3.3.2. Personnel costs

Regarding the personnel division by business composition, 87% of the effective workers are allocated to the paper distribution.

Figure 13: Personnel per functional area



Source: Inapa's financial report 2011

The personnel costs have a fixed and a variable component. The variable part is characterized by the sales' commissions given to the Marketing and Sales staff and represents 1/3 of the personnel costs within this workers' category. The variable part of the costs will unsurprisingly evolve together with sales, while the fixed part will grow 0,5% below inflation due to the operational efficiency program Inapa has been developing.

Table 16: Personnel costs

Million Euros	2010	2011	E2012	E2013	E2014	E2015	E2016
Fixed	68,6	69,9	70,9	71,7	72,6	73,5	74,4
Variable	10,5	10,7	10,9	11,1	11,4	11,7	12,0
Total	79,2	80,6	81,8	82,9	84,1	85,3	86,4

5.3.3.3. Other costs

The other costs item includes administrative costs, distribution costs, indirect taxes, provisions, impairment in current assets and still other costs.

The administrative costs and the other costs are driven by the inflation's evolution. The distribution costs are directly dependent of two variables: fuel prices and sales. Despite being interesting to proceed with this analysis, the level of complexity of addressing the fuel prices does not compensate when looking at the weight of these costs in total costs and thus only sales will be used as a driver.

Moreover, the impairment in current assets, more specifically from clients' accounts, is not expected to be higher than the value of 2011 because the company is now hedging its credit risk exposure through an insurance hired.

The provisions are related to a litigation process in course that has costs associated that are difficult to estimate and so they will remain equal to 2011 level. The same happens to the indirect taxes since this information was not provided by the company.

Table 17: Other costs

Million Euros	2010	2011	E2012	E2013	E2014	E2015	E2016
Administrative costs	45,6	48,6	49,5	50,4	51,3	52,1	53,0
Distribution costs	37,3	39,8	40,3	41,1	42,4	43,5	44,5
Indirect taxes	3,2	3,5	2,9	2,9	2,9	2,9	2,9
Other costs	3,8	3,0	3.090	3.143	3.196	3.251	3.307
Provisions	0,988	0,049	0,049	0,049	0,049	0,049	0,049
Impairment in current assets	6,5	2,8	2,8	2,8	2,8	2,8	2,8
Total	97,7	97,9	98,9	100,6	102,8	104,8	106,8

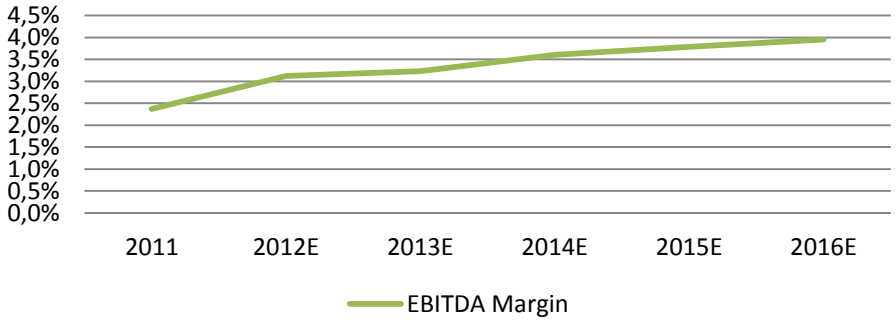
5.4. EBITDA

In order to reach the EBITDA, not only the operational costs were subtracted from the operational income, but the gains and/or losses of associates were also taken into account. However, due to the lack of information they were considered to be equal to zero for the remaining years of the explicit period.

Table 18: EBITDA

Million Euros	2010	2011	E2012	E2013	E2014	E2015	E2016
EBITDA	30,7	23,3	31,2	32,9	37,9	40,9	43,8

Figure 14 : EBITDA Margin



In spite of Inapa's EBITDA margin being low, it had been evolving positively and according to the forecasts it will continue to increase. Contributing for this effect is the growth of the complementary businesses and the effort done by the company to increase the operational efficiency through synergies.

5.5. Working capital

The working capital is defined as the difference between current assets and current liabilities, including only non-financial items (e.g. inventories, trade receivables, taxes to be recovered, other current assets, suppliers, taxes payable and other current liabilities). The company has pursued a strategy of reducing its working capital as a way of increasing the amount of cash flows available to amortize debt. In 2011, Inapa decided to focus its efforts on the current assets side by imposing rules to reduce the number of receivables days and by decreasing its inventories levels. On the current liabilities, the company's spotlight was to reduce the number of payables days, with the benefit of taking advantage of prompt payment discounts. This strategy resulted in a reduction of 27 Million Euros in the working capital in the year of 2011 when compared to the previous year. Furthermore, Inapa considers that the working capital reached its minimal level in 2011 and so it will grow according to sales from 2012 until 2016.

Table 19: Working capital needs

Million Euros	2010	2011	2012E	2013E	2014E	2015E	2016E
Current assets	328,7	283,3	287,2	292,6	302,4	309,9	317,4
Current liabilities	106,4	87,8	89,0	90,7	93,7	96,0	98,4
Working capital	222,3	195,4	198,1	201,9	208,6	213,8	219,0
Investment in NWC	29,3	(26,8)	2,7	3,7	6,7	5,1	5,1

5.6. Investment policy

Inapa's investment policy is constrained by the debt repayment priority, and if possible reduction, and thus its value is directly linked to its capital structure. In this way, Inapa has been facing depreciation levels higher than its fixed assets investment.

Moreover, the investment valuation by type of asset was done in order to consider the different depreciation rates. For valuation purposes the value of the needed investment in fixed assets is net of disposals, which will be considered equal to zero, with the

exception of the transport equipment that will be equal and constant to the average of the last four years (see appendix 7).

Concerning increases, buildings and other constructions, basic equipment and administrative equipment, they will only be target of maintenance expenses until 2016, while the investment in buildings will be considered to be zero. Alternatively, investment expenses in transport equipment will have to be done due to a fleet renewal in Germany. On the intangible fixed assets side, an investment in software by the year of 2012 was considered.

Table 20: CAPEX

Thousand Euros	2008	2009	2010	2011	E2012	E2013	E2014	E2015	E2016
Tangible fixed assets									
Land and natural resources	(930)	0	-58	0	0	0	0	0	0
Buildings and other Constructions	(2.388)	429	644	(205)	400	400	400	400	400
Basic Equipment	(107)	211	286	(44)	380	380	380	380	380
Transport Equipment	(974)	(920)	(535)	13	(604)	(604)	(604)	(604)	(604)
Administrative Equipment and Other Tangible Fixed Assets	(590)	648	32	167	912	912	912	912	912
Total	(4.989)	368	369	(69)	1088	1088	1088	1088	1088
Intangible fixed assets									
Industrial property and other rights	943	3.570	2.392	774	2.000	774	774	774	774
Total	943	3.570	2.392	774	2.000	774	774	774	774
Total CAPEX Investment	(4.046)	3.938	2.761	705	3.088	1.862	1.862	1.862	1.862

The assets will be depreciated at different rates (see appendix 8) and the depreciations for each year can be observed in the table below.

Table 21: Depreciations

Thousand Euros	E2012	E2013	E2014	E2015	E2016
Tangible fixed assets					
Land and natural resources	0	0	0	0	0
Buildings and other Constructions	2.073	2.082	2.090	2.099	2.108
Basic Equipment	563	568	573	578	583
Transport Equipment	95	103	110	118	126
Administrative Equipment and Other Tangible Fixed Assets	803	860	917	974	1031
Total	3.533	3.612	3.690	3.769	3.847
Intangible fixed assets					
Industrial property and other rights	1.748	1.756	1.765	1.773	1.782
Total	1.748	1.756	1.765	1.773	1.782
TOTAL	5.281	5.368	5.455	5.542	5.629

5.7. Taxes

Inapa's presence in several countries leads to a complex tax treatment because each country has its own regulation policy. Even though Inapa's presence is in its majority in Europe, countries like Switzerland have really particular tax rules.

Moreover, in order to simplify the tax treatments, Inapa reached a nominal tax rate common to all markets with a weighted average. As this rate was not target of volatility issues, and has been steady around 30%, it was considered to be constant and equal to 30% in the forecasts.

Furthermore, the fact that the company's performance is not the same across countries makes it subject to deferred taxes. In what concerns to reportable tax losses, the company recognized assets in the value of 16.425 Thousand Euros that can be deducted to future taxable income (see appendix 9). The time usage varies across countries but they are in their majority of unlimited nature. Therefore, in the deferred income tax assets side the reportable losses per country vary according to the taxable income, which was computed by taking the sales per country of 2011 as a constant (see appendix 10). In addition, the taxed provisions and the others item were considered to remain equal to the last historical year.

Concerning the liabilities for deferred taxes, it is mainly composed by amortizations related to Goodwill and due to the lack of information it was considered to remain constant. Moreover, the revaluation of fixed assets and the others item were also target of a 0% growth rate.

Table 22: Income taxes

Million Euros	E2012	E2013	E2014	E2015	E2016
Current taxes	(1,1)	(0,7)	(0,5)	(0,6)	(0,6)
Deferred taxes	(0,9)	(0,5)	(0,4)	(0,4)	(0,4)
Income tax	(2,1)	(1,2)	(1,0)	(1,0)	(1,1)

5.8. Free cash flow projections

For the purpose of using the APV as a valuation method, the free cash flows were estimated for the explicit period and a steady state analysis was done.

The evolution of most cash flows had followed a stable pattern as can be observed in the table below. In the case of capital expenditure, there was an increase in value in the cruise year so that it matches the depreciations value and the steady state condition can be fulfilled. In addition, the deferred taxes were considered to be zero since it is an effect that will not be kept forever by the company. Working capital needs and CAPEX over the explicit period were already analyzed.

The terminal value was reached by discounting the free cash flows in the cruise year at the cost of equity deducted by the growth rate, which was assumed to be equal to Real GDP growth rate. Moreover, in order to reach the present value of the cash flows forecasted, the cost of equity was used as discount rate.

Table 23: Free cash flow projections

Million Euros	E2012	E2013	E2014	E2015	E2016	Steady state
EBIT	25,9	27,5	32,5	35,3	38,1	39,8
Taxes	7,7	8,2	9,7	10,6	11,4	11,9
EBIT (1-t)	18,1	19,3	22,7	24,7	24,7	27,8
Depreciation	5,2	5,3	5,4	5,5	5,6	5,7
Net deferred taxes	(0,855)	(0,462)	(0,287)	(0,320)	(0,502)	0
Cash flow from operations	22,5	24,6	27,9	29,9	31,8	33,5
Investment in NWC	2,7	3,7	6,7	5,1	5,1	5,2
CAPEX	3,0	1,8	1,8	1,8	1,8	5,7
FCFF	16,6	18,5	19,2	22,8	24,8	22,5
PV cash flows	15,1	15,4	14,5	15,7	15,6	
Terminal value						295,1
PV terminal value						269,2
Base-case value						**345,8**

5.9. Debt analysis

Inapa's debt analysis is the vital point in this dissertation because the company is reaching a dangerous situation in which it is not capable of generating enough cash flows to cover its debt service (e.g. debt repayments, interest paid and other costs associated to financial contracting). The company reached this condition due to the expansion projects in which it was involved, namely through acquisitions.

Even though Inapa is conscious of the priority that debt reduction represents, it will have to engage in heavy deleveraging processes in order to do so. In the view of this fact, the company already took on a capital increase of 54 Million Euros in 2011, with shares of a preferred nature, whose single end was to reduce debt. This effort translated into a decrease of its D/EV ratio from 78% to 70%. Nevertheless, the company's net debt over EBITDA ratio is 11, which is above the peer group average that stays in the 6,59, with range from 3,89 to 9,29. However, it is easy to understand that Inapa is not alone in this fight against high debt levels in its industry. Moreover, the company was allowed to do an additional capital increase of 24 Million Euros however no concrete information was given and thus it will not be considered.

Moreover, a debt analysis by different types of debt was done in order to reach the repayments schedule, but the debt forecasts were simply divided into long-term and short-term debt. The long-term debt includes bank loans, financing associated with financial assets (securitization), and financial leases. The bank overdrafts, commercial paper and factoring were considered to be short-term components.

As it was already stated, the company operational cash flows deducted of capital expenditures and working capital needs - free cash flows - are not sufficient to assume its debt commitments. There are three possible scenarios, and two of them were only addressed in a theoretical perspective for being difficult to predict.

The first one is the hypotheses of the company renegotiating its debt in terms of maturity dates. The second scenario is more radical but it must be considered by the company, the hypotheses of converting bank debt into equity or even lead a privatization process. The scenario considered for valuation purposes was one where the company contracts new debt in short-term conditions and its value was reached by subtracting the cash flow available for debt amortization of the debt service value. Moreover, the long-term debt evolution was driven by the repayments schedule. The

same treatment was given to the medium and long term (MLT) debt, which is considered to be the long-term part of debt that will have to be paid in one year time.

About the financial leases, they were considered as non-financial debt by the company and were included in the other non-current liabilities account until now. However, in the forecasts they were considered as financial debt and were included in the loans account.

Table 24: Debt analysis summary

	2010	2011	E2012	E2013	E2014	E2015	E2016
Long-term debt	149,8	149,3	126,8	104,3	81,9	59,4	36,9
Short-term debt	301	223,4	242,9	263,6	287,8	310,1	332,1
MLT debt	Na	Na	31,6	31,6	31,6	31,6	31,6
New debt	Na	Na	174,5	204,4	237,7	269,3	300,5
Total debt	450,5	372,7	369,7	368,0	369,7	369,5	369,1
Cash and cash equivalents	17	15	28,5	27,2	27,2	27,9	28,9
Net debt	433,9	357,7	342,6	343,1	345,5	345,5	343,3
Net debt/EBITDA	14,1	15,3	10,9	10,3	9,0	8,3	7,8

As can be verified, in 2016 the company reached a net debt over EBITDA ratio of 7,8, which is inside the range of values for the comparable companies in the sector.

5.9.1. Financial costs

The financial costs' evolution reflects the increase in short-term debt that has higher interest rates associated. The cost of debt of new debt financing was estimated according to the company's rating and was already explained above in the discount rates section. The interest rates associated to long-term debt were assumed to remain equal for book value purposes.

The capital increase operation had an effect of 1Million Euros reduction in the interest payments. Moreover, the other costs are associated to commercial paper and other type of debt contracts and it is evolving according to total debt growth.

Table 25: Financial costs

Million Euros	2010	2011	E2012	E2013	E2014	E2015	E2016
Interest payments	9,7	15,7	15,4	20,0	25,7	28,3	30,8
Other costs	5,1	5,0	4,0	4,0	3,9	4,0	4,0

5.9.2. Market value of debt

As a way of estimating the market value of debt, it was assumed that short-term debt is in equilibrium, i.e. book value equal to market value. However, the same does not happen to the long-term debt since it was considered to be out of equilibrium. In this sense, the interest payments and the repayments were discounted at the cost of debt of each year (estimated through ratings spread plus risk free rate) to reach their present value.

Table 26: Market value of debt

Million Euros	E2012	E2013	E2014	E2015	E2016
Short-term	242,9	263,6	287,8	310,1	332,1
Long-term	79,6	61,8	42,7	52,3	55,1
PV(Interests)	9,1	6,4	3,9	32,0	34,8
PV(Repayments)	70,5	55,4	38,7	20,3	20,3
Market value of debt	322,5	325,5	330,5	362,4	387,3
Net debt	294,0	298,3	303,2	334,5	358,4

5.10. Other balance sheet items

As a result of information constraints and also low relevance in relation to the total value, some items were considered to be either constant or equal to zero.

Table 27: Other balance sheet items

g = 0%	
Investment in associates	Debt amortization is number one priority
Available for sale financial assets	
Other non-current assets	Difficult prediction
Share capital	No information about capital increases
Treasury shares	Difficult prediction
Share issue premiums	Difficult prediction
Reserves	Difficult prediction
Minority interests	No more subsidiaries disposals
Provisions	Difficult prediction
Other non-current liabilities	Difficult prediction

Moreover, the Goodwill increase in 2012 is a result of the acquisition of Semaq, which fair value was taken from Inapa's quarterly report of March 2012 leading to a goodwill improvement of 1,9 Million Euros.

The company's employee benefit obligations are only directed for high board seats and for French employees, where legislation obliges the company's benefits to embrace all employees. According to my forecasts, they will be equal to the average of the last 5 historical years and will remain constant.

Finally, the cash and cash equivalents present the following values during the explicit period:

Table 28: Cash and cash equivalents

	2010	2011	E2012	E2013	E2014	E2015	E2016
Cash&cash equivalents	16,5	15,0	28,5	27,2	27,2	27,9	28,9
% of sales	1,7%	1,5%	2,9%	2,7%	2,6%	2,6%	2,6%

Even though there is a significant increase when comparing the year of 2011 with 2012, this can be explained using several reasons. Firstly, Inapa increased the scope of its operations through an acquisition and whenever a mature company is being analyzed, the cash levels increase with the investment level.

Moreover, short-term debt had been increasing over the explicit period and it is also known that "companies with more short-term debt in their capital structure are expected to hold more cash". As these companies are usually in risk of financial distress, this strategy helps them to hedge the risk of finding constraints of debt renewal (Saddour, 2006). In addition, financial analysts usually define their cash and cash equivalents as 2%-3% of sales.

5.11. Tax shields

As it was said in the Literature Review, the interest tax shields derive from the deductibility of interest payments in tax payments. Moreover, it was considered that principal and interest payments, and tax shields share the same level of uncertainty and thus the cost of debt was used to reach the present value of the tax shields. The terminal value was estimated by assuming that tax shields will evolve at the same rate as debt, i.e. 0%.

Table 29: Interest tax shields

Million Euros	E2012	E2013	E2014	E2015	E2016
Tax rate	30%	30%	30%	30%	30%
Cost of debt	8,47%	10,47%	10,47%	10,47%	10,47%
Interest paid	15,4	20,0	25,7	28,3	30,8
Other costs and financial losses	4,0	4,0	3,9	4,0	4,0
Interest tax shields	5,8	7,2	8,9	9,7	10,4
PV interest tax shields	5,3	5,9	6,6	6,5	6,3
Terminal value					99,7
PV Terminal value					90,2
Total present value, tax shields					**121,0**

5.12. Bankruptcy costs

Figure 15: Probability of default

Rating Class (S&P)	One year PD (%)
AAA	0.01
AA	0.02 - 0.04
A+	0.05
A	0.08
A-	0.11
BBB	0.15 - 0.40
BB	0.65 - 1.95
B+	3.20
B	7.00
B-	13.00
CCC	>13

Source: Damodaran

In order to quantify how limited the interest tax shields are, the bankruptcy costs were estimated as the present value of bankruptcy costs multiplied by their probability of occurrence. Furthermore, to estimate Inapa's default probability, the table presented sideling was used. It was adapted by Damodaran from credit agencies researches, and it links companies' ratings to the probability of default within one year.

In relation to the company's bankruptcy costs, I estimated both direct and indirect costs through the Korteweg approach. As it was referred in the Literature Review, Korteweg estimates the bankruptcy costs as a percentage of the levered firm value. However, different bankruptcy costs were estimated for different industries and the values for the paper industry are presented below. Moreover, companies within the same industry can have different costs associated due to the diversity of debt-to-enterprise ratios.

Table 30: Bankruptcy costs as % of levered firm value (Unobserved debt at face value)

L= D/D+E				
L=0,1	**L=0,3**	**L=0,5**	**L=0,7**	**L=0,9**
0,003	0,025	0,07	0,138	0,228

Source: Korteweg (2007)

In spite of Inapa being a highly levered company, its bankruptcy costs did not surpass the interest tax shields and they are valued in 108Million Euros.

Table 31: Bankruptcy costs

Million Euros	E2012	E2013	E2014	E2015	E2016
Levered firm value	450,3	552,4	424,2	404,7	382,6
L= D/V (Book values)	0,69	0,70	0,69	0,69	0,69
Costs of financial distress (%VL)	13,8%	13,8%	7,0%	7,0%	7,0%
Costs of financial distress	62,1	76,2	58,5	55,8	52,8
PV costs of financial distress	57,3	62,4	43,4	37,5	32,0
PV terminal value	464,9				
Interest coverage ratio	1,332	1,248	1,192	1,190	1,195
Rating	B-	CCC	CCC	CCC	CCC
Probability of default	13%	14%	14%	14%	14%
Expected bankruptcy costs	7,4	8,7	6,0	5,2	4,4
	65,0				
	97,1				

6. Relative valuation

With the purpose of having comparison multiples from where Inapa's enterprise value could be estimated, it was the following peer group with the subsequent characteristics:

Table 32: Peer group characteristics

Peer group	Market capitalization	Enterprise value	D/V	D/E	EBITDA margin (%)	P/E growth	Sales growth	ROE
Sequana	211	823	1,1	3,0	4%	8,93%	-8,98%	-10,38%
Paperlinx	44	544	0,6	1,9	0,4%	1%	-8,12%	-36,45%
Inapa	26	417	0,7	2,4	2,6%	Na	1%	-3%

Source: Bloomberg

The peer group choice was based upon quoted companies that are operating in the same business sector of Inapa. This explains the small number of comparables, since there are few quoted companies in this sector.

Sequana is a French company which operates in Europe and is placed in a leading position in the market. It follows a business model similar to the one practiced by Inapa since it distributes paper and packaging products and still products targeted for the visual communication sector. However, this company is not only a distributor but also a producer, which explains the larger dimension when compared with the peer group elements.

On the other hand, Paperlinx is an Australian company that is a purely paper distributor. Even though it is Australian, 68% of its revenue comes from the distribution of paper in Europe.

With the objective of using enterprise value forecasted multiples, data for the years of 2012 and 2013 was retrieved from Bloomberg for the EBIDA, EBIT and sales variables. However, the EV/EBITDA and EV/EBIT multiples for the peer group are really disparate among each other. For the case of Paperlinx's multiples, really high variations between years are presented due to profitability problems the company is facing. Even though Sequana's multiples are closer to be compatible with those of Inapa, its compatibility is not as high as it is expected to proceed with an enterprise-value valuation. Moreover Inapa's EBITDA and EBIT numbers were the lowest in a 5 year horizon and thus they will not be taken into account to define the target price.

Table 33: EV/EBITDA and EV/EBIT multiples

	EV/EBITDA			EV/EBIT		
Peer group	2011	E2012	E2013	2011	E2012	E2013
Sequana	5,24	3,67	4,17	9,25	4,57	5,76
Paperlinx	29,45	120,83	31,87	Na	(31,55)	2564,44
Inapa	Na	13,97	12,65	Na	Na	Na

Source: Bloomberg

When looking at the EV/Sales multiples, it can be observed that Sequana and Paperlinx present similar estimates. However, after assessing its compatibility quality with Inapa's multiple, the decision of not using this multiple to define a target price was taken.

Table 34: EV/Sales Multiples

	EV/Sales		
Peer group	2011	E2012	E2013
Sequana	0,21	0,18	0,17
Paperlinx	0,12	0,13	0,13
Inapa	Na	0,41	0,41
Maximum	0,21	0,18	0,17
Minimum	0,12	0,13	0,13
Weighted average (Variable: Market Capitalization)	0,19	0,17	0,16

Source: Bloomberg

Moreover, the price-earnings ratio is not a good predictor of Inapa's enterprise value due to the negative earnings the company presented in the last historical period. In addition, Paperlinx presented negative earnings, which could introduce some bias in the analysis.

Table 35: PER Multiples

	PER		
Peer group	2011	E2012	E2013
Sequana	Na	2,870	2,300
Paperlinx	(0,001)	(0,004)	(0,008)
Inapa	Na	Na	12,00

Source: Bloomberg

For knowing that transaction multiples can give more accurate estimates than market multiples, a research on the Zephyr database platform was done in order to find recent transactions on the distribution paper industry. The deal type on the search was: Acquisition, IPO, Institutional buy-out, Joint-venture, MBI / MBO, Management buy-in, Management buy-out, Merger. However, my findings were that there were only transactions for paper producer companies in the last years, which are not directly comparable due to the different business nature and consequent cost structure.

7. Small cap discount

The small cap discount appears as a way of reflecting the higher required rates of return demanded by investors whenever a small cap company is addressed.

Moreover, the standard deviation of small-cap companies' stocks as opposed to the large-cap companies is presented below.

Table 36: Large-cap and small-cap standard deviation

1926-2009	Standard deviation
Large-cap stocks	20,5%
Small-cap stocks	32,8%

Source: Ibbotson, CRSP

Being the standard deviation a risk measure, the highest the level of risk the highest the required rate of return and thus a discount over fair value must be taken into account.

Moreover, a small cap discount of 10% was used in order to match the assumption done by the investment bank.

8. Share price

The following table presents the different sources of value that lead to Inapa's valuation and the method used in each part. Moreover, the preferred shares were treated as debt and thus deducted from the enterprise value.

Table 37: Target price

Million euros	Value	Method
Unlevered firm value	345,8	DCF @ Ru
+ PV Tax Shields	121,0	NPV @ Rd
-PV Financial Distress	97,1	NPV @ Rd
= Enterprise Value	369,8	
-Net debt (MV)	294,0	NPV @ Rd
-Preferred shares	54,1	
+Minority interests	3,9	
=Equity value	17,6	
Number outstanding shares	150	
Fair price	0,12	
Small cap discount	0,01	10% Fair value
Target price End 2011	**0,11**	

9. Sensitivity analysis

This section of the dissertation aims to test how the share price behaves to changes in some drivers. The drivers chosen were the ones that I had considered to have the biggest impact in the company's share price by having a direct impact on sales, operating expenses and discount rate. Moreover, the direct discount due to small cap stocks was also considered.

Starting with the discount rate, variations on the levered beta were tested by taking into account the different methods previously referred and explained (e.g. peer group beta, industry beta). The equity risk premium variation impact was assessed with positive and negative variations of 0,5%.

Table 38: Sensitivity analysis - ERP and beta

Discount rates	Equity risk premium		
Beta	6%	6,5%	7%
1,08	0,52 €	0,35 €	0,20 €
1,22	0,26 €	**0,11 €**	-0,02 €
1,36	0,05 €	-0,08 €	-0,20 €

Moreover, scenarios where sales' variations are tested are also important. The paper segment sales were considered through +/- 0,5% GDP growth variations, due to the high correlation between these variables.

Table 39: Sensitivity analysis - Real GDP Growth Rate

Real GDP Growth Rate		
-0,5%	Base	+0,5%
-0,93 €	**0,11 €**	1,27 €

In relation to the complementary businesses, I considered to be interesting to test a scenario in which Inapa is not capable of incorporating the total sales from the acquisition of the French packaging company Semaq. In one of these scenarios the company is only capable of incorporating 50% of Semaq sales, while the second one is a more extreme case in which the company does not incorporate any of Semaq's sales. Factors like consumer loyalty were taken into account to address this scenario.

Table 40: Sensitivity analysis - Packaging sales

Packaging not capable of incorporating 100% Semaq sales		
0% incorporation	**Base**	**50% incorporation**
-0,63 €	**0,11 €**	-0,27 €

Moreover, inflation and gross margin were considered to be the drivers with the biggest impact on the company's operating costs. The inflation was tested with 0,5% positive and negative variations. The gross margins in the bull case were equal to the 2010 levels, which was the best historical year performance, while in the bear case the 2011 levels were used due to the fact that they correspond to the minimum historical values.

Table 41: Sensitivity analysis - Gross margin

Gross margin		
Levels of 2011	**Base**	**Levels of 2010**
-0,09 €	**0,11 €**	0,32 €

Furthermore, the impact of changes in the small cap discount was also tested and the following results were achieved:

Table 42: Sensitivity analysis - Small cap discount

Small cap discount		
0,5%	**10,0%**	**15,0%**
0,112 €	**0,106 €**	0,100 €

Finally, in what concerns to changes in the growth rate perpetuity, they were already considered in the variation of the GDP growth rate since the company will be growing according to this variable.

This sensitivity analysis demonstrates that Inapa's share price is very volatile and that in some scenarios they reach negative levels, which is not surprising due to the company's highly leveraged situation. However, these scenarios are not considered to be the most probable ones since the scenario with the highest probability of occurrence was based on industry trends, information provided by the company and historical data, and led to a price target of 0,11€.

10. Valuation comparison

After reaching a price target, the purpose of this dissertation is to compare it with a valuation done by an investment bank. I had chosen to use the BPI Equity Research done by the analysts José Rito and Bruno Bessa as a comparison model. The report was published in January 2012 with a "reduce" recommendation derived from a price target of 0,14€. However, the consolidated accounts had not been published by then and thus forecasts of the year of 2011 were used.

In relation to the valuation method used, the bank chose the Free Cash Flow to the Firm while I used the APV valuation. Even though the FCFF can be more accepted among investors, I consider that a company which capital structure is not stable like Inapa can benefit of a more accurate valuation through the APV method. In addition, the bank used an explicit period of 4 years (2011-2014) while I chose to employ a 5 years period (2012-2016), and so as a consequence in terms of cash flows only the years of 2012-2014 can be compared.

Moreover, the assumptions on discount rates also differ in the following way:

Table 43: Valuation comparison

	Thesis	BPI Equity Research
Risk-free rate	1,72%	3,25%
Levered beta	1,22	1,1
Equity risk premium	6,5%	6,43%
Cost of equity	9,64%	10,3%
Cost of debt	10,47%	5,7%
Growth rate	2%	2%

The bank's assumptions that contrast the most with my thesis are the risk free rate and the cost of debt. In relation to the cost of debt, I believe that the bank did a very optimistic estimation since according to the company's rating the estimated cost of debt would be really difficult to achieve. In order to have more data to sustain my position, I looked into the Equity Research done by HSBC for EDP-Energias Portugal, which estimates its cost of debt as 5,5%, leaving only 0,2% margin when compared to Inapa. About the risk-free rate I also believe that 3,25% is a too high percentage to reflect a bond with zero probability of default.

Regarding the cash flow statement differences on assumptions about EBITDA evolution, capital expenditures and variations of net working capital are recorded.

Concerning EBITDA estimations, my forecasts were optimistic from 2014 on when compared to BPI's research.

Table 44: EBITDA margin comparison

	E2012	E2013	E2014
Thesis	3,1%	3,2%	3,6%
BPI Equity Research	3,0%	3,2%	3,3%

Moreover, there is a discrepancy in values when looking at the estimated cash flows used for capital expenditures. While I assumed the company would only support maintenance costs until its cruise year in order to maximize the amount of money available for debt amortization, the bank did less conservative forecasts.

Table 45: CAPEX comparison

CAPEX	E2012	E2013	E2014
Thesis	2	2	2
BPI Equity Research	6	6	6

Concerning working capital needs, my assumptions were also more conservative since according to information from Inapa's managers, the company will not be able to reduce its investment in working capital further than it did so far.

Table 46: Net working capital comparison

Net Working Capital	E2012	E2013	E2014
Thesis	3	4	7
BPI Equity Research	3	0	1

The enterprise value reached by the bank is of 407 Million Euros, 37 Million Euros over mine.

Table 47: Target price comparison

Million euros	Thesis	BPI Equity Research
Enterprise Value	370	407
-Net debt (MV)	294	406
-Preferred shares	54	(Included in Net Debt)
-Minority interests	4	1
+Financial investments	(Not taken into account)	23
=Equity value	18	22
Number outstanding shares	150	150
Fair price	0,12	0,15
Small cap discount	0,01	0,01
Target price End 2011	**0,11**	**0,14**

The approach of net debt was not the same because the bank assumed that the debt was in equilibrium, while I estimated a different market value that was lower than the book value. Furthermore, the minor interests' disparity is attributable to the fact that the bank missed the forecasts for the year of 2011 by 3 Million Euros.

The last point that contributes for the equity value difference is the financial investments, which is the money attributed to the other non-current assets in the balance sheet that are related to other debtors. The bank considers it as part of equity due to the high level of quickness it attributed to the company's capacity of converting this money into cash. I do not agree with this assumption since I believe these operations will always have a considerable amount of time associated to them.

11. Conclusion

Taking into consideration the macroeconomic situation of the European countries in which the company operates and its precarious debt situation, Inapa is considered to be a high risky company and an easy privatization target. Moreover, while any drastic scenario is pursued, the company should hedge the interest rate volatility since its financial costs are cutting down the firm's profit.

Furthermore, by valuating the company through the Adjusted Present Value method, the benefits and costs of debt were analyzed separately, which may have contributed for the lower price when comparing to BPI estimates. This equity research resulted in a final **SELL** recommendation, with a final target price of **0,11€**, which represents a 35% downside variation.

Table 48: Investment ratings

High risk	
Buy	>30%
Neutral	>-10% and < 30%
Sell	< -10%

Source: Adapted from BPI Equity Research

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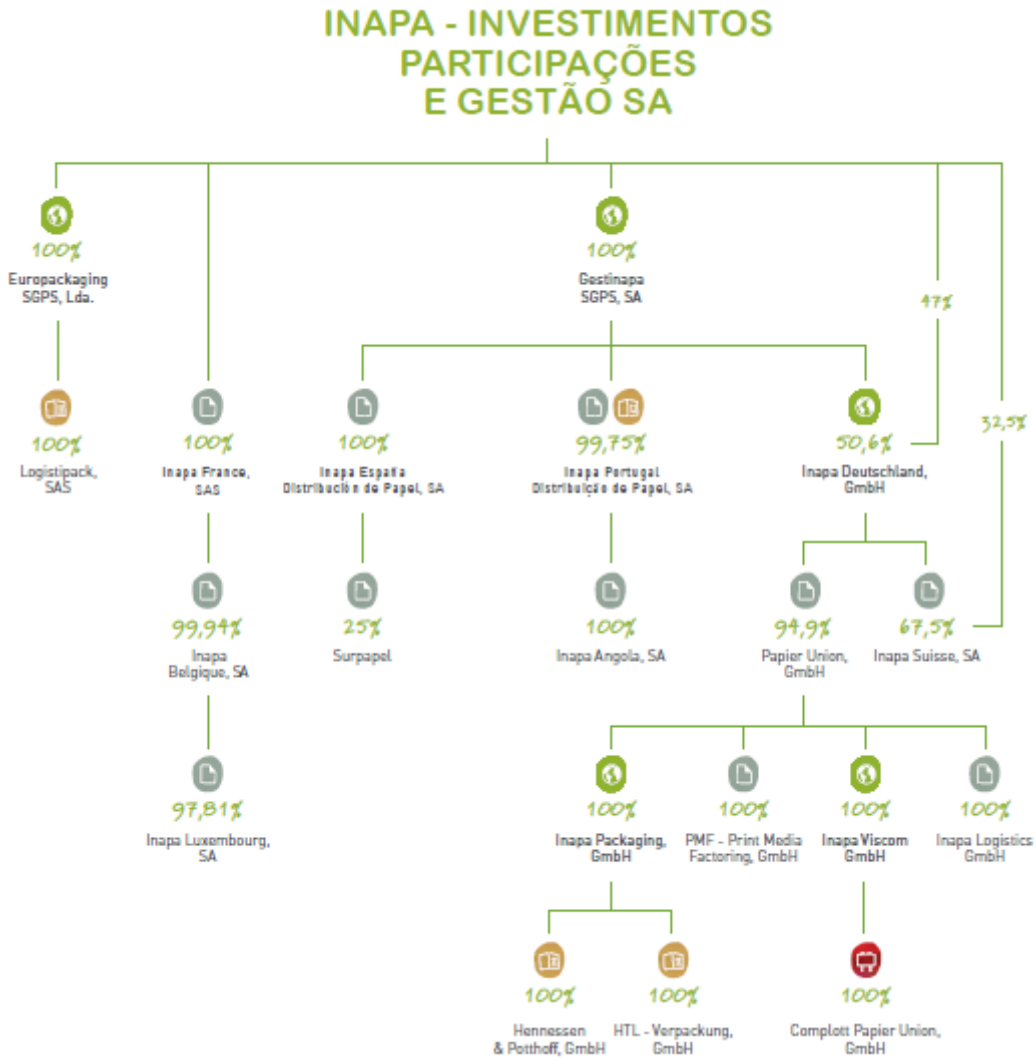
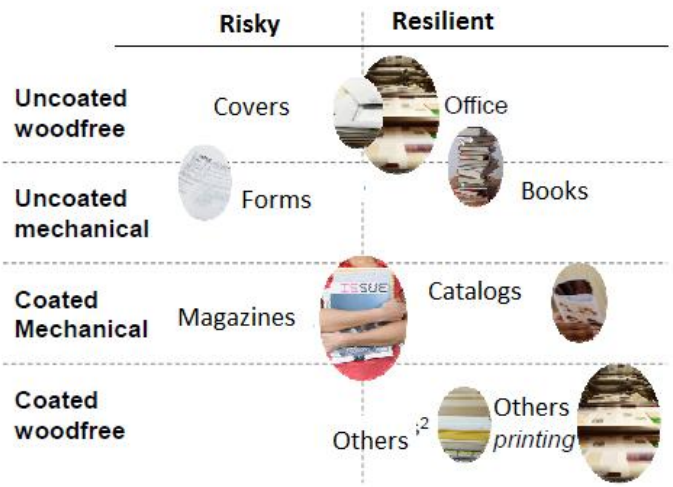
13. Appendixes

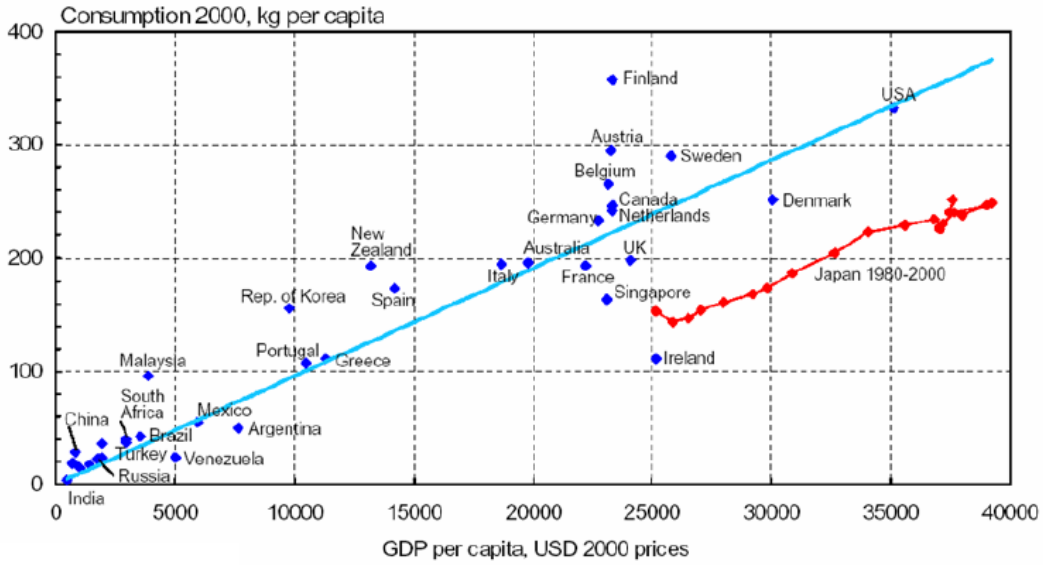
Appendix 1: Inapa's chart



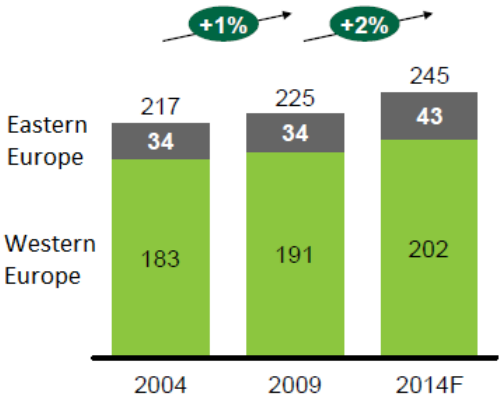
Appendix 2: Different growth rates across paper segments



Appendix 3: Paper consumption and GDP per capita correlation



Appendix 4: Growth potential packaging segment



Appendix 5: Ratings

If interest coverage ratio is		Rating is	Spread is
>	<= to		
-10000	0,199999	D	12%
0,2	0,649999	C	10,50%
0,65	0,799999		9,50%
0,8	1,249999	CCC	8,75%
1,25	1,499999	B-	6,75%
1,5	1,749999	B-	6%
1,75	1,999999	B+	5,50%
2	2,2499999	BB	4,75%
2,25	2,49999	BB+	3,75%
2,5	2,999999	BBB	2,50%
3	4,249999	A-	1,65%
4,25	5,499999	A	1,40%
5,5	6,499999	A+	1,30%
6,5	8,499999	AA	1,15%
8,5	100000	AAA	0,65%

Source: Damodaran

Appendix 6: Sales by country in 2011

Revenues Per Country	2011	Weight
Sales		
Germany	520.815	53%
France	241.889	25%
Portugal	55.987	6%
Others	167.748	17%
Total	986.439	100%

Appendix 7: Forecasted increases and disposals fixed assets

	E2012	E2013	E2014	E2015	E2016
Tangible fixed assets					
Land and natural resources	0	0	0	0	0
Increases	0	0	0	0	0
Disposals	0	0	0	0	0
Buildings and other Constructions	400	400	400	400	400
Increases	400	400	400	400	400
Disposals	0	0	0	0	0
Basic Equipment	380	380	380	380	380
Increases	380	380	380	380	380
Disposals	0	0	0	0	0
Transport Equipment	(604)	(604)	(604)	(604)	(604)
Increases	128	128	128	128	128
Disposals	(732)	(732)	(732)	(732)	(732)
Administrative Equipment and Other Tangible Fixed Assets	912	912	912	912	912
Increases	912	912	912	912	912
Disposals	0	0	0	0	0
Total	1.088	1.088	1.088	1.088	1.088
Intangible fixed assets					
Industrial property and other rights	2.000	774	774	774	774
Increases	2.000	774	774	774	774
Disposals	0	0	0	0	0
Total	2.000	774	774	774	774
TOTAL	3.088	1.862	1.862	1.862	1.862

Appendix 8: Forecasted depreciation rates

Tangible fixed assets	2008	2009	2010	2011	2012-2016
Buildings and other Constructions	2%	2%	2%	8%	2%
Basic Equipment	4%	3%	3%	1%	1%
Transport Equipment	6%	6%	5%	10%	6%
Administrative Equipment and Other Tangible Fixed Assets	7%	6%	7%	6%	6%
Intangible fixed assets					
Industrial property and other rights	1%	1%	1%	1%	1%

Appendix 9: Reportable tax losses by country in 2011

Germany	0
France	8581
Portugal	177
Others	7667
Total	16425

Appendix 10: Forecasted current taxes and reportable tax losses

	E2012	E2013	E2014	E2015	E2016
EBT	**7,0**	**4,1**	**3,3**	**3,5**	**3,9**
Germany	3,7	2,1	1,7	1,8	2,0
France	1,7	1,0	0,8	0,8	0,9
Portugal	0,4	0,2	0,1	0,2	0,2
Others	1,2	0,7	0,5	0,6	0,6
Taxable income	**2,1**	**1,2**	**1,0**	**1,0**	**1,1**
Germany	1,1	0,6	0,5	0,5	0,6
France	0,5	0,3	0,2	0,2	0,2
Portugal	0,1	0,07	0,05	0,06	0,06
Others	0,3	0,2	0,1	0,1	0,2
Reportable tax losses	**15,4**	**14,8**	**14,4**	**13,9**	**13,4**
Germany	0	0	0	0	0
France	8,0	7,7	7,5	7,2	6,9
Portugal	0,05	0	0	0	0
Others	7,3	7,0	6,9	6,7	6,5
Current taxes	**1,1**	**0,7**	**0,5**	**0,6**	**0,6**
Germany	1,1	0,6	0,5	0,5	0,6
France	0	0	0	0	0
Portugal	0	0,07	0,05	0,06	0,06
Others	0	0	0	0	0

Appendix 11: Historical Inapa's balance sheet

Million Euros	2007	2008	2009	2010	2011
Assets					
Tangible fixed assets	109,9	104,2	101,2	99,1	95,8
Goodwill	131,1	137,9	138,8	139,6	140,3
Other intangible assets	106,7	106,2	110,9	111,5	111,2
Investment in associates	2,0	1,5	1,1	1,0	1,0
Available for sale financial assets	13,4	13,5	9,2	0,6	0,04
Other non-current assets	18,0	18,5	18,9	21,8	21,8
Deferred income tax assets	25,9	26,9	22,3	20,9	19,5
Total non-current assets	**407,4**	**409,0**	**402,8**	**394,9**	**389,9**
Inventories	78,7	83,4	65,2	79,2	71,0
Trade receivables	222,4	210,1	174,2	197,3	166,6
Taxes to be recovered	11,4	9,8	7,5	6,4	7,2
Other current assets	38,9	44,6	42,1	45,6	38,3
Available for sale financial assets	0	0	0	0	628,0
Cash and cash equivalents	91,4	5,3	7,6	16,5	15,0
Total current assets	**443,2**	**353,3**	**296,8**	**345,3**	**299,0**
Discontinued operations assets	4,9	0,3	0,2	0	0
Total assets	**855,6**	**762,8**	**699,9**	**740,2**	**688,9**
Shareholders' equity					
Share capital	150,0	150,0	150,0	150,0	204,1
Treasury shares	0	0	0	0	0
Share issue premiums	2,9	2,9	2,9	2,9	0,4
Reserves	40,2	41,2	44,1	44,5	44,4
Retained earnings	(35,9)	(46,0)	(44,7)	(42,3)	(43,6)
Net profit (loss) for the year	(10,3)	1,0	2,1	3,7	(6,1)
Minority interests	1,3	1,0	1,0	1,0	3,9
Total shareholders' equity	**148,1**	**150,2**	**152,5**	**159,8**	**203,2**
Liabilities					
Loans	80,2	102,7	97,6	157,2	148,4
Financing associated to financial assets	133,0	134,7	0	32,8	38,0
Liabilities for deferred tax	21,0	21,6	18,8	20,2	21,2
Provisions	0,7	4,5	0,8	1,2	0,3
Employee benefit obligations	2,8	2,9	3,0	3,3	3,5
Other non-current liabilities	16,7	15,7	11,4	10,5	8,7
Total fixed liabilities	**254,7**	**282,3**	**131,8**	**225,4**	**220,2**
Loans	326,5	228,9	210,0	248,5	176,2
Financing associated to financial assets	0	0	109,2	0	0
Suppliers	73,2	59,7	54,0	58,7	47,4
Taxes payable	13,3	11,3	10,6	15,4	18,0
Other current liabilities	35,9	30,1	31,6	32,1	23,6
Total current liabilities	**449,1**	**330,1**	**415,5**	**354,9**	**265,3**
Discounted business liabilities	3,6	0	0	0	0
Total liabilities	**703,9**	**612,5**	**547,4**	**580,4**	**485,6**
Total shareholders' equity and liabilities	**855,6**	**762,8**	**699,9**	**740,2**	**688,9**

Appendix 12: Historical Inapa's profit and loss statement

Million Euros	2007	2008	2009	2010	2011
Sales of merchandise and other products	1050,2	1044,1	937,7	980,2	986,4
Provision of services	6,9	7,9	8,4	11,3	11,6
Other income	33,5	25,9	24,5	25,8	27,3
Total income	**1090,7**	**1078,0**	**970,8**	**1017,4**	**1025,4**
Cost of sales	(884,1)	(871,6)	(777,2)	(809,7)	(823,4)
Impairment of inventories	(0,4)	(0,4)	(0,3)	(0,1)	(0,05)
Personnel costs	(81,0)	(77,9)	(77,4)	(79,2)	(80,6)
Impairment in non-current assets	0	0	0	(0,04)	0
Administrative and commercial costs	(78,8)	(79,1)	(76,2)	(83,0)	(88,4)
Indirect taxes	(2,7)	(2,6)	(2,4)	(3,2)	(3,0)
Other costs	(3,8)	(1,9)	(2,3)	(3,8)	(3,0)
Provisions	0	0	0	(0,9)	(0,04)
Impairment in current assets	(4,1)	(3,9)	(4,8)	(6,5)	(2,8)
Total operational costs	**(1055,2)**	**(1037,7)**	**(940,8)**	**(986,9)**	**(1002,1)**
Gain/losses of associates	(0,009)	(0,2)	(0,08)	(0,01)	(0,003)
EBITDA	**35,5**	**40,0**	**29,9**	**30,5**	**17,3**
Depreciations and amortizations	(6,3)	(6,7)	(6,2)	(6,4)	(5,9)
EBIT	**29,1**	**33,3**	**23,6**	**24,0**	**17,3**
Interest obtained	0,8	1,7	1,1	1,5	0,2
Gains from disposal of investment	0	0	0,3	0	0
Income from capital investments	0	0	0	0,05	0
Positive FX	0,04	0	0,1	0,08	0,2
Other profits and financial income	0,8	0,8	0,5	0,6	0,3
Financial income	**1,7**	**2,6**	**2,2**	**2,3**	**0,8**
Interest paid	(21,6)	(19,2)	(11,6)	(9,7)	(15,7)
Losses on disposal of investments	0	0	0,4	0	0
Negative FX	(0,1)	(0,4)	(0,2)	(0,8)	(0,4)
Others costs and financial losses	(15,3)	(14,8)	(8,5)	(8,6)	(5,1)
Financial costs	**(37,1)**	**(34,5)**	**(20,9)**	**(19,3)**	**(21,2)**
Net financial function	**(35,3)**	**(31,8)**	**(18,7)**	**(16,9)**	**(20,4)**
EBT	**(6,2)**	**(1,4)**	**(4,9)**	**(7,1)**	**(3,0)**
Current taxes	(3,6)	(0,7)	(0,8)	(2,3)	(0,5)
Deferred taxes	3,9	0,3	(1,8)	(2,7)	(2,3)
Income tax	0,3	(0,3)	(2,6)	(5,0)	(2,9)
Net profit for the period of discontinued operations	(4,3)	(0,05)	0	0	0
Net profit	**(10,2)**	**1,1**	**2,2**	**2,0**	**(5,9)**

Appendix 13: Forecasted Inapa's balance sheet

Million Euros	E2012	E2013	E2014	E2015	E2016
Assets					
Tangible fixed assets	92,9	91,1	89,2	87,2	85,2
Goodwill	142,3	142,3	142,3	142,3	142,3
Other intangible assets	109,6	108,6	107,6	106,6	105,6
Investment in associates	1,0	1,0	1,0	1,0	1,0
Available for sale financial assets	0,04	0,04	0,04	0,04	0,04
Other non-current assets	21,8	21,8	21,8	21,8	21,8
Deferred income tax assets	18,5	17,9	17,5	17,0	16,6
Total non-current assets	**386,3**	**383,0**	**379,7**	**376,3**	**372,8**
Inventories	72,0	73,3	75,8	77,6	79,5
Trade receivables	168,9	172,0	177,8	182,2	186,6
Taxes to be recovered	7,3	7,5	7,7	7,9	8,1
Other current assets	38,9	39,6	40,9	41,9	43,0
Available for sale financial assets	0,6	0,6	0,6	0,6	0,6
Cash and cash equivalents	28,5	27,1	27,2	27,9	28,9
Total current assets	**316,4**	**320,4**	**330,2**	**338,5**	**346,9**
Discontinued operations assets	0	0	0	0	0
Total assets	**702,8**	**703,5**	**710,0**	**714,8**	**719,7**
Shareholders' equity					
Share capital	204,1	204,1	204,1	204,1	204,1
Treasury shares	0	0	0	0	0
Share issue premiums	0,4	0,4	0,4	0,4	0,4
Reserves	44,4	44,4	44,4	44,4	44,4
Retained earnings	(38,7)	(35,8)	(33,5)	(31,0)	(28,2)
Net profit (loss) for the year	4,9	2,8	2,3	2,4	2,7
Minority interests	3,9	3,9	3,9	3,9	3,9
Total shareholders' equity	**219,2**	**220,0**	**221,8**	**224,5**	**227,5**
Liabilities					
Loans[5]	126,8	104,3	81,9	59,4	36,9
Liabilities for deferred tax	21,1	21,1	21,1	21,1	21,1
Provisions	0,3	0,3	0,3	0,3	0,3
Employee benefit obligations	3,1	3,1	3,1	3,1	3,1
Other non-current liabilities	0	0	0	0	0
Total fixed liabilities	151,5	129,0	106,5	84,1	61,6
Loans	242,9	263,6	287,8	310,1	332,1
Suppliers	48,0	48,9	50,5	51,8	53,1
Taxes payable	18,3	18,6	19,2	19,7	20,2
Other current liabilities	22,6	23,1	23,8	24,4	25,0
Total current liabilities	**331,9**	**354,2**	**381,5**	**406,2**	**430,5**
Discounted business liabilities	0	0	0	0	0
Total liabilities	**483,5**	**483,4**	**488,1**	**490,3**	**492,2**
Total shareholders' equity and liabilities	**702,8**	**703,5**	**710,0**	**714,8**	**719,7**

[5] Includes Financial Instruments associated to Financial Assets – Securitization

Appendix 14: Forecasted Inapa's profit and loss statement

Million Euros	E2012	E2013	E2014	E2015	E2016
Sales of merchandise and other products	1000,3	1019,4	1054,6	1081,5	1108,4
Provision of services	11,6	11,7	12,0	12,2	12,4
Other income	27,3	27,6	28,1	28,7	29,3
Total income	**1039,3**	**1058,9**	**1094,8**	**1122,5**	**1150,2**
Cost of sales[6]	827,3	842,4	869,8	891,4	913,0
Personnel costs	(81,8)	(82,9)	(84,1)	(85,3)	(86,4)
Impairment in non-current assets	0	0	0	0	0
Administrative and commercial costs	(89,9)	(91,5)	(93,7)	(95,7)	(97,6)
Indirect taxes	(2,9)	(2,9)	(2,9)	(2,9)	(2,9)
Other costs	(3,0)	(3,1)	(3,1)	(3,2)	(3,3)
Provisions	(0,04)	(0,04)	(0,04)	(0,04)	(0,04)
Impairment in current assets	(2,8)	(2,8)	(2,8)	(2,8)	(2,8)
Total operational costs	**(1008,1)**	**(1025,9)**	**(1056,8)**	**(1081,6)**	**(1106,4)**
Gain/losses of associates	0	0	0	0	0
EBITDA	**31,2**	**32,9**	**37,9**	**40,9**	**43,8**
Depreciations and amortizations	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
EBIT	**25,9**	**27,5**	**32,5**	**35,3**	**38,1**
Interest obtained	0,2	0,2	0,2	0,2	0,2
Gains from disposal of investment	0	0	0	0	0
Income from capital investments	0	0	0	0	0
Positive FX	0	0	0	0	0
Other profits and financial income	0,3	0,3	0,3	0,3	0,3
Financial income	**0,5**	**0,5**	**0,5**	**0,5**	**0,5**
Interest paid	(15,4)	(20,0)	(25,7)	(28,3)	(30,8)
Losses on disposal of investments	0	0	0	0	0
Negative FX	0	0	0	0	0
Others costs and financial losses	(4,0)	(4,0)	(3,9)	(4,0)	(4,0)
Financial costs	**(19,4)**	**(24,0)**	**(29,7)**	**(32,3)**	**(34,8)**
Net financial function	**(18,8)**	**(23,4)**	**(29,1)**	**(31,8)**	**(34,2)**
EBT	**7,0**	**4,1**	**3,3**	**3,5**	**3,9**
Current taxes	(1,1)	(0,7)	(0,5)	(0,6)	(0,6)
Deferred taxes	(0,9)	(0,5)	(0,4)	(0,4)	(0,4)
Income tax	**(2,1)**	**(1,2)**	**(1,0)**	**(1,0)**	**(1,1)**
Net profit for the period of discontinued operations	0	0	0	0	0
Net profit	**4,9**	**2,8**	**2,3**	**2,4**	**2,7**

[6] Includes impairment of inventories