Financial analysis and planning : theoretical and practical application

Bachelor's thesis

Sara Pitarch Ayza - al133034@uji.es

Finance and Accounting Degree

Academic Year 2015/2016

Abstract

Nowadays there are different economic agents who carry out common investment operations and for whom it is necessary to know beforehand, if it is possible, the convenience to develop the investment or not.

On the one hand, this project conducts a theoretical and practical analysis about the investments of financial analysis and planning. For this, dynamic or classic models are used which use the Net Present Value (NPV) criterion and the Internal Rate of Return (IRR) as an analysis mean. Moreover, there are also sensitivity and scenarios analysis performed to introduce the risk in the investments analysis.

On the other hand, the financial planning process is also performed with the order to find out if the company presents liquidity problems during the investment realization or not and to analyze the funding source to ensure the existence of liquidity.

Table of contents

4

List of figures

Table of graphics

Table of appendices

Financial analysis and planning: theoretical and practical application

I.   Introduction

One of the main issues in the sphere of finance is the choice between the implementation of a specific investment or not. When the investors do investment transactions, they want to maximize their profitability taking minimum risk. Moreover, they also want to know if they will have losses, profits, if it is convenient to do the operation or, on the contrary, they have to choose other asset or mix of assets in the market to perform the transaction.

With the purpose to answer these issues which appear previously to the execution of the investment, there are different financial valuation and planning models.

These models constitute an essential tool in the financial world by answering or trying to answer to the previous questions, they serve as a help for the investor to select which investments to perform or not and to determine which one will be the expected gain or loss that the investor can obtain for conducting the investment.

What is more, financial planning also is regarded as an essential tool. It allows the estimation of the data which the company will have in short and long term on the basis of a current and known information. With this financial projection, the company can predict which will be its future development as well as the problems that may arise (liquidity, solvency), as well as taking actual steps to avoid the apparition of problems.

The present essay pretends to show which criteria can be used to the investment valuation and how to render the financial planning which lets the future prospect of the company, offering previously a theoretical vision about the topic.

The main objectives of the study are:

- To offer a view about the previous analysis to the implementation of an investment.
- To know which tools can be used to perform the financial review and planning.
- To learn which are the main features in the process of financial valuation and planning

- To establish and to quantify the losses or earnings that is possible to obtain with de development of the investment.

For the achievement of objectives, the essay has been structured in two parts: financial valuation and financial planning.

Within the valuation section, there is the contextualization that supposes a theoretical explanation about the analysis of investment projects to give the reader a perspective on the topic which will be approached on the paper.

In the third section, there is an explanation about the empirical analysis of the project and later, it is explained the implementation of the financial valuation; using the models and tools which are shown before with the purpose to determine a conclusion over the project's implementation.

Then the company financial planning appears. Throughout this part it is possible to choose the source of funding that guarantees the liquidity during the project.

Once the financial process of valuation and planning has finished, it is explained the main conclusions obtained during the development of the project.

For this, the knowledge acquired during the degree is used but there are some subjects like Introduction to Financial management and advanced financial management, financial market and institutions, business taxation, business valuation or mathematics of financial operations, among others, which give knowledge concerning different aspects of the paper.

II.   Financial valuation of the project

1.   Development of selection criteria

1.1.   Brief description of NPV, IRR, advantages and disadvantages

The enterprises have to perform their activity in order to satisfy the needs of the other companies and the final consumer too.

To carry out their activity, it is necessary that the company performs different investments with the purpose to gain the tangible assets (equipment, transport elements) and intangible assets (computer programs) which will let the company to perform its activity.

The companies and the individuals make investments when they renounce to a certain quantity of financial resources at the present moment because they expect to obtain a higher quantity of financial resources in the future.

It is for this reason that previously to the investment, the companies want to know if it is suitable to execute the investment project or if, on the contrary, it is necessary to decline this inversion because it will not produce the enough future resources or even it can produce losses.

In order to exercise these assessments, in the corporate finance sector there are two types of models which allow the valuation and choice the inversion projects: the static models and dynamic models (Aragó, et.al. 2013: 65):

- **Static or approximated models:** those are the models which consider that the different net cash flows of the project (difference between collection and payments in the project) are homogeneous and thus, they offer an approximate size of the profitability that will produce the project.
- **Dynamic or classic models:** those models which take into account the moment in which the net cash flows are generated and thus, they offer a more realistic size of the project profitability.

    These models are characterized because they do not consider the different NCF homogeneous, instead, they homogenize them. For this, there are two criteria:

- **The net present value criterion (NPV):** it consists to discount the NCF until the initial time of the inversion for knowing which is the variation (positive or negative) of the company's value from the execution of the investment.

  The NPV provides a net absolute measure of the project's profitability and it has a decision rule:
  - ◆ **If the NPV > 0** → The project is accepted
  - ◆ **If the NPV < 0** → The project is rejected
  - ◆ **If the NPV = 0** → The project is rejected

  Using the NPV method for doing the valuation of the inversions holds different **advantages**. For instance, the method provides simplicity to the calculations; that is to say, the necessary calculations are basic in Math. Another advantage associated with the use of NPV is taking into account the time in which each NCF is originated and they are moved to time 0 to homogenize them.

  However, their use also carries certain **disadvantages**, since there is a great difficulty in establishing a certain "k" (discount rate) to discount the NCF to the initial moment. There are different assumptions which try to set the discount rate to projects, therefore it will carry out an analysis to try to determine an, as close as possible, discount rate to the investment project.

  Another drawback is in the reinvestment of the positive NCF; because of these NCF will be reinvested in order to make them profitable and not having idle resources. It is for this reason that the reinvestment rate (tr) of these NCF does not have to match with the discount rate (k).

- **The internal rate of return criterion (IRR):** according with this method the objective is to determinate which is the discount rate "r" that allows to get that the NPV = 0, that is to say, the rate which provides equalizing between receipts and payments. The IRR provides a relative gross annual measure per currency unit invested of the return on investment. It uses the following decision rule:
  - ◆ **r > k and therefore, NP = r - k > 0** → The project is accepted
  - ◆ **r < k and therefore, NP = r - k < 0** → The project is rejected
  - ◆ **r = k and therefore, NP = r - k = 0** → The project is rejected

  Just as it occurs with the NPV, the use of the IRR also carries out the homogenization of the NCF to the initial time and moreover, it adds the **advantage** that it gives the profitability in relative terms, allowing a better interpretation and comparison of the same with other projects.

However, unlike the NPV, the calculation IRR has **disadvantages** because it is a very laborious equation to resolve manually, so generally the computer media are used to resolve it. Moreover, like the NPV, for reinvesting the positive NCF, the model supposes that the reinvestment rate "r" will coincide with the same IRR and this assumption and this not supposes to be like this as it is not realistic.

1.2. Practical implementation issues of these analysis methods and introduction of the risk

In certain environments, that is to say, environments where all of the information is truly known to value investments and in which, it is also known its future development. In these environments is easily to value investments and to decide which are suitable and which are not.

Nevertheless, the truth does not match with the practice. In the reality, there is uncertainty because there are many variables for which is not known them future evolution and they affect to the investment value. It is for this that with the lack of knowledge from these values, it is necessary to estimate their future values.

According to Fernandez (1992:416-417), due to the necessity to estimate future values for the measures that intervene in the project, it is possible that in this context there are variances between estimated values and real values and ,as a consequence, it is necessary to take into account the risk when valuating an investment project.

In reality, in order to value the inversions it is used different models which conduct estimations assuming many assumptions under the variables from which it depends the amount of an investment, taking into account the uncertainty that is measured with the risk.

In this regard and in order to collect the risk in the investment analysis, it is important to measure the risk of each investment and to determine the profitability-risk binomial investment.

- ▪ **Problems of the net cash flows (NCF)**

In the valuation investments process, one of the principal variables that it is considered as a problem is the determination of net cash flows. The net cash flows are composed by the difference between receipts and payments of an investment.

The difficulty in the determining of the NCF is because the calculation of these flows is carried out in an uncertainly environment, is that to say, it is an analysis which is done

12

ex ante, for this, there is the possibility that in the future these ex post cash flows do not matched with the previously estimated.

As a consequence, the presence of this uncertainty in the process involves the occurrence of the risk, which is necessary to translate in the NCF. One of the tools which are more used by the analysts to introduce the risk in the NCF estimation process is sensibility and scenario analysis.

Moreover, there are many specific mistakes which generally appear in the NCF determination, as (Iborra et al., 2014: 366-367):

- ◆ Assumption of a progressive growth in gross margin.
- ◆ Butterfly Effect: it means the consideration that the volume sale increases faster than the expenditure volume.
  However, in reality this high growth does not happen.
- ◆ Underestimating circulating
- ◆ Underestimating the beginning of the investment project.
- ◆ Do not consider the threats and opportunities overvalue.

- ▪ **Problems with the discount rate**

In terms of Brealey et al. (2010: 241) *"The cost of capital of the company is defined as the expected return on a portfolio that contains all of the company shares. It is the opportunity cost of the capital invested in the company assets and therefore, the right discount rate for projects with an average company risk".*

Nowadays, the company cost of capital is used by the majority of companies as a discount rate to analyze the investments that they want to do, allocating an average risk.

The use of the cost of capital as a discount rate is not considered very practical in the case that the investments have a higher or lower risk than the risk of the investments already made by the company because theoretically each project investment should require a specific discount rate, since each project has a different risk. Thus, according to this decision rule, the company would accept any investment project offered which has a higher cost of capital from the company (Brealey et al 2010: 238-239).

Therefore, valuing the investment is necessary to know the company cost of capital, that is to say, the opportunity cost that supposes to make a specific investment and to refuse others with similar features. To calculate it, it can be used different methods (Aragó et al., 2013):

- **WACC (Weight Average Cost of Capital):** It is the weighted average cost of capital that provides information about the financial structure of the company, but does not incorporate the risk to the assessment.

  The weighted average cost of equity is used to determine the profitability before taxes of any investment with similar features carried out by the company. However, for the WACC can be used to value the investments, it is necessary that there are no changes in the financial and economic risk, that is, it is assumed that new investments have an equal risk to the investments already made (Fernandez 1992: 315-317).

- **Adjustment to the WACC:** this procedure involves incorporating the weighted average cost of capital a risk premium of the market because, in this way, it is using a discount rate taking into consideration the risk of the investment, that is, it is incorporated into the assessment the investment risk.

- **The opportunity cost:** it is that amount which is left to gain for investing in another project. To determinate this, it is used the capital asset pricing model (CAPM).

CAPM model

The Capital Asset Pricing Model is an asset valuating model developed by William F. Sharpe[1], which is applied to measure the profitability that the company shareholders must gain after carrying out investments in that company.

In practice, for using the CAPM model, it has to bear in mind three variables; because the model considers that the expected profitability depends on the risk free rate plus the product of asset sensibility (β) between the risk market premium (Brealey et al., 2006: 242-250):

$$Expected\ return = \ Risk\ free\ rate\ (rf) + \beta E[(rm - rf)]$$

- **Risk free rate (rf):** the interest that represents the risk free rate means which would be the profitability of an investment 100% secure.

  In the case of the companies valuation, most of the authors consider that it needs to be taken into account long-term bonds, specifically 10 year bonds because according *"Leibowitz and Kogelman (1993) highlight the fact that the duration observed of the shares (that is to say, their sensitivity to changes in the interest rates) is the typical of a 10 year bond"* (Brown, 2008: 126-131).

---

[1] William F. Sharpe developed in 1964 the CAPM in his work *"Capital Asset Prices: A theory of market equilibrium under conditions of risk".*

14

Thus, according with what it has been explained before, the profitability of the 10 year's Spanish bond, accessed on April 12, 2016 is located at 1.51%.

- **Beta (β):** it is the market risk of the asset, that is to say, how sensitive is the asset to changes in the market. In order to determinate the β it is necessary to examine the dispersion graphic, in which every point shows which is the profitability of the daily Inditex share[2] and the market performance this day, during two years because according to Damodaran (n.d.) the services companies often use periods between 2 and 5 years.

  In this case, a beta of 0.937 is obtained, that is to say, the price change of the Inditex share each 1% market index of increasing.

Graphic 1: Stock returns Inditex vs. market returns
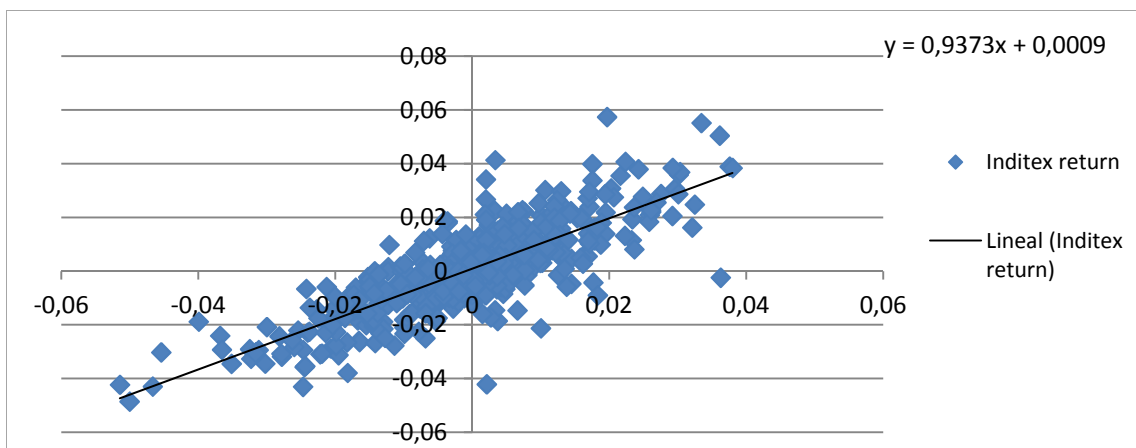
Source: Own elaboration. Data obtained from El Confidencial

- r_m-r_f: the difference between market risk and risk free interest is called the market risk premium, that is to say, that additional value which investors demand for investing in a project with a certain risk.

  The determination of the market risk premium is not an external and independent factor, but it is determined and depends on many other factors and variables such as the aversion to risk and the consumption preferences, economic risk, known information, liquidity and the government policy

  That is why there are three different methods to estimate the risk premium: one of them, it is to investigate what is the opinion of the investors, managers and teachers opinion about the value of the risk premium, the second it is to evaluate historical returns and uses of the historical premium and the last one is based on

---

[2] Inditex is the company chosen because it is a benchmark company in the fashion sector and with features that adjust to the project work.

current relative prices to try to determinate a future premium. In this case, the first method is used to determine the risk premium, to my understanding; the best estimation is that can be done by the analysts and specialists about what additional value would require performing the investment (Damodaran, 2013: 6-17).

In the year 2015, the different approaches and estimates led to consider a market risk premium environment to 6% (Fernandez, 2015: 2-7).

Although the model has theoretical and practical foundations that are used in the practice, there are also variety of views about functioning and its assumptions.

On the one hand, it constitutes a model for which there is no clear evidence that be applied properly in practice, since many economic-financial authors have expressed their doubts about the operation of the model.

Navarro (n.d.: 18-20) in his final master work, after collecting some of the opinions of some authors about the model, synthesized as drawbacks of the CAPM:

- ◆ The expectations of investors are different with regard to profitability and risk; they are not homogeneous as the model assumes.
- ◆ The model does not properly explain the variations of the income from the securities.
- ◆ According to the model, in front of an inverter performance it requires the least risk and given a risk of maximum performance, it does not taken into account that some investors may accept lower yields to high risks.
- ◆ It does not consider that investors do not have the same information.
- ◆ The market portfolio covers all the assets in all the markets, it does not contemplating the possibility that investor may pick different assets in different markets.
- ◆ The assumption that the capital market is in equilibrium and that the investors carried out the risk diversification as a form appropriate, it is unrealistic.
- ◆ The efficiency of the portfolio does not always agree with the reality.
- ◆ A single period of time as a horizon for the CAPM, assuming that the market price of risk remains constant along the time.

However, on the other hand and in accordance with Moreno (2010), the CAPM is the most commonly used model to calculate the cost of own capital *"The Model of*

assessment of the Price of financial assets or Capital Asset Pricing Model (known as model CAPM) is one of the most used tools in the financial area to determine the required rate of return for a particular asset". In addition, according to various authors, this model is used by 73.5% of the enterprises like a source of calculating the cost of capital (Graham et al., 1999: 15-17).

2.   Contextualization of the empirical analysis

Fashion is an important activity for the Spanish economy, in terms of employment, consumption and external area. The textile sector, according to the *Economic fashion Report in Spain*[3], is a sector that contributed in 2014 in 2.7% to the Spanish GDP (Gross Domestic Product) and 4.2% to employment. Moreover, fashion within the industry sector, stands out for its weight in terms of employment, achieving a 7.6% of workers.

According to the *Report of the textile sector and spending on clothing in Spain at 2015*[4] by Marta Riera, the forecasts for the evolution in clothing consumption of dress for the next years are expectations of growth, that is to say, that the projections show that year after year the textile consumption rate is on the rise, such as shown in the following graphic.

Graphic 2: Evolution of the textile consumption for the following years [2015-2019]
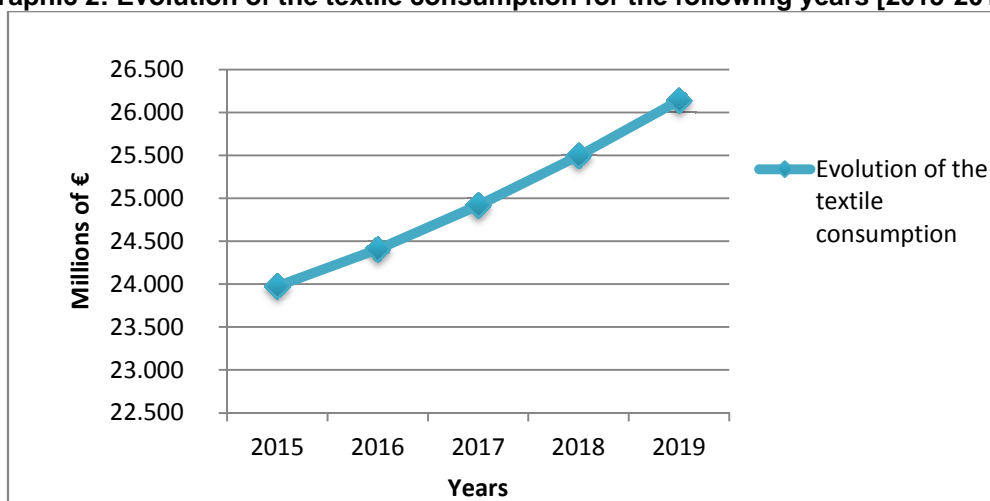
Source: Own elaboration. Data obtained from *Report of the textile sector and spending on clothing in Spain at 2015*

The graphic shows the expectations of growth that was expected in textile consumption from 24,404 millions of € this year to 26,137 millions of € for the year 2019. Thus, it is

---

[3] Report available on the website Moda.es

[4] Report available on the website Finanzas.com

expected to have an increase in textile consumption in Spain about 7 % between the years 2016-2019.

Starting with the advantage that the textile sector is a sector which pretends expectations of growth for a short term future and for which it is expected that there are benefits at an overall level, the option to make an investment in the scope of the textile sector in any specific commercial format is stated.

2.1. Practical Implementation: Case Florencia

Florencia is a company which recently appeared on the market; it was born in 2014, dedicated to the design and marketing of apparel, accessories and footwear; inspired by the casual look and Mediterranean air and working with cotton and silk materials in pastel colors.

Florencia acquires a commercial format that provides its customers with fashion garments that provide simplicity and naturalness at affordable prices, as it is seen in its mission[5]:

"Our goal is to offer a wide range in women's fashion, with a design and our own style, with the possibility of offering a complete outfit that today's woman can have in their closet. We always bet on 100% natural fabrics, with quality and very competitive prices, in order to keep the more refined style in line with each time"

Arises in the city of Barcelona, where there are already five stores, although the brand has expectations of expansion around the country, as it can be observed in their vision:
 "To get a strong presence in the major cities of the country, with a very effective implementation in commercial areas"

In order to achieve their vision in the long term, the brand offers the possibility of hiring systems sales with which they commercialize their clothing through a franchise, but adopting a series of certain conditions.

2.2. Investment conditions approach

In accordance with the above detailed information and the analysis performed on the sector textile, it wants to contribute for developing of Florencia and perform an investment in this business model. To be able to conduct the investment, it is necessary, first of all, the adoption of a number of features such as the following:

- Establishment: between 150 m^2- 200 m^2

---

[5] The information about the company is in the Annex IX.

- Preferential location: shopping street or shopping centre
- Canon's entry: 12,000 €
- Estimated investment: 90,000 € (including canon)
- Expected turnover: 600,000 €
- Gross commercial margin: 43%
- Duration of the contract: 5 years

By relation to the establishment, the investment wants to be performed in the city, Castellon de la Plana, Castellon province, because it is a city with a population level suitable for the franchise conditions, 173,841 inhabitants in 2014[6], where there are a variety of commercial forms with which is possible to compete. There is a fee about a mass consumption by the population and in addition, the commercial activity of the textile sector continues growing year after year. The shop will be located in the shopping centre Salera.

In addition to the franchise hiring with Florencia, with the objective to conduct the investment, it is necessary do the autonomous high, developing the project in order to establish the local shop, the establishment hiring, insurance, and more.

Thus, taking into account all those expenditures and revenues raised by the franchise, moreover of an estimated series raised based on an interview with a franchise with similar features, we can find the following figure with an income and expenses summary:

Figure 1: Summary table of projected income and planned expenditure

Investment expenditure	- Canon's entry: 12,000 - Franchise investment: 78,000 € - Architect project: 700 € - Civil works: 15,000 €
Costs	**Fixed**
	- Rent for local: 940 € per month - Electricity, water, heating: 110 € per month - All risk insurance: 771 € yearly
	Variable
	Autonomous: - The first six months 20% of the rate: 53€

---

[6] Information obtained from the Institute National de Statistic website.

	- Next six months 50% of the rate : 132 €
	- The following six months 70% of the rate: 185 €
	- Finally, 100% of the rate : 264 €
	- Worker wage per 20 hours: 427 € per month
	- Worker wage 40 hours: 755 € per month
Revenues	- Potential market: 250,000 customers

Source: Own elaboration

As shown in the figure above, there are data provided by the same franchise under the conditions of the contract, such as the canon, the estimated investment or the estimated revenue.

However, in addition to income and expense data provided by the brand and the data obtained from the consulting to other companies of the sector, there are also other data calculated by analysis and estimation and which are considered relevant to an investment approach in order to obtain which will be the net cash flows.

- **Fixed costs**

One of the main factors that need to be taken into account is the fixes costs, as well as what its components will be. Fixed costs are presented in the following figure for five periods, as well as, what its components are.

Figure 2: Summary table of total fixed costs

Fixed costs	Breakdown	
Renting	940 € *12 months	11,280
Supplies	110 € * 12 months	1,320
Insurance	771 € per year	771
	Total	13,371 €

Source: Own elaboration

- **Potential market**

The potential market is assumed that it will be made up of all those women who wish to get away from the classic fashion and venturing into a new style of young clothes with a young and fresh air. A clothing store targeted to women between 20 and 60 years.

For the estimation, it is taken into account the total number of women who are in the age range in the province of Castellon in the year 2015, than in accordance with the

National Institute of Statistic, all women in province de Castellon found within this age group is 106,786 women[7].

It is considered as a potential market the entire of women living in the province of Castellon. The city is surrounded by many villages with levels of lower inhabitants, for which much of the population moves to the capital to their fashion purchases, and in particular, to this particular shopping centre.

For this reason, due to the large movements that exist between the inhabitants of the province and the neighboring province, in addition to all those women that are not in that range age and that they can access to shopping in the franchise, it is taken as a potential market a number of 250,000 women.

- **Market share**

One of the most relevant data is the company market share which the company has in the textile sector. The market share shows the percentage that the company sales are supposed to be with respect to the total sector sales. In order to calculate it, it is necessary to realize a comparative analysis between the company sales and the community sales where is the company in advance

Florencia is a brand that currently only owns stores in the province of Barcelona, as well as, according to the *Report of the textile sector and spending on clothing in Spain at 2015*. The community of Catalonia had a turnover in 2014 of 4,232 millions of euro. Moreover, taking into account that the forecasts of invoicing for a franchise of Florencia are located around 600,000 euro for a shop. However, in the province of Barcelona there are 5 shops, therefore, the turnover would be on average 3,000,000 €.

In such form, and noting the above data, it is obtained that the market share of the company for the province of Barcelona stands approximately at 15.41%.

Figure 3: Data to calculate the market share

Sales 2014 of Catalonia	**4,232,000,000**
Billing provided to Florencia	3,000,000
Percentage sales of Barcelona	46%[8]
Barcelona sales	1,946,720,000
Florencia market share	15,41%

Source: Own elaboration. Data obtained from *Report of the textile sector and spending on clothing in Spain at 2015*

---

[7] Information obtained from the National Institute of Statistic website.
[8] Percentage of Barcelona province respect with the total sales of the community.

In the same way, following the same process you get the market share of the company for the province of Castellon:

Figure 4: Calculation of the market share: Valencia Community

Sales 2014 of C. Valencia	**2,199,000,000**
Billing provided to Florencia	3,000,000[9]
Percentage sales of Castellon	13%
Castellon sales	285,870,000
Florencia market share	1,05%

Source: Own elaboration. Data obtained from *Report of the textile sector and spending on clothing in Spain at 2015*

As you can see in the *Report of the textile sector and spending on clothing in Spain at 2015* sales forecasts for the next four years would be growing, falling in the following way:

Figure 5. Sales forecasts in Spain 2015-2019 (figures in millions of euro)

Spain	2014	2015	2016	2017	2018	2019
Sales	23,643	23,976	24,404	24,916	25,495	26,137
% expenditure women	49%	50%	51%	52%	53%	55%
Expenditure women	11,680	12,012	12,470	13,031	13,691	14,401
_Growth	------	2%	3%	4%	5%	5%
Valencia Community	2014	2015	2016	2017	2018	2019
Sales	2,199	2,230	2,270	2,317	2,371	2,431
Expenditure women	1,086	1,117	1,160	1,212	1,263	1,339
Growth	------	2%	3%	4%	5%	5%

Source: Own elaboration. Data obtained from *Report of the textile sector and spending on clothing in Spain at 2015*

So, if you notice the number of expenditure women growth of Spain as in the Valencia Community, approximately the same percentage of growth can be set. The market share also experiences a growth with the same percentage or the following years.[10]

For the growth expected in the last two years, although there are a few rate projected, it is expected that it that will continue to increase the market share, although it is not in

---

[9] It is assumed that the expected billing to Castellon is the same that the billing of Barcelona, because it is considered that in the following years it will be open more shops in the province
[10] For the growth of the market share it is assumed that it takes the same growth but starting from 2014-2015 growth, because it is expected an economic growth and recovery but slowly.

the levels projected in figure 5. It is only increased by one point in respect to the previous year.

- **Selling price of products**

With respect to the sale price, it can not specify a single price for all the articles that are marketed with this brand. However, with the aim to provide the empirical analysis process, it is assumed a single average price for all those articles that may be in the store at any time.

To determine the average price, it is made a price analysis of different goods that are usually in store[11].

Once analyzed the different listing prices, the average price for the marketing of the products of the company determination is carried out.

Figure 6. Calculation of weighted average price

	Units	Total value
Total	175 Units	6,693 €
Average weighted	38.25 €	

Source: Own elaboration. Data obtained from Annex I.

According to calculations made for the market share, it is expected that the price goods will also increase by the same percentage that will increase the share of market until the third year, from this year it will grow at the rate of one point percentage, because it is expected and considered that the economy can continue to grow but not as fast as required.

- **Depreciation method**

The depreciation method that will be used for the investment is a lineal method in 5 years with a zero salvage value.

The depreciation method is established according to regulated by law 27/2014, November 27, Corporation Tax, effective until July 1 of this same year[12].

According to with article 101 a) point 2 of LIS, the investment project addressed to throughout this work corresponds to a new creation and in addition, for an entity of small size since that turnover during the first exercise is less than 10 million euro. This is why; to be qualified as entity's mall size, there is accelerated depreciation.

---

[11] The analysis process can be observed in the Annex I.
[12] Law 27/2014 of November 27, of Corporation Tax (effective until July 1, 2016). Chapter XI which regulates tax incentives for small size companies.

However, to be eligible for accelerated depreciation it is necessary to expand the staff mean workers over the previous year in accordance with article 102.1. Therefore, the company decides to benefit from this law with expectations of incorporating minimum workers required by this.

- **Variable costs**

According to the information provided by the franchise, it estimates that there is a gross commercial margin of 43%, that is to say, the brand estimates, in based on historical data, that the benefit once discounted costs, both fixed as variables, is 43%, therefore it is assumed that there is a percentage of costs total of 57% (100%- 43%) of the total amount of sales.

That percentage can be decomposed into fixed costs amounting to 13,371 € is assumed representing a 10% and the remaining 47% represents the variable costs.

In addition, it is assuming that within that percentage of variable costs, there are included the variable costs detailed in the figure 1 previously presented, it is to say, that the costs of the share of self-employed and the wages of workers that increases year after year at the rate of 1 worker more. These costs are included in that percentage because it has a fixed part and another variable.

- **Operating working capital**

Working capital, also known as a working capital, it is the part of current assets, that means, the current assets, which is financed with capital permanent or noncurrent, that is to say, long term debt.

So, there is equilibrium between the economic and financial structure of the company is necessary that fixed resources finance the investments, that is to say, the fixed asset and fixed or stable part of current assets (Fernandez 1992:338-339).

To obtain the operating working capital of the company covering this project, it is used as a reference the analysis of average working capital over the last five exercises of a company on the textile sector; specifically the company's Inditex, because that is a company dedicated to the youthful fashion and resembles to the features of the franchise in some of its commercial formats.

The working capital calculation has been conducted using the difference between the active current and current liabilities of Inditex the five years above the level sales, thus

obtaining an operating working capital of which 12.75% were used as an estimate in this project.

Figure 7. Calculation the operating working capital of Inditex

Year	Current Assets	Current Liabilities	Difference	Total sales	Op. work capital	Percentage
2010	5,202,512	2,674,907	2,527,605	12,526,595	0.201	20%
2011	5,437,289	2,702,774	2,734,515	13,792,612	0.198	19%
2012	6,692,150	3,485,064	3,207,086	15,946,143	0.201	20%
2013	7,105,953	6,764,961	340,992	16,724,439	0.020	2%
2014	3,748,828	3,462,293	286,535	18,116,934	0.015	1%
					Operating work capital	12.75%

Source: Own elaboration. Data obtained from Inditex Annual Accounts from 2010 until 2014.

- **Selling price**

At the end of the contract of five exercises with the brand, the investor can decide whether to renew the contract, provided that the mark agrees with the decision otherwise, he could not continue to invest and therefore to resell all those elements of fixed assets and material that already it would need, for a value of 10,000 €.

- **Discount rate: CAPM**

As a step prior to the calculation of the profitability of the project, it is necessary to calculate the discount rate. As it is in the section of the CAPM model, to estimate that discount rate the asset valuation model is used the Capital Asset Pricing Model[13]

Figure 8. Calculation of the discount rate. CAPM model

CAPM	
E(Rf)	**1.51%**
βjm	**0.937**
E(Rm-Rf)	**6%**

E(Rj)	7%

Source: Data obtained from CAPM model section

Taking into account all the data previously selected, you get a discount rate "k" that will allow to carry out the valuation of the investment. The rate obtained in this case is 7%.

Finally in the following figure there are showed the estimations done for all the relevant variables that it is necessary take into account in the investments valuations process.

---

[13] Calculations to obtain the discount rate can be observed in Annex II.

Figure 9. Summary of investment conditions

Summary of investment conditions		
Disbursement	115,700 €	
Duration	5 years	
Market potential	250,000 customers	
Market share	1.05%	
Variation of market share	**Growth rate 1-2**	2%
	Growth rate 2-3	3%
	Growth rate 3-4	1%
	Growth rate 4-5	1%
Average selling price	38.25 €	
Variation of selling price	**Growth rate 1-2**	2%
	Growth rate 2-3	3%
	Growth rate 3-4	1%
	Growth rate 4-5	1%
Fixed costs	13,371€	
Variable costs	47% over the sales	
Selling price	10,000€	
Straight line depreciation model: 5 years with zero residual value		
Operating working capital	12.75%	
Tax rate	30%	
Growth rate	**Calculating with CAPM**	7%

Source: *Own elaboration*

3. Implementation of the empirical analysis

In this part of the paper, the evaluation of the investment is performed using different methods and tools that allow you to identify potential future problems that affect to the investment, as well as which are the variables that can influence the execution of it.

3.1. Determination of the NCFat, NPV and IRR of the project

To calculate the net cash flow after tax (NCFat) it is arisen in a table[14] which collects all the data previously estimated and justified in figure 9.

There is an initial outlay of 115,799 €, value known as security because the investor is knowledgeable of the initial expenditure that supposes the realization of the investment.

Another necessary data for the calculation of the NCFat, is the total number of sales, which is obtained by the following operation:

Sales = [(Potential market Market Share)*Average sale price]*

Obtaining in this way, the number of sales for each of the five exercises adjusted to variations in price and market share and which are collected in the following figure.

Figure 10. Sales figures in the five periods

Year	0	1	2	3	4	5
Total sales	-----	103,268	110,279	115,648	117,972	120,343

Source: Own elaboration based estimations done previously.

As a previous step to the obtaining of the NCFat (income after taxes), it is necessary to determine the profit before taxes (NCFbt). These are obtained using the difference between receipts and payments.

Figure 11. Profits before taxes

Year	0	1	2	3	4	5
NCFbt	- 115,700	41,360	45,076	47,922	49,154	50,410

Source: Own elaboration based estimations done previously.

The next step is to obtain the taxable base in order to calculate the tax. In this step, It is important to consider that the tax base is obtained carrying out some previous adjustments, that is to say, subtracting the depreciation from the NCFbt because that the latter does not constitute a payment, but actually represents a cost and increasing

---

[14] Calculations can be seen in Annex III.

the NCFbt for the value of the capital increase because it is not a charge, it is a revenue.

Regarding to capital increase, it is assumed that the total value of the company is amortized, therefore, under this assumption, it is obtained a capital gain of 10,000€. In addition, it is considered that the selling price is 10,000€ and that is charged completely. Subsequently, once the tax base is calculated 30% tax on that base.

Finally, the calculation of the NCFat is made using the following formula:

NCFat= NCFbt – Tax Companies – Working capital variation + Sale price

Note that the calculation of them is done reducing the amount of the variation of operating working capital that remains outstanding collection for further exercises and adds sale price that could exist in the last period, obtaining the NCFat listed in figure 12.

Figure 12. : Profits after taxes

Year	0	1	2	3	4	5
NCFbt	-	115,700	22,728	37,601	39,803	41,053	48,927

Source: Own elaboration based estimations done previously.

Analyzing the NCFat there is a growing tendency of them, however, this indication is not indicative of the operation to be profitable; therefore, it is necessary to value it by methods of the NPV and the IRR.

Using the discount rate k=7% in combination with the different NCFat, it is gets a Net Present Value (NPV) of 36,471 €, that is to say, if the investor carried out the investment, it would get a positive variation of his financial resources from quality. In addition, in accordance with paragraph 1.1., as the NPV>0, indicates that the investment can be performed.

If it is observed the internal rate of return criterion (IRR), it is obtained that r=17 %, that is to say, that interest from which the NPV always will be positive; in comparison with the discount rate k=7 %, as r>k, it would also accepted the project.

For this, according to the two selection criteria discussed in the previously sections, as the current vale is positive under an opportunity cost rate of 7 %, it would accept the realization of the project obtaining a net profitability of 9 %.

3.2. Sensitivity analysis

In an environment of uncertainty, that is to say, that environment where is not known with certainty what will happen, it is possible that the values of estimated variables for the project do not coincide in practice, producing deviations in the expected returns.

That is why, to determine which are the variables that more inferred in the result of the project, as well as the values which may vary them, it is necessary to carry out a sensitivity analysis.

Sensitivity analysis is a tool that is used to analyze which values are the maximum and minimum between can vary the principal variables of the project, ceteris paribus, that is to say, while it is assumed that the other variables remains constant. According to Iturrioz (n.d.) *"Sensitivity analysis is a technical which applied to the valuation of investments, allows the study of the possible variation of the elements that determine an investment in a way that, depending on the assessment criteria, compliance with that investment is performable or preferable to another"*.

So, in this project there are considered as the most important variables the potential market, market share, the price of sale and costs; variable and fixed. Therefore, it is carried out a sensitivity analysis for each of these variables in order to observe which is the minimum value that can be taken in a way that the NPV=0.

Figure 13. Sensitivity analysis for the relevant variables

Variable	Minimum value	Maximum value	Difference with expected value
Size of the market (Potential market, €)	191,957		58,043
Market share (Market share, %)	0.81		0.24
Price unit (€)	29		8
Fixed costs (€)		26,124	12,753
Variable costs (% of sales)		0.58	0.11

Source: Own elaboration based estimations done previously.

Figure 13 lists which should be the maximum or minimum value that they should adopt the relevant variables so that, the net present value is positive.

As observed in the third column, there are differences of each of the values previously estimated with the values obtained in the analysis. It is important to highlight the lower differences because it points these variables as the most critical. For example, in the case of the % of variable costs, only exists eleven percentage points of difference, which indicates that it is necessary that the inverter checks this variable permanently because if it adopts a higher value to the 58% of variable costs, the net present value

29

of the investment would go to be negative. Something similar happens with the market share because values lower of 0.81, they would produce a net present value negative, which would lead to reject the investment.

3.3. Scenario analysis

Other tool which is used to insert the risk in the valuation investments process is the scenario analysis.

Scenario analysis allows introducing indirectly the risk the risk in the investment analysis because it allows observing how the context changes affect to the principal variables of the project, unlike of sensitivity analysis in which only changing one variable and the rest of them remains constant.

Therefore, three scenarios are raised: optimistic scenario, expected and pessimistic. It may be noted that the expected scenario is the scenario previously explained[15].

- **Optimistic scenario**

The optimistic scenario is characterized because it considers that after the crisis which started in 2007, the economy start to grow slowly and to stabilize after difficulties flowed through the last years.

The unemployment figures are failing slowly as you can see in graphic 3, where is showing a growing trend in employment level in the province of Castellon. It is important to note that this growing trend is not very high and it is still far from achieved values in the first quarters of 2008, however is growing with respect to years earlier, which gives hope to maintain this upward trend.

Graphic 3. Level of employment province of Castellon [2008-2016]
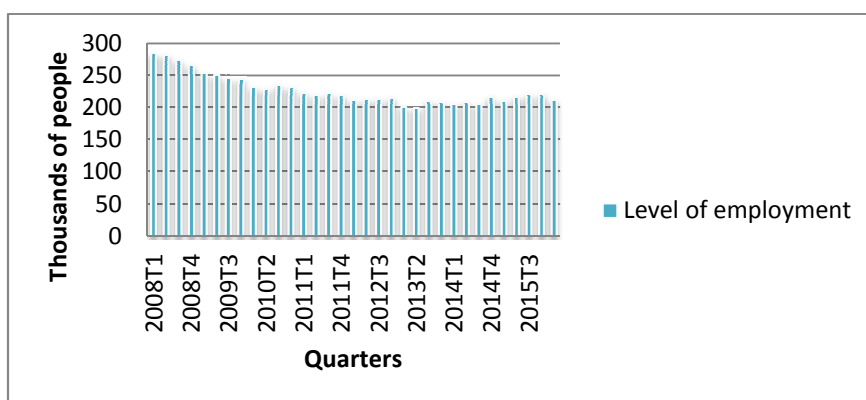
Source: Own elaboration. Data obtained from National Institute of Statistic.

---

[15] See Annex IV in which appear the necessary calculations to determine the different scenarios.

Moreover, according to Carmen (2016), at the beginning of 2016, it was expected a growth of employment level with the creation a number of workstations between 400,000 and 500,000, which meant a growth of the economy but a different rate to the developed during 2015, as it can see in graphic 3; the level of employment for the first quarter of the year has increased with regard to previous years but it is lower of the 2015 growth.

Other indication which shows that there is a slight increase of the economy is the slight increase of the minimum inter-professional wage. In the following figure depicts the diary and monthly minimum inter-professional wage for the last years.

Figure 14. Diary and monthly minimum inter-professional wage, period 2002-2016

Year	Wage diary	Wage monthly
2016	21 €	655 €
2015	21 €	648 €
2014	21 €	645 €
2013	21 €	645 €
2012	21 €	641 €
2011	21 €	641 €
2010	21 €	633 €
2009	20 €	624 €
2008	20 €	600 €
2007	19 €	570 €
2006	18 €	540 €
2005	17 €	513 €
2004	15 €	460 €
2003	15 €	451 €
2002	14 €	442 €

Source: Own elaboration. Data obtained from Expansion.

Consequently, there is an increase of the income level affecting directly to the consumption and finally, this employment level increase is reflected in the sales level increase.

Therefore, in front of this situation which is happening in the environment, some of projects variable are modified, obtaining this new scenario.

- **Growth rate of the market share**

This market share increase is affected by this favorable situation of the economy, which produces that the growth rate of the last two years is in the expected and projected levels in the section of Market Share.

As it is possible to see in that section, the growth rate will achieve an increase of one percentage point more than the data projected in the section of Market Share, except for the last year where it is considered that the economy which is consolidating and remains constant.

■ **Unit fixed costs and variable costs**

The slight increase suffered in the sales level produces a reduction of the unit fixed costs and on the contrary, a variable costs increase because these last depends on the sales level. In front of that situation, it is performed the assumption that this increase of the costs will not affect highly to the investment result because of it will be compensate in turn by the sales level increase.

■ **Selling price of product**

With regard to the sale price, this is one of the principals variables which will be affected by the context described in that scenario.

The economic forecasts for the year 2016 estimate that the economy will experience an increase through the creation of jobs mainly though this increase is lower than the 2015 increase (Carmen, S. 2016). On the other hand, there are also prospects at beginning of 2015 that estimate an unemployment rate drop during the following 5 years (El País, 2015). For this reason, it is expected that prices will grow in the same percentage as those projected in the Sale Price of products section.

Thus, after analyzing the changes in the context effect over the main variables, the NCFat are modified, as well as, the NPV and IRR of the investment, as it can see in figure 15.

Figure 15. Net cash flows after taxes: Optimistic scenario

Year	0		1	2	3	4	5
NCFat	-	115,700	22,728	37,862	41,473	45,538	55,602
	NPV	46,192	IRR	19%	NR	12%

Source: Own elaboration based estimations done previously.

- **Pessimistic scenario**

Other change in the environment that could be produced would be a situation with negative changes. According to Martin, C., responsible of the economic cabinet of CCOO (Carmen, S. 2016) *"the no Government resulting from the elections is the worst of the possible scenario. If it was also appreciated in the last quarter was a withdrawal*

of investment, now it will be more". The result of the last national elections supposes the apparition of an atmosphere of uncertainly that can be capture through a reduction of the consumption and the investment.

Therefore, it is expected that political uncertainly affects adversely to the economy increase and it slows down the process of growth.

- **Growth rate of the market share**

Along with the economic difficulties that comes across the country since the beginning of the crisis in 2007 and the uncertainty that can create the current political situation, it is assumed that the growth of the economy for the next few years will be slowed down so, the market share gets the minimum value calculated in the sensitivity analysis and the growth rate is constant until the third year, from which will begin to grow at the rate of 2% per year, because the confidence of consumers will take to return to the prior to the crisis and will grow little by little.

- **Fixed costs and variable costs**

Unit fixed costs in this situation would increase because it would reduce the demand of the company. Meanwhile, variable costs would be reduce by the reduction of sales level, so it is considered that the reduction in costs would be compensated by the growth of other costs and therefore, it would be kept constants.

- **Selling price of product**

The appearance of uncertainty produces the reduction of consumption of the consumers, which makes it decrease sales of the companies. Given this new situation, the companies have to reduce the sales price to continue on covering the costs and not to be severely affected by this new situation. Thus, it is estimated that the selling price is kept constant, without experiencing a remarkable growth until the last two years where starts to grow at 1%.

After analyzing all the variables that would be strongly affected by the uncertainly political and as a result, the slowdown in the economy growth, the results would be those included in figure 16.

Figure 16. Net cash flows after taxes: Pessimistic scenario

Year	0	1	2	3	4	5
NCFat	- 115,700	16,442	26,318	26,507	27,181	35,075
	NPV	- 10,382	IRR	4%	NR	-3%

Source: Own elaboration based estimations done previously.

3.4. Behavior of NPV in probability

The next section it is to estimate which is the expected return of the investment, as well as, the risk of the same.

According to Aragó et al. (2012:26-35) the expected return on an investment it can be measured by the NPV mathematician expectation and the risk by the standard deviation of the expected profitability.

Therefore it is assumed that the NCF remain a triangular distribution function because that is part of the scenarios discussed above.

Then proceed to the mathematician expectation calculation and the variance of each net cash flow using the analytical expression corresponding to a variable which follows such distribution. The data that adopt the NCF following a triangular distribution are those obtained in scenario analysis.

From the expectation and variance calculation of any NCF, it is estimated the expected value and the NPV variance, that is to say E (NPV) and VAR (NPV), whereas for the calculation of the VAR the NCF are not independent.

- **Statistical inference**

In order to perform statistical inference, that is to say, observing how it behaves the NPV in probability, it is necessary to determine which is the distribution that following the NPV. Previously, it has been considered that the NCF remain a triangular distribution, by the simplest is to apply the Central Limit Theorem, which states that if a variable consists of the sum of independent and random variables, it will be distributed according to a normal provided that the number of variables is superior to 30[16]. To sum up, it is assumed that the NPV follows a normal distribution.

At first, considering that the NCF are independent variables are unrealistic because the NCF are interrelated variables with each other, hence the existence of correlation between them. In addition, although in the present project the duration is 5 years, it is assumed to calculate the profitability that the duration is greater than 30 periods carry out statistical inference.

Therefore, in the sense is considered to the NPV as a random variable, which is distributed through the central limit theorem as a normal:

---

[16] Although there are not 30 NCF, we assume, as is done in most of works where applies this approach that met the Central Limit Theorem applies.

NPV~N (E (NPV), Var (NPV))

The following calculations of the E (NPV) are based on the three scenarios previously mentioned which follow a triangular distribution: optimistic scenario (maximum), expected scenario (normal) and pessimistic scenario (minimum).

Thus, after the realized calculations[17], the expected return (mathematician expectation) and the obtained risk (standard deviation) are the data that are collected in the following figure.

Figure 17. Expected return and risk of the investment

E (NPV)	24,093
VAR (NPV)	42,007,205
DESVEST (NPV)	6,481

Source: Own elaboration based estimations done previously.

From the mathematical expectation and the investment risk may be the statistical inference for calculating probabilities about values that can take the profitability of the project. The calculated probabilities are the following:

- In the first case, the **probability that the NPV > 0** which refers to that the return on investment is positive and therefore will accept it, acquires 99%, that is to say, with almost 100% of probability, the NPV obtained will let to do the investment.

- The second **calculated probability that the NPV > 27, 353** aims to show the probability that the NPV retrieved is greater than 75% of the expected value. It is important to know this percentage pointing to obtain a value that is greater than 25% of the expected value at a minimum. Gets a value of 30 % approximately, the investment will have one absolute return higher than 27,353 €.

- The **probability that the NPV is less than 620 €,** represents the 1.7% of the expected NPV value is 0.01%, that is to say, with approximately 99% of probability the profitability will exceed 620 €.

- Finally, the **probability that the NPV is between the 75% of expected value and 1.7%** is 30%,that is to say, with a probability of the about 30% the NPV reached values between 1.7% and 75% of the expected value.

---

[17] See Annex V in which there is the calculations to determine how it behaves in probability the NPV.

III.   Financial planning of the project

In the first part of the work, we have analyzed, by a practical and theoretical development, different steps to be followed to qualify an investment as profitable or not, from the financial point of view.

However, only with this analysis, it is leaving aside one of the main issues that need to be addressed in the operation of a business: the liquidity.

It is therefore in this second part it is posed the financial planning process, where all the different sources of funding that has the company available are considered and will analyze which one is the best, from the point of view of the balance of the capital budget and the effects of these on the liquidity of the company. It is possible that an investment Project is profitable, at least a priori, according to the results of a selection criterion, but considering how to finance this, being feasible, since the company will not cope with all its payment obligations, both economic (derived from the realization of the project) as the financial (derived from the financing method of this project).

The financial planning of a company must be in mind for two periods of time, in the short and long term. In long term, it is a process that seeks to determine what will be the future development of the company, that is to say, which is the strategies that the company will use in the future to develop the project, as well as, its future results that are reflected in the capital budget. While in the short term, the financial planning allows to modify the variables that are difficult to predict in long term (Cuervo, 1994: 208).

According to Cuervo (1994:208), the main objectives of financial planning are:

- Anticipating the future decisions.
- Coordinating activities, that is to say, an analysis of the various businesses of the company, their interrelations, and more.
- Realization of objectives. To establish the general objectives, as well as, the way to achieve them and measure the results.
- Control base. The planning is represented numerically with the budgets, which constitute the control base and the evaluation medium to assess the achievements.
- Information base. Process that allows developing a process of learning about the interrelationships of the company, markets and environments.

36

Following the analysis carried out in the previous section, it is observed that the project sheds positive data to NPV and a greater profitability to "k" in IRR, therefore, it is necessary that the approach of the financial planning with the aim of guaranteeing the necessary liquidity during the execution of the project.

To be able to establish it in a long term periods, it is necessary to make the capital budget for the coming years, previously raising the provisional profit and loss account under the new strategies and finally the capital budget, for the next future periods (Aragó et al. 2013: 85-109).

It should be noted that for the development of the provisional profit and loss account and the capital budget, it has taken into account all the assumptions made in the first part of the project, as well as, the following assumptions:

- It is assumed that since the first year, in which the investment starts, flows are generated.
- The need to request additional capital arises by the variation of the working capital from one year to another.

> ▪ **Financial strategy of the company**

To carry out the project, the chief financial officer (CFO) as has his disposal on the market numerous sources of financing, which have their own advantages and disadvantages, therefore, the CFO should review what are those which will allow to obtain the necessary resources for the development of the same.

However, for this project, the analysis under different funding sources will be held in order to determine which the most convenient source is for developing the project:

- Applying for a loan with the following features:
    - ▪ Nominal: initial operation disbursement.
    - ▪ Duration: 10 years
    - ▪ Nominal annual interest: 5%
    - ▪ Depreciation method: French
- Search for new capitalist partners that provide the value of the initial outlay. In this case it would be vary the dividend policy to 75% to grasp more capitalist partners.
- Collection of the initial disbursement trough an increase in capital (40%) and a loan of similar features to the previous (60%). The dividend policy is considered 70% of the net profit, since it is necessary to compensate shareholders

although to a lesser extent than in the previous case by not providing 100% disbursement.

1. Profit and loss account

The necessity to resort on funding sources to carry out the investment projects, carries with it financial costs which are not be collected in the NCFat because these cash flows only collect the difference between cash receipts and payments arising from the project without considering the way in which the project is funded (the interest or return of principal payments of the loan are not taken into account, for example).

So, to try to determine the accounting profit for each exercise within the different possibilities of financing mentioned above, it takes place the account of provisional profit and loss[18]

- **Bank loan:** one of the options for obtaining the resources that allow developing the project is the external funding through a bank loan. In this case, it is necessary to reduce financial costs corresponding to the loan interests, with the results in the figure 18.

Figure 18. Earnings after taxes with bank loan

Year	1	2	3	4	5
EAT	8,705 €	11,628 €	13,958 €	15,175 €	16,427 €

Source: Own elaboration based on estimations done previously.

- **New capitalist partners:** another source of external funding that is possible to use is the uptake of new capitalist partners involved providing the necessary resources for the development of the project. This source involves the integration of new partners to the company property, which it must be taken into account by the direction of the same. For the acquisition of them, it is necessary that the dividend policy is sufficiently high to attract investors.

Figure 19. Earnings after taxes with capital increase

Year	1	2	3	4	5
EAT	12,754 €	15,355 €	17,347 €	18,209 €	19,089 €

Source: Own elaboration based on estimations done previously.

- **Capital increase and bank loan:** this last option references to an option of mixed funding that gets 60% of the disbursement initial through a bank loan and 40% by capital increase.

---

[18] The calculations undertaken to determine the accounting result of each source of funding are collected provisional profit and loss accounts in the Annex VI.

Figure 20. Earnings after taxes with capital increase and bank loan

Year	1	2	3	4	5
EAT	10,324 €	13,119 €	15,313 €	16,389 €	17,492 €

Source: Own elaboration based on estimations done previously.

As shown in the previous figures, depending on the funding source chosen to carry out the investment projects, the net benefits would be different from one option to another.

A priori, the options that would provide greater benefits to the company during the three exercises would carry out the project with a capital increase, followed by the combination of the bank loan and the capital increase and finally, the bank loan.

However, a capital increase supposes the inclusion of new partners to take decisions of management and control of the company and can give rise to conflicts interests between the stakeholders of the company; it would be preferable the first option.

Nevertheless, in order to decide and choose the best financing option for the project, it would be necessary to take into account the results of an analysis with other methods which let to observe or detect future situations to which the company could face, such as problems of solvency or liquidity.

2. Capital budget

When the company wants to carry out investment projects, in the first place is necessary to provide profits, but moreover, it is necessary that the company disposes of sufficient for this liquidity.

In this regard, so that a company in his habitual activity does not present liquidity problems and has the necessary resources to be able to face payment obligations so that the profitability so that the profitability of the company sees affected, the CFO must get that match they the horizon payment obligations owned by the company with financial resources that the company is entitled to receive given its activity.

One of the tools that is necessary, but not sufficient, in liquidity control is capital budget. According to Fernandez (1992: 440-441) *"Capital budget includes investment plan and long term financing plan period of the company. In accounting terms, a capital budget is a state of source and application of provisional funds for a planning horizon for 4 or 5 years."*

According to the definition, the capital budget is the tool that allows to the CFO control, for a period of time, what are the inputs and outputs of monetary resources and, in this

way, that the company ensures the liquidity for the duration of the investment project. It consists of two parts, on the one hand, a plan of investment in the long term and on the other hand, the long term financing plan. The difference between the two sides can throw deficit situation, showing. Thus liquidity problems or situation of surplus, where it is necessary to apply investment measures to not keep idle resources. However, the main objective is to obtain a capital with a zero deficit budget.

Through the capital budget it will see the results every year and thus know whether the company can meet its payment obligations to long term.

- **Self-funding**

Within the capital budget there is a section called self-financing to collects the amount of resources that the company has in the company, that is to say, the own internal financing. These resources are divided into two components.

On the one hand there are the reserves, which constitute those benefits not distributed in the past. On the other hand, the depreciation that is theoretically that amount of money that companies spend to a reserve, so that when the asset is not in operating conditions, the undertaking of enough money to purchase another item. However, although only deemed the assumption's self- financing, it is necessary to point out that there are more methods of self-financing, such as the liquidation of obsolete equipment and not functional, the capital increase with premium issuance or conversion of obligations with positive conversion, among other things. (Aragó et al. 2013:75).

Nevertheless, in practice the companies do not allocate to a special reserve the fee corresponding to the element amortization, because when the useful life of the item is complete, this follow in operating conditions or because without the money until this element is amortized 100%. That share is used for other resources or business needs.

There are numerous theories about the effect that produces the amortization to the self-financing of the company. One of these theories is the theory of Lohmann-Ruchti, which sets the importance that the company intended share of amortization to investments that improve the profitability of the company *"Under certain assumptions, the financial resources which the amortization process releases do not only allow keeping intact the unique ability to initially and productive enterprise, its main mission, but which allow to finance further expansion. This ripple effect of depreciation is known in the economic and financial literature with the name of Ruchti-Lohmann"* (Gran Enciclopedia Economica).

Thus, through the capital budget and the provisional income statement, it is studied which is the source or sources which best suits the conditions of the project[19]

- **Bank loan**

In the case of inverter carries out the project through a French loan, as shown in figure 21, for the five years the company would have surplus situation, that is to say, funds entries are superior to outputs.

It is important to show that the capital budget would also present an imbalance for the five years, although in this case it would arise in the form of surplus, which is preferable for the investor. However, it would also need to apply measures to try to correct these imbalances.

Figure 21. Funds gotten every year with bank loan

Year	1	2	3	4	5
Deficit/Surplus	5,127	18,401	19,292	19,782	19,870
Accumulated	5,127	23,528	42,821	62,604	82,475

Source: Own elaboration based on estimations done previously.

- **Capital increase**

In the case that the source of financing chosen is the capital increase, the capital budget would also present an imbalance in favour of the five years with numbers far greater than the one thrown by the previous source, but which also would be necessary to reduce ant try to balance.

The option to carry out the financing with that source involves the advantage that , in this case, the investor would not count own financial expenses, but at the same time a drawback, since a capital increase involves the partial or total loss of control of the company with regard to the situation earlier, since enter part more shareholders and therefore, the dividends policy varies.

Figure 22. Funds gotten every year with capital increase

Year	1	2	3	4	5
Deficit/Surplus	13,162	26,085	26,792	27,396	27,610
Accumulated	13,162	39,247	66,039	93,435	121,045

Source: Own elaboration based on estimations done previously.

---

[19] The calculations made for the preparations of the capital budget under various funding sources can be seen in Annex VII.

- **Capital increase and bank loan**

The use of a capital increase and a bank loan on the part of the entrepreneur to obtain the necessary resources, also throws positive imbalances for five years but with values between those obtained with the loan and capital increase, assuming a few financial lower expenses and one minor way of control too.

Figure 23. Funds gotten every year with capital increase and bank loan

Year	1	2	3	4	5
Deficit/Surplus	7,551	20,386	20,964	21,371	21,376
Accumulated	7,551	27,938	48,903	70,274	91,651

Source: Own elaboration based on estimations done previously.

2.1. Methods to adjust the imbalances

To be able to choose the financing source that best fits the capital budget is necessary try to reduce the imbalances.

Figure 24. Summary results according to funding sources

Source of funding	1	2	3	4	5
Bank loan	5,127	18,401	19,292	19,782	19,870
Capital increase	13,162	26,085	26,792	27,396	27,610
Capital increase and bank loan	7,551	20,386	20,964	21,371	21,376

Source: Own elaboration based on capital budget

Looking at the results obtained in the capital budgets, the entrepreneur should seek measures to try to reduce these imbalances. The obtaining of surplus can be used for that the company invests it in itself or in extra functional investments, avoiding the maintenance of idle resources and obtaining a profit from them.

By contrast, the deficit shows the existence of liquidity problems for these exercises, which implies the necessity to rethink the existing funding conditions or a combination with other sources.

Therefore, in front of the existing imbalances, the entrepreneur could consider to adjust and analyze the bank loan operation because it is the financing funding which presents less imbalances. Nevertheless, it would not have to be the right choice if it is into accounts other aspects, as the remunerations to shareholders, the improvement of workers, and more.

- In the case of **bank loan**, firstly, eh entrepreneur decides to increase the dividends policy to give the shareholders a 70%, thus reduces the surplus in the first year. For the following exercises, the entrepreneur can choose to carry out

the payment of 5,000 € more per amortization loan share until the 5th year, so finishing in the 6th year with the loan.

Finally, the entrepreneur also can use 8,000 € from the imbalances that appear from the 2nd year until the 4th year and 7,000 € of the last year to invest in 10 year bonds at an interest like 1.4%[20], obtaining then a profitability of 4,598 € for the first investments and 8,048 € for the last year. In this way, treasury surplus generated during the different years are significantly reduced[21].

Figure 25. Summary results after the measures taken

Year	1	2	3	4	5
Deficit/Surplus	468	43	149	61	547
Accumulated	468	511	661	723	1,271

Source: Own elaboration based on capital budget

---

[20] The type of 10 year Spanish bond interest is obtained from the consult in the website of the Economist.
[21] In the Annex VIII it can observe all the measures adopted to reduce the treasury surplus and the final result of the capital budget.

IV.   Conclusions

Once all the processes of financial analysis and financial planning are finished, a number of conclusions can be obtained.

On the one hand, with regard to the investment analysis, it can be seen that the raised theoretical and subsequently practical development have led to conclude that it is possible to carry out the investment, obtaining a NPV of 36,471 €, IRR of 17% and a net profitability of 9%, which show that it is convenient to do the investment.

However, theoretically it can also be seen that the dynamic or classic models, despite of having disadvantages, they are used as a tool to determine if it is convenient to carry out the investment project or not. There are a lot of and different methods to determine the acceptance or rejection of investments, nevertheless, for this project the last methods are used because they are the ones studied during the degree.

Other model used in the project to calculate the discount rate is the CAPM model. Numerous and different authors indicate the convenience of using different models to calculate the cost of capital. CAPM is a model used for which there are a lot of proponents and detractors but that is still used for calculating the cost of capital companies.

Moreover, the sensitivity and scenario analysis have allowed to detect which are the intervals in which they could vary, which provides information to establish prices, market shares or even to know if the costs level is appropriate according the country and sector economic situation, as well as, which are the variables more sensitive in the environment or in front different risk levels, respectively.

On the other hand, the **financial planning**, once approved the realization of the project, this analysis serves to ensure that the company will have in the future resources for the development of the investment.

Through the capital budget, it is observed that after analyzing different internal and external funding sources that would be more convenient to the company, from the point of view of the capital budget balance, it would be the bank loan, because despite it has financial expenses, it ensures that the company has liquidity during the investment. Moreover, it is the source that after making the necessary adjustments our goal is most closely located; that is to say, it gets a capital budget with a deficit equal to zero.

However, the application of external funding has advantages and disadvantages and therefore, it is necessary to analyze carefully the different funding options when choosing between one of them.

If it is true that with the bank loan also it gets an imbalanced capital budget, through the adoption of reinvestment or reduction debts measures, it is possible to reduce the number of idle resources obtained.

It is important to highlight the great role that exerts the depreciations as an internal funding source of the companies. Through its expansion effect allow that the productive capacity if the company increases greatly.

Finally, as it can be seen in the project, the dividend policy is a tool which exerts a great influence on company's outcomes (self- financing and capital budget) and therefore, it is necessary to analyze carefully as there is policy so that it is well defined and there are not interest conflicts among the company agents.

Regardless to the methods or models that are used by the experts, it is important to know the investment valuation process because it serves as a indispensable tool for the companies and investors to estimate the possible losses and therefore, not incurring them.

V. Bibliography

- Allen, F., Myers,S. and Brealey, R. (2010) *Principios de Finanzas Corporativas* [online] 9th edn. México: Mc Graw Hill. Available from < https://www.u-cursos.cl/usuario/b8c892c6139f1d5b9af125a5c6dff4a6/mi_blog/r/Principios_de_Finanzas_Corporativas_9Ed__Myers.pdf> [16 June 2016].

- Aragó, V., Cabedo, J., Matallín, J. y Salvador, E. (2013) *Dirección Financiera Avanzada.* Valencia: Lowcost Books.

- Carmen, S. (2015) "Los expertos vaticinan para 2016 más empleo con más temporalidad". *El País* [online] 3 January. Available from < http://economia.elpais.com/economia/2016/01/02/actualidad/1451759217_665163.html> [6 May 2016].

- Castaño, C. (2008) *Valoración de pequeñas empresas: Una aplicación de la marca "denominación de origen dehesa de Extremadura"* [online] PhD thesis. UNED < http://e-spacio.uned.es/fez/eserv/tesisuned:CiencEcoEmp-Ccastano/Documento.pdf> [11 May 2016].

- El Confidencial (n.d.) *Rendimiento Inditex y Rendimiento Ibex 35.* Available from http://www.elconfidencial.com/mercados/ [15 May 2016]

- Cuervo, A. (1994) *Análisis y Planificación financiera de la empresa*. Madrid: Editorial Civitas.

- Damodaran, A. (2013) *Equity Risk Premiums (ERP): Determinants, Estimation and Implications* [online] 15th edn. New York: Stern School of Business. Available from < http://faculty.mccombs.utexas.edu/keith.brown/AFPMaterial/Damodaran%20ERP%20WP-3.15.pdf> [4 April 2016].

- Damodaran, A. (n.d.) Estimating *Risk Parameters* [online]. New York: Stern School of Business. Available from < http://people.stern.nyu.edu/adamodar/pdfiles/papers/beta.pdf> [12 April 2016].

- El Economista (n.d.) *Bono español a 5 años* [online]. Available from <http://www.eleconomista.es/bono/bono-espana-5-years> [29 May 2016]

- El País (2015) "El paro en España seguirá por encima del 21% hasta 2019, según la OIT". *El País* [online] 20 January. Available from <http://economia.elpais.com/economia/2015/01/20/actualidad/1421743072_665389.html > [6 May 2016].

- Expansión (n.d.) *Salario Medio España* [online]. Available from <http://www.datosmacro.com/mercado-laboral/salario-medio/espana> [6 May 2016].

- Fernández, M. (1992) *Dirección Financiera de la Empresa*. Madrid: Ediciones Pirámide.

- Fernandez, P., Ortiz, A. and Isabel, F. (2015) *Discount Rate: Risk Free Rate and Market Risk Premium* [online]. IESE Business School. Available from < http://faculty.mccombs.utexas.edu/keith.brown/AFPMaterial/FernandezEtAl%20WP-Global%20ERP-4.23.15.pdf> [1 May 2016].

- Graham, J. R. and Harvey, C. R. (1999) "The theory and practice of corporate finance: evidence from the field*". The Journal Article* [online] 2 August. Available from < https://faculty.fuqua.duke.edu/~jgraham/website/SurveyPaper.PDF> [13 April 2016].

- Gran Enciclopedia Económica (n.d.) *Efecto de Rutchi- Lohmann* [online]. Available from < http://www.economia48.com/spa/d/efecto-ruchti-lohmann/efecto-ruchti-lohmann.htm> [29 May 2016].

- Iborra, M., Dasí, A., Doiz, C. and Ferrer, C. (2014) *Fundamentos de dirección de empresas: conceptos y habilidades directivas.* Madrid: Paraninfo.

- Instituto Nacional de Estadística (2016) *Población residente por fecha sexo y edad desde 2002* [online]. Available from < http://www.ine.es/jaxiT3/Datos.htm?t=9687> [30 March 2016].

- Iturrioz, J. (n.d.) "Análisis de sensibilidad en valoración de inversiones". *Expansion* [online]. Available from <http://www.expansion.com/diccionario-

economico/analisis-de-sensibilidad-en-valoracion-de-inversiones.html> [5 May 2016].

- Ley 27/2014 de 27 de Noviembre, del Impuesto sobre Sociedades (vigente hasta el 1 de Julio de 2016). *Capitulo XI por el cual se regulan los incentivos fiscales para empresas de reducida dimensión.* [online]. Available from <http://noticias.juridicas.com/base_datos/Fiscal/540273-l-27-2014-de-27-nov-impuesto-sobre-sociedades.html> [26 April 2016].

- Moda.es (2014) *La moda española reivindica su potencia económica: genera el 2,7% del PIB y el 4,2% del empleo* [online]. Available from < http://www.modaes.es/entorno/20141204/la-moda-espanola-reivindica-su-potencia-economica-genera-el-27-del-pib-y-el-42-del-empleo.html> [23 March 2016].

- Moreno, A. (2010) "El CAPM, un modelo de valoración de activos financieros*". El blog salmon* [online] 19 May. Available from < http://www.elblogsalmon.com/conceptos-de-economia/el-capm-un-modelo-de-valoracion-de-activos-financieros [9 May 2016].

- Navarro, G. (n.d.) *Efectos de los criterios empleados en la obtención de los parámetros del modelo CAPM en la valoración de Empresas* [online]. Valencia disponible en < https://riunet.upv.es/bitstream/handle/10251/15437/TRABAJO%20FINAL%20DE%20MASTER.pdf?sequence=1 > [18 de Mayo 2016].

- Riera, M. (2015) "El sector textil y el gasto en prendas de vestir en España 2015". *EAE Business School* [online] September. Available from < http://www.finanzas.com/archivos/201510/el-sector-textil-y-el-gasto-en-prendas-de-vestir-2015.pdf> [24 March 2016].

VI. Appendices

Annex I: Price list of the Florencia's products

Price of products			
Pants	**Units**	**Price**	**Total**
Neoprene pants	1	39.99	39.99
Rubber stamping pants	2	29.99	59.98
5 pockets pants	5	29.99	149.95
Pirate pants	1	24.99	24.99
Chinese pants	2	25.99	51.98
Pants width	1	39.99	39.99
Jacquard pants	2	39.99	79.98
Jeans	4	35.99	143.96
Bermuda	1	22.99	22.99
Basic pants	1	19.99	19.99

T-shirts	**Units**	**Price**	**Total**
Poncho T-shirt	6	29.99	179.94
Skirt t-shirt	3	32.99	98.97
Sheets t-shirt	2	19.99	39.98
Top	1	17.99	17.99
Stripes t-shirt	1	9.99	9.99
Denim t-shirt	1	12.99	12.99
Straps t-shirt	1	5.99	5.99
Mp t-shirt	2	14.99	29.98
Jacquard t-shirt	1	22.99	22.99
Basic t-shirt	1	15.99	15.99

Crocheted	**Units**	**Price**	**Total**
Pingo Jacket	5	35.99	179.95
Lurex Jacket	2	19.99	39.98
Stripes sweeter	1	17.99	17.99
Cinta Jacket	3	29.99	89.97
Stripes Jacket	10	39.99	399.9

Jackets	**Units**	**Price**	**Total**
Jacket	3	49.99	149.97
Cardigan	4	34.99	139.96
Stripes Jacket	2	59.99	119.98
Bomber Jacket	1	29.99	29.99

	Units	Price	Total
Guipur Jacket	2	44.99	89.98
Piqué Jacket	1	69.99	69.99

Coats	Units	Price	Total
Reaper	2	59.99	119.98
Jacket	1	39.99	39.99

Blouses	Units	Price	Total
Smock	12	29.99	359.88
Smooth smock	6	25.99	155.94
Printed smock	3	27.99	83.97
Bambula blouse	3	24.99	74.97
Stripes blouse	2	35.99	71.98
Gauze blouse	4	32.99	131.96
Top B	1	39.99	39.99

Dresess	Units	Price	Total
Printed dress	7	39.99	279.93
Printed dress	8	59.99	479.92
Printed dress	11	49.99	549.89
Straight dress	1	29.99	29.99
Bambula dress	1	37.99	37.99
Long dress	2	89.99	179.98
Pasa dress	3	44.99	134.97
Gauze dress	2	54.99	109.98

Skirts	Units	Price	Total
Midi skirt	1	26.99	26.99
Crocheted skirt	1	27.99	27.99
Doily skirt	2	39.99	79.98

Overall	Units	Price	Total
Overall	2	49.99	99.98
Party overall	1	69.99	69.99

Complements	Units	Price	Total
Shoes	6	79.99	479.94
Wallet	4	35.99	143.96
Bahamas bag	2	39.99	79.98
Hawaii bag	2	45.99	91.98
Sardinia bag	3	49.99	149.97
Sandal Baja	1	69.99	69.99
Foulard	5	12.99	64.95

Foulard A	3	9.99	29.97

Annex II. Calculation necessary to determine the discount rate. CAPM model.

Inditex performance

$y = 0{,}9373x + 0{,}0009$

◆ Inditex performance

— Lineal (Inditex performance)
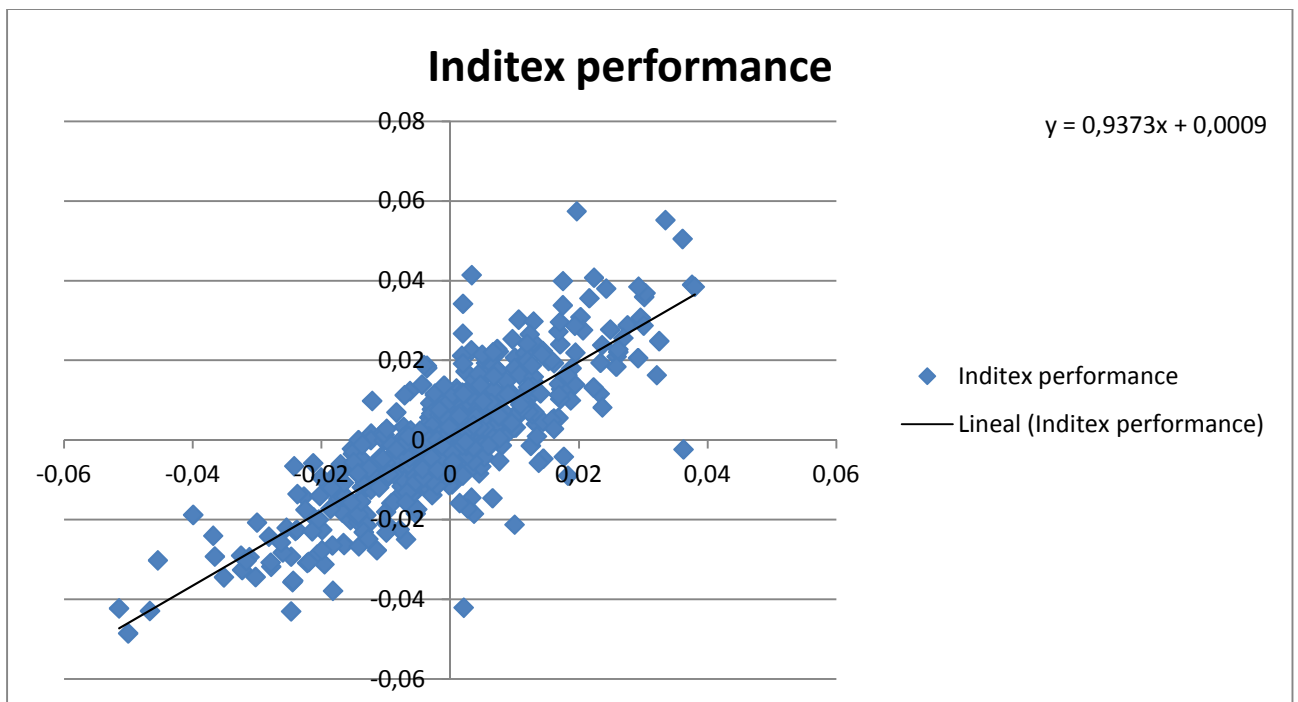
Summary

The regression statistics	
Correlation multiple coefficient	0,81
Coefficient of determination R^2	0,66
R^2 adjusted	0,66
Typical error	0,01
Comments	510,00

	Coefficients	Typical error	Statistic t	Probability	Lower 95%	Superior 95%	Lower 95,0%	Superior 95,0%
Interception	0,00	0,00	2,23	0,03	0,00	0,00	0,00	0,00
Variable X 1	0,94	0,03	31,44	2,66	0,88	1,00	0,88	1,00

Annex III. Calculation of the net cash flows after taxes. NPV and IRR

		0	1	2	3	4	5
Value of investment		115.700					
Potential market		250.000	250.000	250.000	250.000	250.000	250.000
Market share		1,05%	2.625	2.700	2.803	2.831	2.860
Rate growth of the market share	1-2	2,85%					
	2-3	3,83%					
	3-4	1,00%					
	4-5	1,00%					
Selling price		38,25	39	41	41	42	42
Rate growth of selling price	1-2	2,85%					
	2-3	3,83%					
	3-4	1,00%					
	4-5	1,00%					
Sales			103.268	110.279	115.648	117.972	120.343
Fixed Costs		13.371	13.371	13.371	13.371	13.371	13.371
Variable costs (over sales)		47%	48.536	51.831	54.354	55.447	56.561
NCFbt		**-115.700**	**41.361**	**45.077**	**47.922**	**49.154**	**50.411**
Amortization		23.140	23.140	23.140	23.140	23.140	23.140
Equity increase							10.000
Tax base			18.221	21.937	24.782	26.014	37.271
Tax		30%	5.466	6.581	7.435	7.804	11.181
NCFat		-115.700	41.361	45.077	47.922	49.154	50.411
Corporate income tax -			5.466	6.581	7.435	7.804	11.181
Sales value +							10.000
Operating working capital		12,75%	13.167	14.061	14.745	15.041	15.344

Variation operating working capital		13.167	894	685	296	302

NCFat	-115.700	22.728	37.602	39.803	41.054	48.927

Discount rate (K)	7%

Calculating of NPV and IRR	
NPV	36.472
IRR	17%
NP	9,96%

Annex IV. Obtained results in the different scenarios.

Scenarios Variables	Optimistic	Expected	Pessimistic
Rate of growth of the market share	1,05%	1,05%	0,81%
1-2	3,85%	2,85%	constant
2-3	4,83%	3,83%	constant
3-4	4,47%	1%	2%
4-5	0%	1%	2%
Selling price	38,25	38,25	38,25
Growth rate of selling price			
1-2	2,85%	2,85%	constant
2-3	3,83%	3,83%	constant
3-4	4,47%	1%	1%
4-5	5%	1%	1%
Fixed Costs	constants	constants	constants
Variable costs	constants	47%	constants

Results			
NPV	46.191	36.471	-10.382
IRR	19%	17%	4%
NP	12%	9%	-3%
K	7%	7%	7%

Annex V: Statistical inference

- **Calculations of expected values and the NCF variance**

	0	1	2	3	4	5
Optimistic	-115.700	22.728	37.863	41.474	45.539	55.603
Expected	-115.700	22.728	37.602	39.803	41.054	48.927
Pessimistic	-115.700	16.443	26.319	26.507	27.181	35.075

	0	1	2	3	4	5
E (Qj)	-115.700	20.632	33.927	35.927	37.924	46.535
VAR (Qj)	0	2.194.595	7.240.357	11.210.204	15.265.394	18.273.186
Desvest (Qj)	0	1.481	2.690	3.348	3.907	4.274
VAR actual	0	2.048.445	6.308.114	9.116.389	11.587.431	12.946.823

- **Expected value of NPV and variance and typical deviation of NPV**

E (NPV)	24.093
VAR (NPV)	42.007.205
DESVEST (NPV)	6481

-

Probabilities		OFFENCE	PROBABILITY	%
P(NPV >0)	-3,71		0,999899364	99,99%
P(NPV > 27.353,69)	0,50		0,307485673	30,75%
P(NPV <1,7)	-3,62		0,000146308	0,01%
P(3133,81<NPV<71,03)			0,307339365	30,73%

Data	
75% NPV	27353,69
1,7% NPV	620,02

Annex VI: Calculation of the income statements

- **Bank loan**

Income Statement						
Year	0	1	2	3	4	5
Sales		**103.267**	**110.278**	**115.647**	**117.972**	**120.343**
Fixed costs of operating		**13.371**	**13.371**	**13.371**	**13.371**	**13.371**
Amortization		23.140	23.140	23.140	23.140	23.140
Variable costs of operating		**48.535**	**51.831**	**54.354**	**55.446**	**56.561**
EBIT		**18.220**	**21.936**	**24.782**	**26.014**	**27.270**
Interests		5.785	5.325	4.842	4.335	3.802
EBT		**12.435**	**16.611**	**19.940**	**21.679**	**23.468**
Taxes	0,30	3.730	4.983	5.982	6.503	7.040,
EAT		**8.705**	**11.628**	**13.958**	**15.175**	**16.427**
Dividends	0,50	4.352	5.814	6.979	7.587	8.213
Reserves	0,50	4.352	5.814	6.979	7.587	8.213

Table of French loan

	Interest		0,05		
Year	**a**	**A**	**I**	**K**	
0				115.700	
1	14.983	9.198	5.785	106.501	
2	14.983	9.658	5.325	96.842	
3	14.983	10.141	4.842	86.701	
4	14.983	10.648	4.335	76.052	
5	14.983	11.181	3.802	64.871	
6	14.983	11.740	3.243	53.131	
7	14.983	12.327	2.656	40.804	
8	14.983	12.943	2.040	27.860	
9	14.983	13.590	1.393	14.270	
10	14.983	14.270	713	0	

- **Capital increase with a 75% distribution of dividends over net income**

	Income Statement					
Year	0	1	2	3	4	5
Sales		**103.267,83**	**110.278,84**	**115.647,55**	**117.972,06**	**120.343,30**
Fixed costs of operating		**13.371,00**	**13.371,00**	**13.371,00**	**13.371,00**	**13.371,00**
Amortization		23.140,00	23.140,00	23.140,00	23.140,00	23.140,00
Variable costs of operating		**48.535,88**	**51.831,06**	**54.354,35**	**55.446,87**	**56.561,35**
EBIT		**18.220,95**	**21.936,79**	**24.782,20**	**26.014,19**	**27.270,95**
Interests		-	-			
EBT		**18.220,95**	**21.936,79**	**24.782,20**	**26.014,19**	**27.270,95**
Taxes	0,30	5.466,28	6.581,04	7.434,66	7.804,26	8.181,28
EAT		**12.754,66**	**15.355,75**	**17.347,54**	**18.209,93**	**19.089,66**
Dividends	0,75	9.566,00	11.516,81	13.010,65	13.657,45	14.317,25
Reserves	0,25	3.188,67	3.838,94	4.336,88	4.552,48	4.772,42

- **Capital increase with 40% over initial payment and 60% with a French bank loan.**

Loan	60%	69.420
Capital increase	40%	46.280
		115.700

	Income Statement					
Year	0	1	2	3	4	5
Sales		**103.267,83**	**110.278,84**	**115.647,55**	**117.972,06**	**120.343,30**
Fixed costs of operating		**13.371,00**	**13.371,00**	**13.371,00**	**13.371,00**	**13.371,00**
Amortization		23.140,00	23.140,00	23.140,00	23.140,00	23.140,00
Variable costs of operating		**48.535,88**	**51.831,06**	**54.354,35**	**55.446,87**	**56.561,35**
EBIT		**18.220,95**	**21.936,79**	**24.782,20**	**26.014,19**	**27.270,95**
Interests		3.471,00	3.195,04	2.905,28	2.601,03	2.281,58
EBT		**14.749,95**	**18.741,75**	**21.876,92**	**23.413,16**	**24.989,37**
Taxes	0,30	4.424,98	5.622,52	6.563,08	7.023,95	7.496,81
EAT		**10.324,96**	**13.119,22**	**15.313,84**	**16.389,21**	**17.492,56**
Dividends	0,70	7.227,47	9.183,46	10.719,69	11.472,45	12.244,79
Reserves	0,30	3.097,49	3.935,77	4.594,15	4.916,76	5.247,77

Table of French loan

	Interest		0,05	
YEAR	**a**	**A**	**I**	**K**
0				69.420,00
1	8.990,21	5.519,21	3.471,00	63.900,79
2	8.990,21	5.795,17	3.195,04	58.105,62
3	8.990,21	6.084,93	2.905,28	52.020,70
4	8.990,21	6.389,17	2.601,03	45.631,53
5	8.990,21	6.708,63	2.281,58	38.922,89
6	8.990,21	7.044,06	1.946,14	31.878,83
7	8.990,21	7.396,27	1.593,94	24.482,57
8	8.990,21	7.766,08	1.224,13	16.716,49
9	8.990,21	8.154,38	835,82	8.562,10
10	8.990,21	8.562,10	428,11	-

Annex VII: Capital budget

- **Bank loan**

	Bank loan				
	1	**2**	**3**	**4**	**5**
Investment budgets	**138.065,33**	**10.552,52**	**10.826,05**	**10.945,00**	**11.483,39**
Investments	115.700,0				
Working capital requirements	13.166,6	893,9	684,5	296,4	302,3
Financial amortizations	9.198,7	9.658,6	10.141,5	10.648,6	11.181,1
Financing budget	**143.192,6**	**28.954,1**	**30.119,0**	**30.727,7**	**31.353,9**
Self- financing	27.492,6	28.954,1	30.119,0	30.727,7	31.353,9
External funding	115.700,0				
Deficit/Surplus	5.127,25	18.401,58	19.292,97	19.782,70	19.870,53
Accumulated	5.127,25	23.528,8	42.821,8	62.604,5	82.475,0

Determination the amount of self-financing					
	1	**2**	**3**	**4**	**5**
PBI	18.221	21.937	24.782	26.014	27.271
Bank loan interests (new)	**5.785,00**	**5.325,07**	**4.842,14**	**4.335,06**	**3.802,63**
Bank loan interests (existent)					
PBT	12.435,95	16.611,72	19.940,06	21.679,13	23.468,32
Taxes (30%)	3.730,78	4.983,52	5.982,02	6.503,74	7.040,50
30%					
Net income	8.705,16	11.628,20	13.958,04	15.175,39	16.427,83

	1	2	3	4	5
Dividends 50%	4.352,58	5.814,10	6.979,02	7.587,70	8.213,91
Reserves 50%	4.352,58	5.814,10	6.979,02	7.587,70	8.213,91
Self-financing (Reserves+ Amortization)	27.492,58	28.954,10	30.119,02	30.727,70	31.353,91
Amortization	**23.140,00**	**23.140,00**	**23.140,00**	**23.140,00**	**23.140,00**

- **Capital increase**

	Capital increase				
	1	2	3	4	5
Investment budgets	**128.866,65**	**893,90**	**684,51**	**296,38**	**302,33**
Investments	115.700,0				
Working capital requirements	13.166,6	893,9	684,5	296,4	302,3
Financial amortizations					
Financing budget	**142.028,7**	**26.978,9**	**27.476,9**	**27.692,5**	**27.912,4**
Self- financing	26.328,7	26.978,9	27.476,9	27.692,5	27.912,4
External funding	115.700,0				
Deficit/Surplus	13.162,02	26.085,03	26.792,38	27.396,11	27.610,08
Accumulated	13.162,02	39.247,1	66.039,4	93.435,5	121.045,6

Determination the amount of self-financing					
	1	2	3	4	5
PBI	18.221	21.937	24.782	26.014	27.271
Bank loan interests (new)					
Bank loan interests (existent)					
PBT					
Taxes (30%)	18.220,95	21.936,79	24.782,20	26.014,19	27.270,95
30%	5.466,28	6.581,04	7.434,66	7.804,26	8.181,28
Net income					
Dividends	12.754,66	15.355,75	17.347,54	18.209,93	19.089,66
50%	9.566,00	11.516,81	13.010,65	13.657,45	14.317,25
Reserves					
50%	3.188,67	3.838,94	4.336,88	4.552,48	4.772,42
Self-financing (Reserves+ Amortization)					
Amortization	26.328,67	26.978,94	27.476,88	27.692,48	27.912,42
Dividends	23.140,00	23.140,00	23.140,00	23.140,00	23.140,00

- **Capital increase and bank loan**

	Capital increase and bank loan				
	1	2	3	4	5
Investment budgets	**134.385,86**	**6.689,07**	**6.769,44**	**6.685,55**	**7.010,96**

	1	2	3	4	5
Investments	115.700,0				
Working capital requirements	13.166,6	893,9	684,5	296,4	302,3
Financial amortizations	5.519,2	5.795,2	6.084,9	6.389,2	6.708,6
Financing budget	**141.937,5**	**27.075,8**	**27.734,2**	**28.056,8**	**28.387,8**
Self- financing	26.237,5	27.075,8	27.734,2	28.056,8	28.387,8
External funding	115.700,0				
Deficit/Surplus	7.551,63	20.386,69	20.964,72	21.371,21	21.376,80
Accumulated	7.551,63	27.938,3	48.903,0	70.274,3	91.651,1

Determination the amount of self-financing

	1	2	3	4	5
PBI	18.221	21.937	24.782	26.014	27.271
Bank loan interests (new)	**3.471,00**	**3.195,04**	**2.905,28**	**2.601,03**	**2.281,58**
Bank loan interests (existent)					
PBT					
Taxes (30%)	14.749,95	18.741,75	21.876,92	23.413,16	24.989,37
30%	4.424,98	5.622,52	6.563,08	7.023,95	7.496,81
Net income					
Dividends	10.324,96	13.119,22	15.313,84	16.389,21	17.492,56
50%	7.227,47	9.183,46	10.719,69	11.472,45	12.244,79
Reserves					
50%	3.097,49	3.935,77	4.594,15	4.916,76	5.247,77
Self-financing (Reserves+ Amortization)					
Amortization	26.237,49	27.075,77	27.734,15	28.056,76	28.387,77
Dividends	23.140,00	23.140,00	23.140,00	23.140,00	23.140,00

Annex VIII: Reduction the cash surpluses of the bank loan

- **Provisional Income Statement with a new dividends policy of 70%**

Income Statement						
Year	0	1	2	3	4	5
Sales		103.267,83	110.278,84	115.647,55	117.972,06	120.343,30
Fixed costs of operating		13.371,00	13.371,00	13.371,00	13.371,00	13.371,00
Amortization		23.140,00	23.140,00	23.140,00	23.140,00	23.140,00
Variable costs of operating		48.535,88	51.831,06	54.354,35	55.446,87	56.561,35
EBIT		18.220,95	21.936,79	24.782,20	26.014,19	27.270,95
Interests		5.785,00	5.179,18	4.293,08	3.362,67	2.385,73
EBT		12.435,95	16.757,60	20.489,12	22.651,53	24.885,22
Taxes	0,30	3.730,78	5.027,28	6.146,74	6.795,46	7.465,56
EAT		8.705,16	11.730,32	14.342,39	15.856,07	17.419,65

61

Dividends	0,70	6.093,61	8.211,22	10.039,67	11.099,25	12.193,76
Reserves	0,30	2.611,55	3.519,10	4.302,72	4.756,82	5.225,90

- **Amount to self-financing based on the modification of reserves amount**

Self-financing= Reserves + amortization	1	2	3	4	5
Reserves	2.611,55	3.519,10	4.302,72	4.756,82	5.225,90
Amortization	23.140,00	23.140,00	23.140,00	23.140,00	23.140,00
Self-financing	25.751,55	26.659,10	27.442,72	27.896,82	28.365,90

- **Amortization table of French bank loan with an additional payment from year 2:**
  - **Year 2-5: 5.000€**
  - **Year 6: 10.657 €**

	Interest	0,05		
Year	a	A	I	K
0				115.700
1	17.901	12.11	5.785	103.583
2	17.901	17.722	5.179	85.861
3	17.901	18.608	4.293	67.253
4	17.901	19.538	3.362	47.714
5	17.901	20.515	2.385	27.199
6	17.901	27.199	1.359	0

- **Profitability obtained with the investment of surpluses in 10 year Spanish bonds.**

Profitability 10 year Spanish bond		29/05/2016	1,41%		
Nominal investment	2	8.000			
	3	8.000			
	4	8.000			
	5	7.000			
C10		9.197	9.197	9.197	8.048

▪ Capital budget which has all the new conditions explained previously.

	Bank loan				
	1	2	3	4	5
Investment budgets	**140.982,96**	**26.616,03**	**27.292,75**	**27.835,02**	**27.817,91**
Investments	115.700,0				
Working capital requirements	13.166,6	893,9	684,5	296,4	302,3
Financial amortizations	12.116,3	17.722,1	18.608,2	19.538,6	20.515,6
10 years Spanish bold		8.000,0	8.000,0	8.000,0	7.000,0
Financing budget	**141.451,5**	**26.659,1**	**27.442,7**	**27.896,8**	**28.365,9**
Self- financing	25.751,5	26.659,1	27.442,7	27.896,8	28.365,9
External funding	115.700,0				
Deficit/Surplus	468,59	43,06	149,97	61,80	547,98
Accumulated	468,59	511,6	661,6	723,4	1.271,4
Determination the amount of self-financing					
	1	2	3	4	5
	18.221	21.937	24.782	26.014	27.271
PBI	**5.785,00**	**5.179,18**	**4.293,08**	**3.362,67**	**2.385,73**
Bank loan interests (new)					
Bank loan interests (existent)					
PBT	12.435,95	16.757,60	20.489,12	22.651,53	24.885,22
Taxes (30%)	3.730,78	5.027,28	6.146,74	6.795,46	7.465,56
30%					
Net income	8.705,16	11.730,32	14.342,39	15.856,07	17.419,65
Dividends					
50%	5.223,10	7.038,19	8.605,43	9.513,64	10.451,79
Reserves		60%			
50%	3.482,07	4.692,13	5.736,95	6.342,43	6.967,86
Self-financing (Reserves+ Amortization)		40%			
Amortization	26.622,07	27.832,13	28.876,95	29.482,43	30.107,86
Dividends	**23.140,00**	**23.140,00**	**23.140,00**	**23.140,00**	**23.140,00**

Annex IX: Information about Florencia

DOSSIER
FLORENCIA.pdf