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Valuation of the Merger of British American Tobacco & Reynolds American

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ABSTRACT

The aim of the present postgraduate dissertation is to analyze some valuation techniques that are useful for merger and acquisition (M&A) activities, with a view to assessing the situation of a particular merger within the context of valuation. In this paperwork, it is going to be measured the fair value of *Reynolds American (RAI)*, a company acquired in July 2017 at an agreed price of $49.4 billion by a similar from the same sector, *British American Tobacco (BAT)*, creating the biggest listed tobacco company in the world. Through the analysis of the financial situation of both companies, and with the help of several valuation methods, it is expected to estimate how fair the estimation of the acquired company was at the time of the acquisition. Moreover, considering that synergies are the main reason that direct businesses to engage in this type of operations, net synergies will also be accounted, calculated as the difference between the value of the merged entity and the sum of the value of both businesses individually.

RESUMEN

El objetivo de la presente tesis de posgrado es analizar algunas técnicas de valoración que son útiles para las actividades de fusión y adquisición (M&A), con el fin de evaluar la situación particular de una fusión dentro del contexto de valoración. En este documento, se evaluará el valor razonable de *Reynolds American (RAI)*, una compañía adquirida en julio de 2017 a un precio acordado de $ 49,4 mil millones por un similar del mismo sector, *British American Tobacco (BAT),* creando la mayor empresa tabacalera cotizada. A través del análisis de la situación financiera de ambas compañías, y con la ayuda de varios métodos de valoración, se espera estimar cuán justa fue la estimación de la compañía adquirida en el momento de la adquisición. Por otra parte, considerando que las sinergias son la principal razón que lleva a las empresas a realizar este tipo de operaciones, también se contabilizarán las sinergias netas, calculadas como la diferencia entre el valor de la entidad fusionada y la suma del valor de ambos negocios individualmente.

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INTRODUCTION

Organizations are increasingly considering Merger and Acquisition (M&A) activities as a tool for business growth. Regardless the main reasons that direct companies to participate in this type of deals, the primary purpose is to help businesses to create a larger value than the value they create on their own. This assumption introduces the concept of synergy, which states that the cooperation of two or more organizations produce a greater effect together than the one produced summing the effects generated individually (Gaughan, 2007)[1].

Some empirical studies on this topic have determined that M&A deals are not always as successful as they are expected to be. It is very significant that acquirers make an accurate estimation of the fair value of the target company in order to succeed in both the negotiation of the acquisition price and the consequences of the merger (Rhodes at, 2004). For this reason, positive synergies will not always result from an M&A process when there exist gaps between the agreed price and the fair value of the target company. (Agrawal at al,1992; Bruner, 2002; Brotherson at al, 2014). [2]

The aim of this project is to make an accurate estimation of the acquisition price of Reynolds American, the second-largest tobacco company in the United States. British American Tobacco (BAT), one of the global leaders in the tobacco market, bought the 57.8% of Reynolds it didn't already owned in June 2017 at an agreed price of 49.4 billion, creating the world's biggest listed tobacco company. This study will discuss different valuation techniques to determine the acquisition price of the target company, in order to study the possible existing gaps between the agreed price at the time of the acquisition and the price that will be estimated in this project.

The dissertation is divided into four major parts. The first part is dedicated to the literature review, which introduces the concept of M&As, the different forms it can take, and the reasons that direct organizations to take part in this type of activities. Several valuation techniques, which will be used for the purpose of this research, will also be described. The second section will focus on the analysis of the industry and the companies engaged in the agreement, so as to have a broader idea of them and the sector they operate in. Both

[1] Gaughan, P.A. (2007). *Mergers, Acquisitions, and Corporate Restructurings*. John Wiley & Sons, Inc., United States.

[2] Aydin, N. (2017). "Mergers and Acquisitions: A review of valuation methods". *International Journal of Business and Social Science*, Vol. 8, No. 5, pp. 147-151.

companies' enterprise value will be calculated, as well as their upside potential in the market. The third part is going to carry out the valuation of both businesses together and the estimation of the synergies resulting from the agreement. This will allow us to extract the main conclusions and arrive to the last stage, which will state the acquisition price accounted during the study as well as the structure of the final offer. Final conclusions will be provided concerning the financial and strategic reasons for the merger, the accuracy of the valuation of American Reynolds at the time of the acquisition, and the total amount of net synergies estimated along the project.

1. THEORETICAL FRAMEWORK

The theoretical framework of this project is based on different academic studies and specific books concerning the valuation of mergers and acquisitions. Both the authors and the theories put forward by them, will be mentioned along the paperwork.

Basing the study of this report on the literature previously mentioned, this first part of the project, that composes the theoretical section, is going to include an explanation on several aspects regarding mergers and acquisitions, and some of the methods used to value companies in this setting.

1.1. Mergers and acquisitions

Worldwide companies are implementing mergers and acquisitions as part of their business tools. As a result of all the economic changes they have to face, this kind of transactions are becoming very significant in today's economy. In this section of the paperwork, the concept of M&A and the motivations that conduct organizations to get involved in this type of deals, are going to be described.

1.1.1. Motivations for Mergers & Acquisitions

Today's business climate, characterized by the rapidly change in technology, the increasing competition and the shifting of profit margins, have directed businesses to consider mergers & acquisitions (M&A) as a way of growing. They are playing a significant role in external corporate expansion, operating as a strategy for corporate restructuring and control.

Mergers and acquisitions are a general term that refers to the consolidation of companies or assets through various types of financial transactions: mergers, acquisitions, purchase of assets, consolidations, management acquisitions and tender offers. In every case, two companies are involved, and it is seen as a mechanism to help businesses to create higher value than the value they create on their own.

Takeover, merger and acquisition are often used as if they were identical. However, different implications are taken into account when it is referred to each of them.

According to DePamphilis (2003)[3] and Scott (2003)[4], an acquisition takes place when a plant, a division or an entire company is being purchased or acquired by another firm.

Regarding mergers, Hampton (1989) claims that "a merger is a combination of two or more businesses in which only one of the corporations survives", being one of the two parties dominant. On the contrary, Singh (1971) states that at least two firms are combined in order to form a new legal entity. Singh's concept can be seen as A+B=C, whereas Hampton's concept can be seen as A+B=A, B or C.

Some authors consider that the net result is the same for each of the cases, and that it is not necessary to make a distinction between those terms. In other words, every case is referred to the fact that two companies with separate ownership decide to operate together in order to obtain some financial and strategic objectives.

Having explained the concept of mergers and acquisitions, it is also important to highlight which are the reasons that encourage companies to participate in this kind of deals.

The first reason considered is growth, which is seen as the primary goal that guides companies to take part in M&A's activities. There are two growth possibilities: internal or organic growth (e.g. developing new products, expand geographically) and inorganic growth (e.g. gaining access to a new product line, acquisition or merger of another firm) or by external means (e.g. joint ventures, strategic alliances, franchising, licensing). Firms perceive mergers and acquisitions as means to increase their capital base (Stafford, 2004). For many cases, it is faster and less risky to grow through these activities than through internal development.

The second reason for M&A is synergy. This concept states that the cooperation of two or more organizations produce a greater effect together than the one produced summing the effects generated individually (Gaughan, 2007)[5]. In the case of mergers, this is traduced as the ability of a corporate combination to be more profitable than the combination of the individual profits of the merged firms. DePamphilis (2003)[6] makes a distinction between two different kind of synergies:

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[3] DePamphilis, D. 2003. *Acquisitions and Other Restructuring Activities: An Integrated Approach to Process, Tools, Cases, and Solutions*. Elsevier, Inc., United States.

[4]Scott, D.L. 2003. Wall Street Words: An A to Z Guide to Investment Terms for Today's Investor. Clarion Books, Inc., United States.

[5] Gaughan. *Mergers, Acquisitions, and Corporate Restructurings*. Op.cit.

[6] DePamphilis. *Acquisitions and Other Restructuring Activities: An Integrated Approach to Process, Tools, Cases, and Solutions*. Op. cit.

- Operating. This type of synergy refers to economies of scope (to reduce unit costs by increasing total output) and economies of scale (economic factors that make the simultaneous production of different products more cost-effective than manufacturing them independently).
- Financial. Consists on the impact produced on the cost of capital of the buying firm or the new entity formed as a result of a merger or acquisition.

Furthermore, the third reason is the approach to intangible assets. The value that companies give to intangible resources has considerably increased in the last years. Knowledge, seen as the basis for the development of organizational activities, is playing a crucial role in the decision making of firms. Intangible assets comprise (Saint-Onge & Chatzkel, 2009)[7]:

- Human capital. It is referred to the capabilities and skills of all the employees of the company (e.g. knowledge, aptitudes, skills). These capabilities generate value for clients.
- Customer capital. Consists of the specific core competencies of a firm (strategies, structures and processes) and the organizational capacity and physical systems used to transfer and store intellectual material. It is mainly composed of the organization of the firm, innovation and processes.
- Structural capital. It indicates the customer relationship, which can be defined by depth (penetration of customers' wallets), breadth (share of the market), sustainability (durability of the relationship with customers) and the profitability that generates in the firm.

Intangible assets have a greater value in organizations than physical or financial assets, and what is more, they are viewed as the most valuable assets inside the company. However, as they depend on the goodwill and commitment of individuals, they are also very fragile and difficult to control (Coffey, Garrow & Holbeche, 2002).

Apart from these three reasons previously mentioned, some other purposes can be found that motivate companies to participate in M&A, such as horizontal and vertical

[7] Madhani, Pankaj M. (2009) , "Intangible Assets: Value Drivers for Competitive Advantage", *Best practices in management accounting*, pp.147-164.

integration, tax benefits, cost reduction, new customer base, larger R&D capabilities, or changes in markets, technology and industry (Kreitl & Oberndorfer, 2004).

So, all the above-mentioned motives fall under the buyer´s perspective, but it is also important to include the motives behind the sellers. Some of these points that guide them to make the decision of selling may be: lack of resources and capital, emerging competitors, decision to turn equity into cash, growth maximization, owner's retirement.

1.1.2. Types of M&A

Mergers and acquisitions can be categorized according to their nature. The term chosen to describe their type depends on the economic function, the purpose of the business and the existing relationship between the merging companies. According to Ross et. Al (2003), there are two different ways to categorize M&A's: by legal procedures and by the typical financial analysts' classification.

On the one side, regarding the **l**egal procedures, transactions can be classified in: merger or consolidation, acquisitions and tender offers. On the other side, according to the typical financial analysts' classification, there are five commonly-referred to types of business combinations known as mergers: conglomerate merger, horizontal merger, vertical merger, market extension merger and product extension merger.[8]

Legal procedures

- Merger or consolidation

Both processes require the approval of the shareholders of the participating companies. The difference between the two is that, in the case of a merger, the acquired company disappears as it is absorbed by the parent company. However, in a consolidation operation, a new company is created, of which shareholders will own common shares.

- Acquisition

On the one hand, in a simple acquisition, the buyer company obtains the majority of the shares of the target company, without changing its name nor its legal structure. On the other hand, in an assets acquisition, if shareholders approve the operation, an organization acquires the assets of a company.

[8] Bulaki Borad, S. (December 31st, 2018). "Classification/Types of Mergers". IE Business School [online]. Available: https://efinancemanagement.com/mergers-and-acquisitions/classification-types-of-mergers. [accessed: March 3, 2019].

- Tender offer

In this type of transaction, the acquiring company gets in direct contact with the shareholders of another company, to which it offers to buy its outstanding shares at a fixed price. This type of transaction usually ends in a merger.

Financial analysts' classification

- Conglomerate merger

When two companies that merge operate in different business areas, it is said to be a conglomerate merger. There are two types: pure and mixed. For the first kind, both companies operate in different markets and in different business areas. In the case of the mixed, both companies operate under the purpose of a product or market extension.

- Horizontal merger

Horizontal mergers take place when two companies that are direct competitors decide to join together to expand their market share. Both are active in the same industry and offer the same type of product.

- Vertical merger

A vertical merger takes place when two companies in the same production chain, but operating at different levels, decide to combine. This type of operations is usually successful, as the flow of information is clearer between them.

- Market extension merger

As the name suggests, this type of merger is aimed at expanding the market share, and thus the consumer base. The participating companies offer the same type of products but in different markets.

- Product extension merger

A product extension merger consists in the combination of two organizations that sell related products in the same market. As a result of the merge, both companies will benefit from a larger base of clients.

1.2. Valuation Methods

The second part of the theoretical framework is going to address some valuation methods for companies engaged in merger and acquisition (M&A) activities. Although there exist several valuation techniques that can be adopted for this purpose, Damodaran (2002)[9] distinguishes three different methods, which are going to be explained in detail.

- Discounted Cash Flow valuation
- Relative Valuation
- Contingency valuation

1.2.1. Discounted Cash Flow Valuation

In an M&A setting, the Discounted Cash Flow approach seeks to define the value of a company by computing the present value of cash flows over the life of the company. The organization is assumed to have an infinite life, and for this reason, the analysis is divided into two different parts: forecast period and terminal value. In the forecast period, which usually considers a period from five to ten years, explicit forecasts of free cash flows, which incorporate the costs and benefits of the deal, must be developed (Chaplinsky, 2000).[10]

After the forecast period, the value of the company that results from the free cash flows is captured by a terminal value. It is estimated in the last year of the forecast period and capitalizes the present value of all future cash flows beyond the forecast period. Moreover, when free cash flows are determined, the Weighted Average Cost of Capital (WACC) is used so as to discount the in order to obtain the present value, which results in the value estimation of the enterprise.

Having described the concept of free cash flows, terminal value and WACC, an approach to the calculation of these three terms is going to be provided.

Free Cash Flows

In a merger and acquisition analysis, free cash flows are contemplated to be the operating cash flows attributable to the acquisition, before considering any financing charges. Free cash flow (FCF) is equal to the sum of NOPAT (Net Operating Profits After Taxes), the

[9] Damodaran, A. (2002). *Investment Valuation*. John Wiley & Sons, Inc., United States.

[10] Chaplinsky, S. (2000). "Methods of valuation for mergers and acquisitions". *Graduate School of Business Administration. University of Virginia (*UVA-F-1274).

depreciation and non-cash charges, and the discount of the investment in capital and the working capital investment (assuming it is increasing).

To see it clearly, the expression stands as follows:

$$FCF=EBIT\ (1-t)\ +Depreciation-CAPEX+/-\Delta NWC$$

- EBIT stands for earnings before interest and taxes.
- Depreciation refers to non-cash operating charges such as amortization, depreciation and depletion.
- CAPEX is the capital expenditures in fixed assets.
- T is the marginal tax rate.
- ΔNWC is the change in net working capital, which could be positive or negative. When it decreases it represents a positive cash flow, while when it increases it represents a positive one.

Terminal Value

In the final year of the forecast period, the terminal value is added in order to expose the present value of all cash flows happening thereafter. The long-term growth forecasts of the company are capitalized by the terminal value, so it is a large factor of the value of the firm. It is important to pay attention to this concept.

The perpetual growth model is the preferred method among academics in order to calculate a terminal value. This model assumes the business will continue to generate Free Cash Flows (FCF) at a normalized state forever (perpetuity). The formula for calculating the terminal value is:

$$\text{Terminal value} = \frac{\text{FCFt} * (1 + \text{g})}{\text{WACC} - \text{g}}$$

- FCF is the expected free cash flow to all capital providers in period t.
- WACC is the weighted Average Cost of Capital
- g is the expected constant growth rate in perpetuity for each period.

The terminal value is highly affected by the value of the growth rate, so special attention must be paid when determining this factor. For this reason, cash flows should be projected until a point where the company and its industry are in sustainable long-term equilibrium,

which comes after the high growth stage. At this point, the constant growth formula can be applied, and it is probable that it takes a value similar to the rate.

Discount rate

Investors' opportunity cost on comparable investments should be exposed by the discount rate. The weighted average cost of capital (WACC) is the calculation of the company's cost of capital in which each type of capital is proportionately weighted. It is the overall required return for an organization. For this reason, company's decisions, such as determining the feasibility of mergers, are often based on this component.
The formula for WACC is:

$$WACC= E/V *ke + D/V * kd * (1-t)$$

- Ke represents the cost of equity
- Kd denotes the interest rate on new debt
- V stands for the total amount of equity and debt
- E/V represents the weight of equity
- D/V represents the weight of debt
- T is the marginal tax rate

For calculating the weights of equity and debt, their market values are used. Moreover, the cost of equity can be obtained from the Capital Asset Pricing Model (CAPM).

$$Ke=Rf+ B (Rm-Rf)$$

- Rf is the theoretical rate of return of an investment with zero risk. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.
- Rm-Rf represents the historic risk premium for common stocks over government bonds.
- B stands for beta, a measure of the systematic risk of a company's common stock. It includes compensation for business and financial risk.

1.2.2. Relative Valuation

According to Damodaran (2002)[11], when considering relative valuation, "the value of an asset is compared to the values assessed by the market for similar or comparable assets". Therefore, for doing a relative valuation, it is necessary: 1) to identify comparable assets and determine their market value, 2) to convert these market values into standardized values, as absolute prices cannot be compared (this process creates price multiples) and 3) to compare the standardized value of the comparable assets to the standardized value of the analyzed asset.

Moreover, in relative valuation, four different steps can be found:

- To define the multiplier. In practice, the same multiplier can be defined in different ways. It is critical to know how the multiple has been estimated.
- To know the distribution of the multiplier. It is necessary the knowledge of the statistical distribution of each multiplier in order to judge whether it is too high or low.
- To analyze the multiplier: to understand the fundamental variables that are behind each multiplier and the nature of the relationship between the multiplier and each variable.
- Apply the multiplier. In practice, it is sometimes a difficult process.

There exist many advantages for choosing this method. For instance, it is much faster and takes into account fewer assumptions than other valuation techniques, it is simpler to understand and to explain to customers and it is more likely to reflect the current mood of the market than other methods, such as discounted cash flows method (Damodaran, 2006).[12]

The prices of assets can be standardized relative to the earnings firms generate, to the book value or replacement value of the firms themselves, to the revenues firms generate or to measures that are specific to firms in a sector. In Table 1.1., the most used multipliers according to the different variables just mentioned, are going to be reflected.

[11] Damodaran, A. (2002). *Investment Valuation*. Op.cit.

[12] Damodaran, A. (2006). *Damodaran on Valuation.* John Wiley & Sons, Inc., United States.

Table 1.1. Relative Valuation multipliers

Benefit multipliers	Price Earnings Ratio (P/E)
	Firm Value/EBIT (EV/EBIT)
	Firm Value/ EBITDA
Book Value Multipliers	Price/ Book Value of own resources (P/BV)
	Firm value/ Book value of productive assets
	Firm value/ Replacement cost
Income multipliers	Price/Sales per Share
	Firm value/Sales
Specific variable of an industry or sector	Price/ KWh
	Price/ Equivalent oil barrels
	Price/ Ton of steel

Source: Damodaran (2006). Own elaboration.

1.2.3. Contingent claim valuation

Damodaran (2002) states that "A contingent claim or option is a claim that pays off only under certain contingencies: if the value of the underlying asset exceeds a prespecified value for a call option or is less than a prespecified value for a put option". An option can be valued as a function of: the actual value of the underlying asset, the maturity of the option, the exercise or strike price and the risk-free interest rate. This was first established by Fischer Black and Myron Scholes in 1972 and has developed since then.

Regarding options, two different categories can be described: 1) Based on whether the underlying asset is a financial asset (e.g. stocks and bonds) or real asset (e.g. commodities, real estate, investment projects). 2) Based on whether the underlying asset is traded or not. This categorization implies overlapping because few real assets are traded, while most financial assets are. It is easier to value options on traded assets because for non-traded assets there are no market inputs available on the underlying assets (Damodaran, 2002).

In summary, three different valuation methods have been described. The first one is the DCF method, in which cash flows are discounted at a discount rate to obtain the present value. The second method described is relative valuation, which values a company's shares on the basis of its comparable companies, regarding its operating margin, sales, market price, etc. And finally, the third method is contingent claim valuation, where an asset with the characteristics of an option is valued using an option pricing model.

2. CASE STUDY: BAT & REYNOLDS AMERICAN

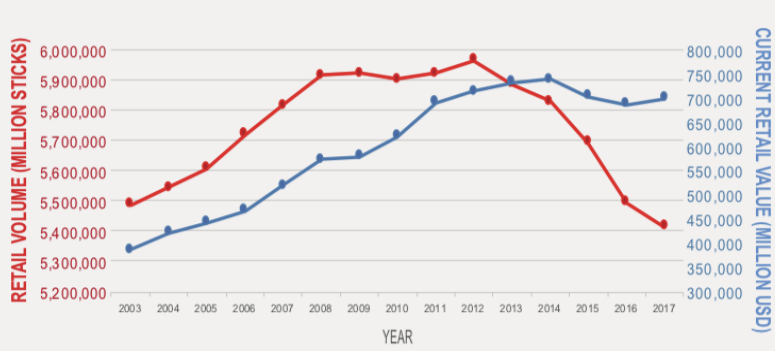
The second part of this dissertation is entirely dedicated to the individual financial analysis of the two companies engaged in the acquisition process: British American Tobacco (BAT) and Reynolds American (RAI). But before focusing on the standalone analysis of these two, a brief description of the industry in which the two businesses operate, is going to be provided.

2.1. Industry analysis

Tobacco is an agricultural commodity product, and one of the most broadly used addictive substances in the world. The tobacco industry is comprised by those engaged in the growth, preparation for sale, shipment, advertisement, and distribution of tobacco and tobacco-related products. It is a global industry because this type of substance can be cultivated in any warm, humid environment. For this reason, it can grow in any continent, except for Antarctica.

The tobacco industry is one of the most profitable industries in the world. It is increasingly targeting emerging markets, as the majority of its consumers live in low- and middle-income countries. In 2017, over 5.4 trillion cigarettes were sold to more than 1 billion smokers worldwide, and cigarette retail values were worth US $699.4 billion. Between 2003 and 2017, there was a decrease of 1.3% in global cigarette volume sales while retail values increased by 26.5%. It is predicted by analysists that by 2022, the global cigarette volume will decline by 8%, and that the real value will decline by 0.3%. [13]

Graphic 2.1. Global cigarette market: historic retail volume and current value (2003-2017).

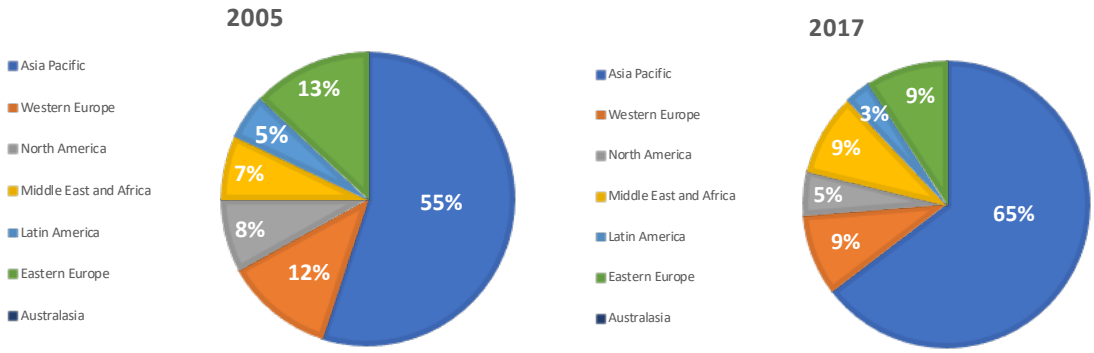


Source: Euromonitor International, 2018

[13] Euromonitor International (August 2018). *"The Global Cigarette industry"*. Euromonitor International [online].Available:https://www.tobaccofreekids.org/assets/global/pdfs/en/Global_Cigarette_Industry_pdf.pdf [accessed: March 29, 2019].

As previously mentioned, while cigarette consumption is declining in high-income countries, it is growing in low-and middle-income nations. Some of the reasons than can explain this situation is that while in some developed countries government policies are very restricted, some emerging countries take advantage of their growing population, increasing incomes and their lax regulatory environment. In the following graphic, it is reflected the shifting in sales from developed markets to emerging markets from 2005 to 2017.

Graphic 2.2. Global cigarette market by region



Source: Euromonitor International, 2018[14]

The cigarette market is mainly controlled by a few international companies. In the last years, the international tobacco industry has been dominated by:

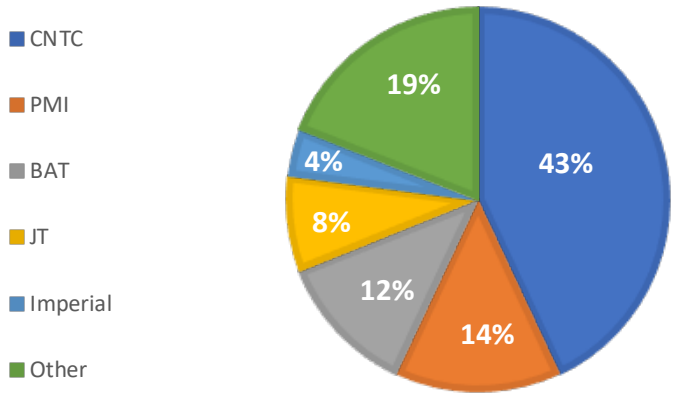
- Philip Morris International (PMI). It is a publicly traded American company which controls around 14.1% of the international cigarette market. It only sells its tobacco products outside the United States, operating in more than 180 markets. The firm sells 6 of the top 15 brands, including the world's top selling brand, Marlboro.
- British American Tobacco (BAT). It is a publicly traded company based in London. Controlling the 11.8% of the international cigarettes market, it is the third largest company in the global tobacco market. The acquisition of some tobacco companies, such as Reynolds American, Bulgartabac and others, contributed to the overall growth in volume and value of the company.

[14] Ibid., *"The Global Cigarette industry"*.

- China National Tobacco Corporation (CNTC). It is the largest producer of cigarettes (42.6%) in the world. It is owned by the Chinese government and only 1% of the cigarettes produced are exported to other countries, being the majority of the sales in China.
- Japan Tobacco Inc. (JT). The company is headquartered in Tokyo, and it is the parent company of Japan Tobacco International (JTI), which is headquartered in Geneva. JTI sales represent more than the 60% of the operating profit of the parent firm. Japan Tobacco Inc. (JC) is the fourth largest tobacco company in the world, controlling the 8.4% of the international cigarette market and operating in 130 countries.
- Imperial Tobacco. It is a British company which operates in more than 160 markets. It controls 3.7% of is the international cigarette market, being the fifth largest company participating in the global tobacco market.

Global market sales controlled by these five leading transnational tobacco companies (TTC) have increased between 2001 and 2017 from 43% to 80.6%, respectively. In the following figure, tobacco company shares of global cigarette market, by retail volume in 2017, are graphically represented.

Graphic 2.3. Tobacco company shares of global cigarette market, by retail volume 2017.



Source: Euromonitor International, 2018[15]

[15] Ibid., *"The Global Cigarette industry"*.

Finally, the five largest cigarette consuming nations, which represent the 61.7% of the volume of all cigarettes sold in 2017, are: China, Indonesia, Russia, Unites States and Japan, as it can be observed in Table 2.1.[16]

Table 2.1. Top 10 cigarette markets by volume

COUNTRY	RETAIL VOLUME, 2017 (BN STICKS)
China	2368.9
Indonesia	308.2
Russia	258.9
USA	252.
Japan	151.4
Turkey	106.2
Egypt	93.1
Bangladesh	88.9
India	81.3
Germany	79.0

Source: Euromonitor International, 2018[17]

Porter's Five forces

Porter Five Forces Model was proposed in 1979 by Michael E. Porter.[18] The model has two vertical forces (bargaining power of buyers and bargaining power of suppliers) and three horizontal competitive forces (Threat of substitute products or services, threat of new entrants and rivalry among existing firms). The analysis of these five forces establishes a framework so as to analyse the level of competition in an industry, in order to develop a business strategy. It is considered to be a very useful technique for companies so as to decide if it is beneficial or not to enter in a particular industry.

These five forces are going to be analysed for the tobacco industry, with the view of having a wider perspective of the specific environment.

-Threat of new entrants

The tobacco industry could be considered attractive for new players, as the initial capital investment is not high and there are few barriers for entering in the field. However, government imposes high regulations and taxes, which make it more difficult for the new

[17] Ibid., *"The Global Cigarette industry"*.

[18] Porter, M.E. (1979). "How Competitive Forces Shape Strategy", *Harvard Business Review*, pp.137-145.

joining firms. Moreover, consumers are generally very loyal to their brands, and this fact makes it harder for the new companies to gain market share. Economies of scale are also considered a barrier for new firms, as established firms enjoy them in their productive process.

-*Threat of substitutes*

Tobacco and nicotine are the main products of this industry. The potential substitutes for the replacement of cigarettes are inhalators, sprays, gums and e-cigarettes. The number of these substitutes is low, for this reason the threat of substitutes is not considered to be high in this industry. However, it is important that companies incorporate these new products in their portfolio, as the concerning of people in their health and their interest in this kind of products is increasingly growing.

-*Bargaining power of customers*

Bargaining power of customers is low. Cigarettes are addictive by nature, so people consume this type of goods independently of changes in prices. Moreover, differences between competitors are not very significant as their products are not unique. However, differences in prices among competitors are not really substantial, so customers switching costs are low. A good measure for firms in order to reduce the power of buyers could be the implementation of loyalty programs.

-*Bargaining power of suppliers*

Suppliers have a strong position in this industry. Tobacco farmers provide the raw materials for these organizations. It is important to have a strong relationship with because of the fact that there are few substitutes in the tobacco industry. The ability to vertically integrate them is a good way to reduce their power.

-*Industry rivalry*

There are only a few tobacco giants. And for this reason, it is an industry highly competitive. Rivalry is high between these solid firms. Strong marketing campaigns and constantly innovating products carried out by companies increase the rivalry among competitors. Research and development investments also encourages competitive advantages in each business, which lead to higher needs for being transforming and ground-breaking.

2.2. Individual analysis of the companies

2.2.1. British American Tobacco

British American Tobacco plc (BAT) is a British multinational cigarette and tobacco manufacturing company created in 1902 and headquartered in London, United Kingdom. It is the largest publicly tobacco company in the world.

It is present in more than 200 markets, such as Asia-Pacific, America, Western Europe, Eastern Europe, Middle East and Africa. Despite the fact that the company's highest revenues have always come from the most developed economies, BAT estimates that its growth will be based on emerging markets in a near future, as they are gaining position in its customer base.

The company has a large number of subsidiaries in different countries. Some of these places where the firm has holding companies are: Albania, Angola, Bangladesh, Argentina, Australia, Fiji, Ghana, United States.

The tobacco portfolio of BAT company does not only include traditional cigarettes; the importance of potentially reduced-risk products among consumers is encouraging the company to produce other, more up-to-date products, such as tobacco heating products, steam products, and modern and traditional oral hygiene products.

As a result of the emphasis the organization displays on potentially-reduced risk products, and the acquisition in 2017 of a sector leader firm in the United States market (Reynolds American), the company has established a portfolio of priority brands, which logos are represented in the following figure (British American Tobacco, webpage).[19]

Figure 2.1. British American Tobacco brands of combustible tobacco products.

Source: Official webpage of the company (www.bat.com)

[19] British American Tobacco (2018). Corporative webpage of the company. [online]. Available: https://www.bat.com/global . [accessed: May 11, 2019].

Figure 2.2. British American Tobacco brands of potentially reduced-risk products.

Vapour products	Tobacco heating products	Modern oral products	Traditional oral products
vype vuse CHIC MOTIVES VIP	glo neo	EPOK LYFT	mocca KODIAK GRANIT GRIZZLY CAMEL SNUS

Source: Official webpage of the company (www.bat.com)

2.2.2. Reynolds American

Reynolds American, Inc. (RAI) is an American tobacco company created in 2004, with headquarters in Winston-Salem. It is an indirect, wholly owned subsidiary of British American Tobacco p.l.c. and the second-largest tobacco company in the United States. Before it was acquired by the parent company in July 2017, it was listed on the New York Stock Exchange (NYSE) under the symbol "RAI".

Reynolds is the U.S parent company of four holding firms, which at the same time have numerous tobacco brands in their portfolio and a large customer base. These four subsidiaries and their respective brands are: R.J. Reynolds Tobacco Company, which include Newport, Camel and Pall Mall; American Snuff Company, LLC., whose leading brands are Grizzly and Kodiak; Santa Fe Natural Tobacco Company, Inc., manufacturer of Natural American Spirit products; and R.J. Reynolds Vapor Company, which markets in the US digital vapor cigarettes (VUSE).[20]

[20] Reynolds American, Inc. (2018). Corporative webpage of the company. [online]. Available: https://www.reynoldsamerican.com/Home/default.aspx. [accessed: May 11, 2019].

Figure 2.3. Reynolds American, Inc. subsidiaries.

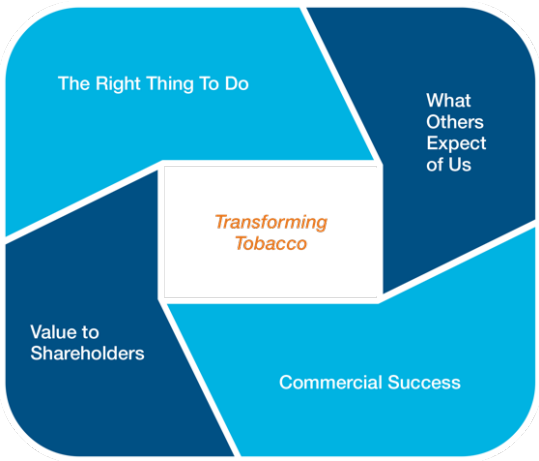
Source: Official webpage of the company (www.reynoldsamerican.com)[21]

In response to the high demand that consumers exert on the potentially- reduced risk products, Reynolds American Inc. and its operating companies are leading the transformation of the tobacco industry.

The company's ultimate goal is to become the leading company in the U.S. market. To achieve this goal, the company focuses its strategy on four important points: innovation, reduction of tobacco consumption among young people, a larger product offer and satisfaction to adult consumers, and the reduction of the harmful effects of tobacco.

They are dedicated to meeting the needs that the society believes a tobacco company should offer to its clients. BAT's subsidiary is confident that by embracing those areas, the company will achieve long-term growth, greater leadership in the U.S. market, and stronger consumer loyalty. They believe the pillars represented in the following figure will drive their future success.

Figure 2.4. Reynolds American, Inc. strategy.



Source: Official webpage of the company (www.reynoldsamerican.com)[22]

[21] Ibid., Corporative webpage of the company.

[22] Ibid., Corporative webpage of the company.

3. VALUATION PROCESS

In this third part, the quantitative analysis of the paperwork is going to be addressed. This empirical section is mainly based on the information provided by the annual accounts of both companies, their websites, and some financial tools such as Bloomberg and Reuters.

This chapter is subdivided into three major parts. The first two points are entirely dedicated to the standalone valuation of the acquired (Reynolds American) and the buyer (British American Tobacco) companies. Both separated valuations are very significant for the study, as the difference between the valuation of the merged entity and the sum of the two companies individually valuated, will result in the synergy value. This estimation of the merged entity value and the synergies accounted, conforms the third part of this chapter.

3.1. Standalone valuation of Reynolds American

3.1.1. Discounted Cash Flow valuation

Company valuation approaches focus on either enterprise value, equity value, debt value or other aspects like options, preferred stock and minority interest (Imam, Barker & Clubb, 2008). It has been considered discounted free cash flow method as a proper technique in order to estimate the enterprise value, the company's own resources value, its stock price and upside potential of the firm.

Discounted cash flow (DCF) valuation views the intrinsic value of a security as the present value of its expected future cash flows. In this section of the paperwork, DCF analysis is going to be applied for valuing Reynolds American, and more precisely, estimating the free cash flow to the firm (FCFF). Whereas dividends are the cash flows actually paid to stockholders, free cash flows are the cash flows available for distribution to shareholders. Moreover, this valuation technique implies several assumptions to be taken into account, which are going to be explained and analyzed afterwards.

Sales Growth

Estimating the sales growth of the projected future cash flows is one among several assumptions that will be carried out in this section. It is considered one of the most important estimations of the applying valuation technique, as revenues are the first step in the income statement of an organization, and many data will depend on this first factor.

As it is shown in the Income Statement of the company (Appendix 2), historical years display that sales growth has not been very constant in the last few years, presenting great volatility between periods. One of the reasons that can explain these differences between years is that the firm is positioned in the growth phase. In this company lifecycle stage, the product or the innovation becomes accepted in the market and, as a result, sales and revenues start to increase.

It is not easy to make an accurate estimation of the future of revenues, as it is not possible to know what is going to happen in the future. However, some key points have been considered so as to make a more accurate estimation of the sales growth.

First, Reynolds American has a great market share, it is the second largest tobacco company in the US. And moreover, the demand for cigarettes is on a rise, particularly in developing regions such as Asia and Africa. Secondly, it is expected a fast growth of products in the market, and as previously stated, Reynolds American and its operating companies are leading the transformation of the tobacco industry, not only offering cigarettes but also new goods in the form of vapour and heating products. Finally, the global tobacco market sector is expecting a 2.8% CAGR from 2016 to 2021 according to yahoo finance. Moreover, the average growth in the last few years is 10%, and it is predicted that the firm will continue growing, although at lower rates. For these reasons just mentioned, an annual 4% sales growth seems a good prospect for the future.

Cost of sales

Cost of sales measures the cost of goods produced or services provided in a period by an entity. It is also generally known as “Costs of goods sold (COGS)”. For the estimation of these direct costs attributable to the production of the goods and services of the company, historical data has been taken into account.

Unlike in the case of sales growth, it is represented (Appendix 1) that the cost of sales has been very constant along the years, ranging between 39 and 53 percent. The average of the cost of sales between the period 2010-2016 is 48 percent. Considering the stability of the last few years, the slight decrease it has experienced each year, and the fact that the company is in the growth phase and can benefit from economies of scale, it is going to be taken into account for the projected years a constant cost of sale of 42%.

Income Tax Expense

Nowadays, the United States' Corporate Income Tax Rate is more in line with other members of the OECD union. The U.S. federal corporate income tax rate was reduced from 35 percent to 21 percent by The Tax Cuts and Jobs Act (TCJA) in 2018. Under current law, the weighted average corporate income tax rate in the United States is 25.7%.

Before this change in regulation, the United States showed the largest combined statutory corporate income tax rate among the OECD nations at 38.9%, which represented a 35 percent plus the average of state corporate income tax rates. In Figure 10, it is observed that the income tax ranged between 35 to 49 percent, accounting for an average of 39%. For all these reasons, taking into consideration that the change in the income tax rate entered into force by 2018, the future cash flows will take 39% as income tax in 2017 and 25% in the following years.

Depreciation and Capital Expenditures

Reynolds American, as it has been previously mentioned, is a company that is placed in its growth stage. In order to confirm this fact, the capital expenditures to depreciation ratio has been applied. When this ratio is high it means that the business is investing highly in its long-term assets, implying a prediction of future growth or expansion. The sales revenues of businesses with high capital expenditures to depreciation ratios grow faster than businesses with low capital expenditures to depreciation ratios. Businesses with high capital expenditures to depreciation ratios invest a larger portion of their resources in themselves so they can perform better than their competitors.

The capital expenditure to depreciation ratio has been analyzed for the period between 2010 and 2016, showing an average ratio of almost 3. Therefore, this ratio reflects that capex is greater than depreciation, and because of this, the company is expanding into essentially infinity because assets are growing faster than their depreciation.

Moreover, it should also be taken into account that as the company moves to the long-run, there will be fewer investments. The company will reach a steadier state situation, leading to a similar value of depreciation and CAPEX, as investments will take place so as to replace damaged capital stock.

Capital structure

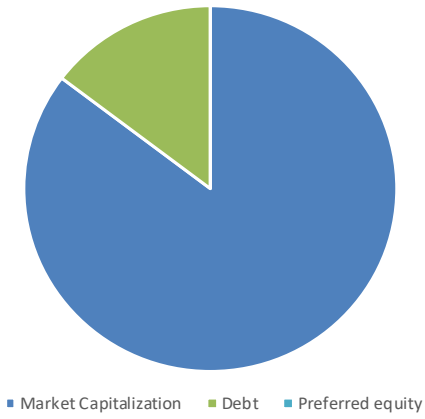
The capital structure states the way the company finances its overall operations and growth by using different sources of funds. In the case of Reynolds American, analyzing

the figures that each source of financing represents on the overall capital structure of the company, it is observed:

- Market capitalization. It is accounted multiplying the number of outstanding shares of the year by the price per share. It stands for 72574.2 million euros and represents an 85.3% of the overall capital structure of the company.
- Short term debt. It is only 0.5% percent of the total capital structure, and it is equal to 475 million euros.
- Long term debt. It accounts for 12007 million euros and represents a 14.12 % over the total.
- Preferred Equity. It is 0 percent of the total. Its value is 0.

Therefore, the capital structure of the company is composed by 85.3% of equity and 14.7% of debt, not having any value preferred equity. The following graph represents this financing structure of the organization.

Graphic 3.1. Capital Structure of Reynolds American, Inc.



Source: Bloomberg. Own elaboration.

Discount rates

The theoretical framework of this paperwork explained the necessity for a discount rate in order to apply the Discounted Cash Flows valuation (DCF). The weighted average cost of capital (WACC) is the discount rate considered for calculating the operating free cash

flows of the company. The cost of equity must be multiplied by the % of equity in the company's capital structure, plus the cost of debt multiplied by the % of debt on the company's structure. Furthermore, the cost of debt is reduced by the tax rate, as interest in debt is a pre-tax expense. The formula for calculating the WACC is summarized as follows:

$$WACC= E/V *ke + D/V * kd * (1-t)$$

The cost of equity (Ke) will be calculated by using the Capital Asset Pricing Model (CAPM). The CAPM formula requires the beta value of the stock (B), the risk-free rate (Rf) and the rate of return for the general market (Rm). Bloomberg, which is a financial tool, is going to be used in order to obtain this information.

$$Ke=Rf+[B*(Rm-Rf)]$$

- Beta. Reynolds American was a listed company back to 2016, and for this reason, the company's beta can be used. If it were a non-listed company, it should be accounted depending on its comparable companies. The Beta of the market is 1. In this case, the Beta of the company accounts for 0.4, indicating that the security's price tends to be less volatile than the market. If it were higher than 1 it would mean more volatility than the market.
- Risk-free rate. A riskless instrument could be the 10 years rate for the government bond of the US government in December 2016, which is 2.7 percent.
- Equity risk Premium (ERP). Bloomberg states that the equity risk premium is 9.3 percent, as the market premium is 12 percent. The result for the equity risk premium is equal to the difference between the market premium and the risk-free rate.

Table 3.1. Cost of Equity of Reynolds American, Inc.

Cost of Equity	
Risk Free Rate	2,7%
Bêta	0,49
Market Premium	9,3%
Cost of Equity	**7,3%**

Source: Bloomberg. Own elaboration.

The cost of debt of the company is measured dividing the financial costs of the company by the sum of the total debt, which is composed by the short term and long-term debt included in the balance sheet of the firm. It has been obtained an amount of 3.2% for the cost of debt of Reynolds American.

Table 3.2. Weighted Average Cost of Capital (WACC) of Reynolds American, Inc.

WACC	
Cost of Equity	7,3%
% of Equity	85,3%
Cost of Debt	3,2%
% of debt	14,7%
Tax rate	25,0%
Market Capitalization	72574,2
Debt	12482,22
Preferred equity	0,00
WACC	**6,58%**

Source: Bloomberg. Own elaboration.

Change in Operating Working Capital (OWC)

For calculating the operating free cash flows of the project, the variation in the operating working capital is also taken into account, and it refers to the company's needs of cash. For calculating it, the organization takes into account current assets and current liabilities. If the change in the OWC is positive, this results in investment needs. In general, a growth in revenues implies an increase in working capital needs.

Terminal Value

It is very significant, and at the same not very easy, to determine the moment Reynolds American is going to exist its growth phase. The terminal growth rate is a constant rate at which a firm's expected free cash flows are assumed to grow indefinitely. It has been taken into consideration a forecast for GDP growth from 2016 to 2022 carried out by The World Bank. In 2016 the GDP growth was 1.5%, and the expected growth for the next years is 2.2%. For this reason, a growth rate of 2% for the Terminal Value was presumed.

Once having assumed the growth rate, it is possible to calculate the terminal value. For computing it, it is taken into account the last operating free cash flow, which is multiplied by 1 plus the growth rate. And all that will be divided by the difference between the discount rate and the growth rate.

Discounted Operating Free Cash Flows

Having taken into account all the previous assumptions, now it is possible to calculate the discounted operating free cash flows.

Operating free cash flows are the result of Earnings Before Interest and Taxes (EBIT), deducting its taxes, adding amortization and depreciation and subtracting the change in working capital minus capital expenditures.

Finally, for calculating the discounted free cash flows, operating free cash flows are taken to the present value at the discount rate, which in this case is the WACC. It is also important to take into account than the last year's operating free cash flow takes into consideration the terminal value. The following table represents the Discounted Operating Free Cash Flows of Reynolds American.

Table 3.3. Operating Discounted Free Cash Flows of Reynolds American, Inc. (In Million Euros).

Discounted Cash Flow Valuation							
Free Cash Flows							
		2016	2017	2018	2019	2020	2021
EBIT*(1-t)		5827,9	4467,1	5074,9	5932,4	6233,7	6081,8
+D&A		90,4	97,7	109,3	115,2	125,0	135,7
-CAPEX		-277,3	-503,0	-492,1	-515,3	-622,6	-665,9
- Variation of working capital		249,1	-497,3	-568,0	-438,8	-766,7	-892,9
Operating Free Cash Flow		**5890,1**	**3564,6**	**4124,1**	**5093,5**	**4969,4**	**4658,7**
Capex							
	2015	2016	2017	2018	2019	2020	2021
PPE	2667,0	2853,9	3259,1	3642,0	4042,0	4539,6	5069,8
D&A		90,4	97,7	109,3	115,2	125,0	135,7
CAPEX		**277,3**	**503,0**	**492,1**	**515,3**	**622,6**	**665,9**
Variation Operating Working Capital							
	2015	2016	2017	2018	2019	2020	2021
Inventories	1595,8	1559,7	1965,2	2453,1	2850,2	3486,8	4223,1
Change in Inventories		-36,1	405,5	487,9	397,1	636,7	736,3
Account Receivables	62,6	62,6	63,6	62,3	56,8	55,5	53,9
Change in Account Receivables		0,0	1,0	-1,3	-5,5	-1,3	-1,6
Other Currents Assets	586,2	451,3	412,9	333,6	277,2	236,0	195,9
Change in Other Current Assets		-134,9	-38,4	-79,3	-56,4	-41,2	-40,1
Accounts payable	164,7	209,5	248,0	319,0	397,9	493,0	620,0
Change in Account Payables		44,8	38,4	71,0	78,9	95,1	127,0
Other Current liabilities	1174,3	1051,5	1142,2	1231,9	1256,7	1334,2	1405,4
Change in Other Current Liabilities		-122,8	90,7	89,8	24,7	77,5	71,3
Change in Operating Working Capital		**-249,1**	**497,3**	**568,0**	**438,8**	**766,7**	**892,9**
DCF Valuation							
			2017	2018	2019	2020	2021
Operating Free Cash Flows			3564,6	4124,1	5093,5	4969,4	4658,7
Terminal Value	2,0%						103744,1
Periods			1	2	3	4	5
Dicounted Factor (WACC)	6,58%		1,1	1,1	1,2	1,3	1,4
Discounted Free Cash Flows			**3344,5**	**3630,5**	**4207,1**	**3851,2**	**78823,2**

Source: Own elaboration

Results obtained from the Discounted Cash Flows

Once the discounted operating free cash flows have been obtained, now it is possible to obtain the enterprise value of Reynolds American at the end of 2016. The total enterprise value is equal to the sum of the discounted free cash flows. It has been obtained a value of 93856.6 million euros in total, but in order to obtain the own resources value it has to be subtracted the net financial debt plus non-operating cash and cash equivalents. The result for the Own resources value is 81374.3 million euros.

Moreover, the number of the outstanding shares of the company in 2016 was 1425.8 million in 2016, and the market price was 50.9 euros per share. Considering the calculated own resources value and the outstanding shares, the computed price per share is equal to 57.1, which is higher than the market price.

This fact implies that the company is undervalued in the market and that it has an upside potential of 12.13%.

Table 3.4. Enterprise value and Upside Potential of Reynolds American, Inc. (In Million Euros).

(In Million Euros)	
Enterprise Value	**93856,6**
-Net Financial Debt	**12482,2**
+Cash and cash equivalents	**1944,6**
=Own resources value	**81374,3**
Number of shares	**1425,8**
Value per share	**57,1**
Upside potential	**12,13%**

Source: Own elaboration

Sensitivity analysis

Several scenarios have been considered for the firm value regarding changes in two different variables: weighted average cost of capital and terminal growth. As previously observed when calculating the discounted free cash flows, WACC influences the present value of the company, as it is the discount rate. Moreover, terminal growth affects the terminal value, which will affect the final cash flow of the estimation, and therefore, the enterprise value as well.

In Table 3.5, it is observed that the higher the discount rate, the lower is the enterprise value. On the contrary, the higher the terminal growth the higher it is the value of the

company. As a consequence, it is obvious to suggest that the optimistic scenario would imply a high terminal growth and a low cost of capital, being the pessimistic scenario the opposite to this situation.

Table 3.5. Sensitivity analysis for the firm value of Reynolds American Inc. (In Million Euros).

		WACC				
		4,0%	5,0%	6,0%	7,0%	8,0%
Terminal Growth	1,5%	175.308	125.130	97.249	79.503	67.214
	2,0%	215.131	143.381	107.499	85.965	71.604
	2,5%	281.502	168.933	120.678	93.863	76.792

Source: Own elaboration

3.1.2. Multiples valuation

The introductory chapter of this project, which comprised the theoretical framework, presented another method for valuating companies. This other technique is based on the analysis of certain multiples, which can be useful for estimating if a stock price is cheap or expensive. With this purpose, three different multiples have been chosen for the estimation.

- Price per Earnings ratio (P/E)
- Price to Book Value (P/BV)
- Enterprise value to EBITDA (EV/EBITDA)

Price per Earnings

It is calculated as the price (P) divided by the earnings per share (EPS), which at the same time is calculated as the division between net income and the number of shares.

Damodaran (2006)[23] indicated that there are some necessary variables so as to know if the stock price is expensive or cheap according to the calculated P/E ratio. The most significant variable would be that the stock value has to be compared to the value assigned by the market to similar assets.

Choosing the right companies is also an important step. It is crucial to understand that similar and comparable firms don't mean the same. A similar firm has similar characteristics to your company, but it could represent something common to all sectors

[23] Damodaran, A. (2006). *Damodaran on Valuation.* John Wiley & Sons, Inc., United States.

in the market or a general tendency. However, comparable companies are not only are similar firms, but also behave and react in the same way to changes in market variables. The P/E ratio has some determinant variables, as it can also be computed with the following formula:

$$PER = \frac{payout}{Ke - g} = \frac{1 - \frac{g}{ROE}}{Ke - g}$$

- Payout ratio. The highest the payout ratio of a company is, the largest the P/E could be, assuming the rest of the variables constant. This payout depends on the future growth of the firm and its return on equity. The highest the growth, the lowest the payout will be, as there will be greater needs to retain benefits and not to distribute them (dividends) in order to finance growth. Moreover, the largest the return on equity, the highest the payout, because the company will need to retain a lower percentage of benefits to finance growth.
- Cost of equity (Ke). As previously seen with the CAPM model, it depends on the risk-free rate and the market premium. The highest the interest rates or the market premium, the lowest the P/E will be, assuming the rest of the variables constant.
- Growth rate (g). The greater the expected future growth of the company the larger the P/E of an organization will be.

Now, it is time to analyse the P/E ratio of Reynolds American. The following table shows the ratio for the base and forecasted years of the company.

Table 3.6. Forecasted P/E ratio for Reynolds American Inc.

	2016	2017e	2018e	2019e	2020e	2021e
P/E	15,78	13,80	14,65	14,74	14,40	14,60

Source: Bloomberg

The previous table indicates the dollar amount that an investor expects to invest in RAI so as to receive 1 dollar of the company's earnings. For example, in 2016 the company is trading at a multiple of 15.78, which means that an investor is willing to pay 15.78 dollars for 1 dollar of current earnings.

As this multiple is only useful for evaluating the company when it can be analysed together with its comparable companies, the following figure shows the different values for this ratio of the competitors of the firm.

It is observed that Reynolds American ratio is generally lower than the average of the industry, indicating that the current stock price is low relative to earnings. This fact would indicate that probably the company is a little undervalued, and for this reason, a good suggestion would be to buy.

Table 3.7. Peers analysis for Reynolds American Inc. regarding P/E multiple.

PEERS ANALYSIS						
P/E	**2016**	**2017e**	**2018e**	**2019e**	**2020e**	**2021e**
Reynolds American Inc.	15,78	13,80	14,65	14,74	14,40	14,60
Philip Morris International	20,42	21,52	13,10	15,02	13,93	14,02
Japan Tobacco Inc.	16,32	16,57	12,15	11,82	11,45	11,81
British American Tobacco	18,47	17,88	18,41	17,77	18,13	18,05
Imperial Tobacco	60,11	21,57	18,60	7,30	7,04	10,98
Altria Group Inc.	22,90	20,92	12,39	12,24	11,41	12,02
Average	25,67	18,71	14,88	13,15	12,73	13,58

Source: Bloomberg

Price/Book Value

The price to book value is accounted as the price per share divided by the book value per share, which is calculated as the division between own resources and the total final number of shares.

There are some determinant variables in order to determine if the share is expensive or cheap according to this multiple. The P/BV can be calculated as follows:

$$P/BV = \frac{ROE - g}{Ke - g}$$

The difference between the Return on Equity (ROE) and the its cost (Ke) measures the capacity that an organization has to generate value over the invested own resources. It is important to determine which variables are significant to make this excess on the generated value sustainable over time.

The highest the ROE, the highest the Price to Book Value will be. When the difference between ROE and Ke is high, it is an undervalued asset, and therefore, it is advisable to

buy it. When the Price to Book Value is high, it means that the financial instrument is overvalued, and for this reason, it is advisable to sell.

The picture below (Table 3.8), reflects the value of the Price to Book ratio for the company in the forward years.

Table 3.8. Forecasted P/BV ratio for Reynolds American Inc.

	2016	2017e	2018e	2019e	2020e	2021e
P/BV	3,68	5,01	4,96	4,32	4,49	4,69

Source: Bloomberg

Considering the average of the sector, the company's P/BV is relatively low for every predicted year. This could indicate that it is a potentially undervalued stock, and therefore, a good investment.

Table 3.9. Peers analysis for Reynolds American Inc. regarding P/Book value multiple

PEERS ANALYSIS						
P/Book value	2016	2017e	2018e	2019e	2020e	2021e
Reynolds American Inc.	3,68	5,01	4,96	4,32	4,49	4,69
Japan Tobacco Inc.	2,80	2,35	1,78	1,63	1,54	1,65
British American Tobacco	10,53	11,49	12,05	12,11	11,54	11,80
Imperial Tobacco	7,17	5,35	4,41	3,39	3,35	3,72
Altria Group Inc.	10,29	8,83	6,26	6,37	5,92	6,18
Average	6,90	6,61	5,89	5,56	5,37	5,61

Source: Bloomberg

Enterprise Value/ EBITDA

This multiple is calculated as the firm value (market capitalization plus net financial debt) divided by the EBITDA of the company.

The necessary variables for determining if a stock is expensive or cheap according to this multiple are:

$$\frac{EV}{EBITDA} = \frac{(1-t) - \frac{DA}{EBITDA} * (1-t) - \frac{Reinvestment}{EBITDA}}{WACC - g}$$

- Tax rate. Assuming the rest of the variables constant, the lowest the tax rate of the company, the higher the free cash flows will be, and therefore, the higher this multiple will be.

- Depreciation and amortization. The highest the amortization of EBITDA in comparison with the generated EBITDA, the highest the ratio will be.
- Discount rate (WACC). The highest the rate, the lowest the ratio.
- Reinvestment. The larger the reinvestment rate over EBITDA, the lowest the ratio. Expected growth. The ratio will be higher when the expected growth is large.

The following table represents the different values of this multiple for Reynolds American in the forecasted years.

Table 3.10. Forecasted EV/EBITDA ratio for Reynolds American Inc

	2016	2017e	2018e	2019e	2020e	2021e
EV/EBITDA	8,51	10,95	11,34	10,55	10,34	10,79

Source: Bloomberg

This popular ratio is used a tool for comparing the enterprise value to the company's cash earnings less non-cash expenses. It is considered a good multiple for comparing companies within the same industry.

As it was seen when analyzing the P/E ratio, the lower the value of the multiple, the cheaper the valuation of the company would be. Many investors look for organizations that have low P/E and EV/EBITDA and a balanced dividend growth.

Table 3.11. Peers analysis for Reynolds American Inc. regarding EV/EBITDA value multiple

PEERS ANALYSIS						
EV/EBITDA	2016	2017e	2018e	2019e	2020e	2021e
Reynolds American Inc.	8,51	10,95	11,34	10,55	10,34	10,79
Philip Morris International	14,47	15,40	10,57	11,92	11,07	11,19
Japan Tobacco Inc.	9,92	9,98	7,59	8,38	8,25	8,07
British American Tobacco	19,71	15,90	16,92	17,41	17,49	16,93
Imperial Tobacco	14,74	11,93	10,17	8,20	7,79	8,72
Altria Group Inc.	15,70	15,14	12,53	11,32	11,03	11,62
Average	13,84	13,22	11,52	11,30	10,99	11,22

Source: Bloomberg

In Table 3.11 it is reflected that the value of RAI's multiple is low compared to the average of the sector, and therefore, it could be a good opportunity to invest in this organization.

3.2. Standalone valuation of British American Tobacco

3.2.1. Discounted Cash Flows valuation

With the purpose of valuating British American Tobacco, the same steps as when analyzing Reynolds American are going to be followed. Discounted Free Cash Flows and relative multiples are going to be the techniques applied for this value estimation.

Sales Growth

The income statement (Appendix) of the company displays the growth of sales along the past years. The average growth in the past 5 years is almost 1%, which doesn't indicate a significant figure. However, regarding the fact that the company is a leader in many markets, and that it is placed in the growth stage, sales revenues are expected to keep increasing.

The company is focusing its efforts in developing and innovating potentially reduced-risk products, which include: tobacco heating products, vapour products, modern oral products and traditional oral products. As a result of this and considering that the global tobacco market sector is expecting a 2.8% CAGR from 2016 to 2021, it is predicted that the firm will continue growing at a 3,5% level.

Cost of sales

Historical data has been taken into account so as to estimate the cost of goods sold of BAT company. For the estimation of these direct costs attributable to the production of the goods and services of the company, historical data has been taken into account.

The cost of sales has been very constant along the years, ranging between 22 and 26 percent. The average of the cost of sales between the period 2010-2016 is 23 percent. Considering the stability of the last few years and the growth phase of the company, it is going to be taken into account for the projected years an average cost of sale of 23%.

Income Tax Expense

In 2015, the government announced legislation setting the corporate income tax main rate at 19%. Because of this reason, it has been taken into account a 19% tax rate for the forecast, which shows a great decrease compared to the rate of the previous years. The average tax rate of the period between 2010-2016 is 27.1%.

Depreciation and Capital Expenditures

British American Tobacco, as previously stated, is a company that is placed in the growth stage. The capital expenditures to depreciation ratio has been calculated for the last few years, and it reflects an average ratio of almost 2. This means that the capital expenditures of the company are higher than the depreciation of the assets. As a result, it is concluded that the firm is investing in its non-current assets, predicting growth and development.

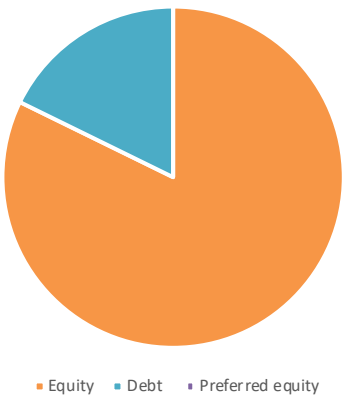
Capital structure

Analyzing the different sources of financing that conform the British American Tobacco capital structure, the following information is captured:

- Market capitalization. It is accounted multiplying the number of outstanding shares of the year by the price per share. It stands for 105782.8 million euros and represents an 82.3% of the overall capital structure of the company.
- Short term debt. It is the 2.74 percent of the total capital structure, and it is equal to 3519.6 million euros.
- Long term debt. It accounts for 19298.8 million euros and represents a 15.01 % over the total.
- Preferred Equity. It is 0 percent of the total. Its value is 0.

Therefore, the capital structure of the company is composed by 82.3% of equity and 17.7% of debt, not having any amount of preferred equity. The following graph represents this financing structure of the organization.

Graphic 3.2. Capital Structure of British American Tobacco PLC.



Source: Bloomberg

Discount rates

As accounted for Reynolds American, it is necessary to calculate the cost of equity and the cost of debt in order to obtain the value of the discount rate, which in this case is the weighted average cost of capital.

Again, the cost of equity (Ke) is going to be calculated considering the Capital Asset Pricing Model (CAPM). Then, it will be necessary to determine the value of the beta value of the stock (B), the risk-free rate (Rf) and the rate of return for the general market (Rm). Bloomberg is going to be used in order to obtain this information.

- Beta. It was considered the 1 year leveraged Beta of British American Tobacco, which is 0.94. Considering that the Beta of the market is 1, and the one from the company is lower, this indicates that the security's price tends to be less volatile than the market.
- Risk-free rate. A riskless instrument could be the 10 years rate for the government bond of the UK government in December 2016, which is 1.04 percent.
- Equity risk Premium (ERP). Bloomberg states that the equity risk premium is 5.9 percent, as the market premium is 7 percent. The result for the equity risk premium is equal to the difference between the market premium and the risk-free rate.

Table 3.12. Cost of Equity of British American Tobacco PLC.

Cost of Equity	
Risk Free Rate	1,040%
Bêta	0,94
Market Premium	5,9%
Cost of Equity	**6,57%**

Source: Bloomberg. Own elaboration

It has been obtained an amount of 3.7 % as the cost of debt of British American Tobacco. It is measured dividing the financial costs of the company by the sum of the total debt, which is composed by the short term and long-term debt included in the balance sheet of the firm.

Figure 3.13. Weighted Average Cost of Capital (WACC) of British American Tobacco PLC.

WACC	
Cost of Equity	6,6%
% of Equity	82,3%
Cost of Debt	3,7%
% of debt	17,7%
Tax rate	19%
Market Capitalization	105782,8
Debt	22818,4
Preferred equity	0,00%
WACC	**5,93%**

Source: Bloomberg

Terminal Value

The terminal growth rate considered for British American Tobacco is 1.9%. It has been taken into consideration a forecast for GDP growth from 2016 to 2022 carried out by The World Bank, which is of almost 2%. Taking into account that the GDP growth in 2016 was 1.7%, and the forecast for the following years, that rate seemed appropriate for the prediction. Once contemplated the growth rate, the terminal value is now possible to be calculated.

Discounted Operating Free Cash Flows

Regarding all the previous assumptions, discounted operating free cash flows can now be estimated. The following picture (Table 3.14) represents the Discounted Operating Free Cash Flows of British American Tobacco.

Table 3.14. Operating Discounted Free Cash Flows of British American Tobacco (In Million Euros).

Discounted Cash Flow Valuation							
Free Cash Flows							
		2016	2017	2018	2019	2020	2021
EBIT*(1-t)		4272,4	5115,7	5303,2	5560,2	5660,7	5817,9
D&A		653,8	565,6	564,5	573,1	582,7	587,9
CAPEX		-1166,3	-694,4	-744,4	-736,3	-870,6	-862,8
Variation of working capital		-1654,4	-385,3	-219,9	-302,8	-125,3	-313,2
Operating Free Cash Flow		**2105,4**	**4601,7**	**4903,4**	**5094,2**	**5247,5**	**5229,8**
Capex							
	2015	2016	2017	2018	2019	2020	2021
PPE	7855,2	8367,7	8496,5	8676,3	8839,5	9127,4	9402,3
D&A		653,8	565,6	564,5	573,1	582,7	587,9
CAPEX		**1166,3**	**694,4**	**744,4**	**736,3**	**870,6**	**862,8**
Variation Operating Working Capital							
	2015	2016	2017	2018	2019	2020	2021
Inventories	5758,8	6780,6	6855,1	6951,1	7020,6	6950,4	7033,8
Change in Inventories		1021,7	74,6	96,0	69,5	-70,2	83,4
Account Receivables	3193,3	3155,6	3196,6	3198,5	3220,3	3232,2	3249,1
Change in Account Receivables		-37,7	41,0	1,9	21,7	11,9	17,0
Other Currents Assets	1646,2	1932,5	1992,4	2115,9	2214,3	2334,4	2452,0
Change in Other Current Assets		286,3	59,9	123,5	98,4	120,1	117,6
Accounts payable	1431,9	1499,4	1574,3	1656,2	1740,7	1830,3	1924,1
Change in Account Payables		67,5	75,0	81,9	84,5	89,6	93,8
Other Current liabilities	1929,5	2246,1	2380,9	2297,6	2326,3	2300,1	2301,6
Change in Other Current Liabilities		316,6	134,8	-83,3	28,7	-26,2	1,4
Change in Operating Working Capital		**1654,4**	**385,3**	**219,9**	**302,8**	**125,3**	**313,2**
DCF Valuation							
			2017	2018	2019	2020	2021
Operating Free Cash Flows			4601,7	4903,4	5094,2	5247,5	5229,8
Terminal Value	1,90%						132.116
Periods			1	2	3	4	5
Dicounted Factor	5,93%		1,06	1,12	1,19	1,26	1,33
Discounted Free Cash Flows			**4343,9**	**4369,5**	**4285,2**	**4166,9**	**102953,9**

Source: Own elaboration

Results obtained from the Discounted Cash Flows

Once the discounted operating free cash flows have been obtained, now it is possible to obtain the enterprise value of British American Tobacco at the end of 2016. The total enterprise value is equal to the sum of the discounted free cash flows. It has been obtained a value of 120119.5 million euros in total, but in order to obtain the own resources value it has to be subtracted the net financial debt plus non-operating cash and cash equivalents. The result for the Own resources value is 97301.1 million euros.

Moreover, the number of the outstanding shares of the company in 2016 was 1865 million in 2016, and the market price was 56.72 euros per share. Considering the calculated own resources value and the outstanding shares, the computed price per share is equal to 52.2, which is higher than the market price.

This fact implies that the company is slightly undervalued in the market and that it has an upwards potential of 9.54%.

Table 3.15. Enterprise value and Upside Potential of British American Tobacco (In Million Euros).

(In Million Euros)	
Enterprise Value	**120119,5**
-Net Financial Debt	**22818,4**
+Cash and cash equivalents	**2597,3**
=Own resources value	**97301,1**
Number of shares	**1865**
Value per share	**52,2**
Upside potential	**9,54%**

Source: Own elaboration

Sensitivity analysis

As in the valuation of Reynolds American, several scenarios have been considered for the firm value regarding changes in two different variables: weighted average cost of capital and terminal growth.

In Table 3.16. it is observed that the higher the discount rate, the lower is the enterprise value. On the contrary, the higher the terminal growth the higher it is the value of the

company. As a consequence, it is obvious to suggest that the optimistic scenario would imply a high terminal growth and a low cost of capital, being the pessimistic scenario the opposite to this situation.

Table 3.16. Sensitivity analysis for the firm value of British American Tobacco. (In Million Euros).

		WACC				
Terminal Growth		4,0%	5,0%	6,0%	7,0%	8,0%
	1,5%	196.791	140.478	109.194	89.287	75.505
	2,0%	241.495	160.967	120.701	96.541	80.433
	2,5%	316.003	189.651	135.496	105.407	86.258

Source: Own elaboration

3.2.2. Multiples valuation

The three same multiples applied for the valuation of Reynolds American are going to be used for analyzing this company.

- Price per Earnings ratio (P/E)
- Price to Book Value (P/BV)
- Enterprise value to EBITDA (EV/EBITDA)

Price per Earnings

It is reflected in the following table the P/E ratio for the base and forecasted years of British American Tobacco.

Table 3.17. Forecasted P/E ratio for British American Tobacco p.l.c.

	2016	2017e	2018e	2019e	2020e	2021e
P/E	18,47	17,88	18,41	17,77	18,13	18,05

Source: Bloomberg

The previous table indicates the dollar amount that an investor expects to invest in BAT so as to receive 1 dollar of the company's earnings. For example, in 2016 the company is trading at a multiple of 18.47 dollars, which means that an investor is willing to pay 18.47 dollars for 1 dollar of current earnings.

Moreover, in order to analyse if the stock price is cheap or expensive, it is going to be compared to the value assigned by the market to similar companies.

It can be observed that British American Tobacco ratio is a little bit higher in some years than the average of the industry, indicating that the current stock price is high relative to earnings. This fact would indicate that probably the company is a little overvalued, and for this reason, a good suggestion would be to sell stocks of the company.

Table 3.18. Peers analysis for British American Tobacco p.l.c regarding P/E value multiple.

PEERS ANALYSIS						
P/E	**2016**	**2017e**	**2018e**	**2019e**	**2020e**	**2021e**
Reynolds American Inc.	15,78	13,80	14,65	14,74	14,40	14,60
Philip Morris International	20,42	21,52	13,10	15,02	13,93	14,02
Japan Tobacco Inc.	16,32	16,57	12,15	11,82	11,45	11,81
British American Tobacco	18,47	17,88	18,41	17,77	18,13	18,05
Imperial Tobacco	60,11	21,57	18,60	7,30	7,04	10,98
Altria Group Inc.	22,90	20,92	12,39	12,24	11,41	12,02
Average	25,67	18,71	14,88	13,15	12,73	13,58

Source: Bloomberg

Price/Book Value

Table 3.19 represents the projected P/BV of BAT company for the years comprised between 2016 and 2021.

Table 3.19. Forecasted P/BV ratio for British American Tobacco p.l.c

	2016	**2017e**	**2018e**	**2019e**	**2020e**	**2021e**
P/Book value	10,53	11,49	12,05	12,11	11,54	11,80

Source: Bloomberg

Furthermore, this ratio is important when it is compared to similar companies, so as to determine if the company is cheap or expensive.

Considering the average of the sector, the company's P/BV is relatively high for every predicted year. This could indicate that it is a potentially overvalued stock, and therefore, it would be reasonable to make the decision of selling.

Table 3.20. Peers analysis for British American Tobacco p.l.c regarding P/Book value value multiple.

PEERS ANALYSIS						
P/Book value	**2016**	**2017e**	**2018e**	**2019e**	**2020e**	**2021e**
Reynolds American Inc.	3,68	5,01	4,96	4,32	4,49	4,69
Japan Tobacco Inc.	2,80	2,35	1,78	1,63	1,54	1,65
British American Tobacco	10,53	11,49	12,05	12,11	11,54	11,80
Imperial Tobacco	7,17	5,35	4,41	3,39	3,35	3,72
Altria Group Inc.	10,29	8,83	6,26	6,37	5,92	6,18
Average	6,90	6,61	5,89	5,56	5,37	5,61

Source: Bloomberg

Enterprise Value/ EBITDA

The company's forecasted future ratios for the following years are reflected in the following figure.

Table 3.21. Forecasted EV/EBITDA ratio for British American Tobacco

	2016	**2017e**	**2018e**	**2019e**	**2020e**	**2021e**
EV/EBITDA	19,71	15,90	16,92	17,41	17,49	16,93

Source: Bloomberg

The subsequent table shows the corresponding ratio for the comparable firms in the market, in order to analyze if it is high or low-priced. The lower the value of the multiple, the cheaper the valuation of the company would be, and therefore, more attractive to investors. Considering the results from Table 3.22, the value of BAT's multiple is high compared to the average of the sector, and therefore, it would be advisable to sell the stocks of the company.

Table 3.22. Peers analysis for British American Tobacco p.l.c regarding EV/EBITDA value multiple.

PEERS ANALYSIS						
EV/EBITDA	**2016**	**2017e**	**2018e**	**2019e**	**2020e**	**2021e**
Reynolds American Inc.	8,51	10,95	11,34	10,55	10,34	10,79
Philip Morris International	14,47	15,40	10,57	11,92	11,07	11,19
Japan Tobacco Inc.	9,92	9,98	7,59	8,38	8,25	8,07
British American Tobacco	19,71	15,90	16,92	17,41	17,49	16,93
Imperial Tobacco	14,74	11,93	10,17	8,20	7,79	8,72
Altria Group Inc.	15,70	15,14	12,53	11,32	11,03	11,62
Average	13,84	13,22	11,52	11,30	10,99	11,22

Source: Bloomberg

3.3. Merged entity

3.3.1. Strategic and financial rationale for the merger

Before starting valuating the merged entity, it is important to understand the following question: What drives British American Tobacco to acquire Reynolds American?[24]

The main reason that directs BAT to acquire RAI is the purpose to become a global, strong and Next Generation Products company, in order to be able to deliver sustained long-term profit growth and returns. After the merger, the group will be broader, bigger and highly diversified geographically. As it is stated in an announcement carried out by the buyer company, the firm expects the following to be achieved:

- Stable presence in high profitability developed and high growth emerging markets, combined with direct access to the US market, which is very attractive.
- Ownership of Newport, Pall Mall and Kent. This would create a portfolio of strong growing global brands.
- Strong and global Next Generation Products (NGP) business, through the delivery of new and innovative vapor and tobacco heating products.
- By the end of the third year, at least $400m of annualized cost synergies, supporting an improvement in the margin of the company.
- Increase in Earnings per Share and Dividends per Share during the first year, and continuous engagement with the BAT dividend policy with a payout ratio of at least 65%.
- Generation of cash as a result of a larger control in a significant proportion of the group cash flows.
- Balanced and continuous financial profile, with a solid credit rating of the investment grade through progressive deleveraging.

[24] United States SEC. (2017). Proposal of merger of British American Tobacco and Reynolds American [online].
Available:https://www.sec.gov/Archives/edgar/data/1275283/000119312517203053/d366567ddefm14a.htm#rom366567_113. [accessed: June 2, 2019].

Some of the previous points just mentioned are going to be explained deeper in order to obtain a better understanding of the motivations that drive BAT in the acquisition of RAI.

Direct access to the attractive US market

Excluding China, the United States is the most profitable market in the tobacco industry, reflecting an opportunity for long-term growth, with high disposable incomes, low packaging prices and high growth in transformer products.

Reynolds American has a 34% market share in the tobacco industry, and it is the second largest company in the U.S market. Its leading brands are Newport (the leading menthol brand), PallMall (the leading value brand), Natural American Spirit (the fastest-growing brand) and American Snuff (the leader in wet tobacco).

Significant presence in high growth emerging markets

Emerging markets account for 60% of the volume of the BAT group. The company has a significant presence in Africa, Asia, South America and Middle East. Compared to developed markets, during the last few years the revenue per pack in these markets has increased at higher rates. The future profit growth opportunity remains strong in these emerging markets as a consequence of the expected stable growth in consumer disposable income and the low prices on cigarette packs. Developed markets are considered by the company as the current profit growth, while Emerging markets are seen as the future profit growth.

Portfolio of strong, global brands

BAT is an organization highly focused on constant innovation and product quality, which has led the firm to have a very successful track in the development of solid brands. The Global Drive Brand portfolio of Lucky Strike, Pall Mall, Dunhill, Kent and Rothmans has grown at an average volume of 7% per year during the last few periods. The merger agreement also joins the brands of Newport, Kent and Pal Mall under common ownership.

Global Next Generation Products (NGP) business

It is an opportunity for the combined business to gain share in the fast growing NGP group, being the only truly global company in this category. The company will be able to leverage scale and insights across these fastest growing markets and categories.

This multi category strategy carried out by the buyer company consists on satisfying consumers at different moments, with the ability of being flexible to address every client

behavior at any time. BAT has already launched a portfolio of vapor products in different countries outside the US, and which have been very successful. What is more, it is the largest international company in this category, and leads position in Poland and United Kingdom.

In December 2016, BAT launched in Japan an innovative tobacco heating product. This new launch, named Glo, was very well accepted and with high success in the country. Moreover, Reynolds is selling in the world's largest vapour market one of the leading vapour brands: Vuse.

Balanced long-term profit growth and returns

The merge transaction is attractive for both the acquirer and the target company. On the one side, BAT will benefit from operating in the US market and extend its consumers base. Moreover, it will support the purpose of the firm to achieve and sustain long term growth. On the other side, Reynolds American will take advantage of the combination company operating and financial synergies. Cost synergies, which are expected by BAT to reach 400 million dollars by the end of the third year, exist in three main areas. These three are: procurement, product development and corporate costs of the combined group. The following figure summarizes the strategic and financial rationale of the transaction.

Figure 3.1. Strategic and financial rationale behind the merger agreement.

STRATEGIC RATIONALE	FINANCIAL RATIONALE
· Stronger, truly global tobacco and Next Generation Products (NGP) company.	· At least $400m annualized cost synergies anticipated by the end of year 3.
· Direct access to the attractive US market.	· EPS and DPS accretive in first full year targeting mid-single digit EPS accretion in year 3.
· Balanced presence in high growth emerging markets and high profitability developed markets.	· Beats the Group WACC for the US by year 5.
· Portfolio of strong, growing global brands.	· Strong financial profile with commitment to maintaining a solid investment grade credit rating.
· Global NGP business with a world class pipeline.	· Enhanced cash generation
	· Continued commitment to BAT's dividend policy with a minimum payout ratio of 65%.

Source: British American Tobacco release

Having analyzed both companies separately, it is now time to account for the value of the merged entity. First, the different financial statements for the new group are going to be calculated. They will be estimated as the sum of the individual financials of the two companies, and moreover, some assumptions for the calculations regarding the discount rate, cost of equity, growth and tax rate will have to be done. Secondly, the resulting synergies opportunities of the acquisition agreement will have to be incorporated in the financials of the merged entity. Finally, the total value of synergies of the transaction will be inferred calculating the enterprise value difference between both cases.

3.3.2. Valuation of the merged entity without synergies

Reynolds American and British American Tobacco present their financials in USD and GBP respectively. However, since the beginning, every number and picture along the project were presented in Euros. This was done in order to facilitate the comparison of both businesses when looking at their tables, and furthermore, to help in this last step of the paperwork. As all the data is presented in the same currency, it can be summed when necessary with no need to take into account the exchange rates.

Both businesses have been valuated separately, so it is now time to estimate the financials of the merged entity and to valuate it through the DCF valuation technique at a discount rate, as it was done for accounting the value of both firms individually.

It is going to be assumed the same capital structure for both organizations, and considering the fact that BAT is going to own the whole company after the acquisition, the merged entity's values of equity and debt are going to be calculated as the sum of each firm's values. Moreover, in order to calculate the discount rate (WACC) of the joined business, several assumptions have to be taken into account.

Some studies suggest that regarding the discount rate it is logic to consider the highest percentage of the two firms as the tax rate for the merged company. In this case, as British American Tobacco assumes a higher fraction of debt than Reynolds American over the total, it seemed a better idea to determine the tax rate weighted on the net debt values of each company. The obtained amount of this percentage for the merged company is 21%. Furthermore, the unlevered beta and the cost of debt for the combined business were also calculated as a weighted average by equity value and by net debt, respectively.

Table 3.23. Weighted Average Cost of Capital (WACC) of the merged entity.

WACC			
	BAT	RAI	Merged Entity
Cost of Equity	6,6%	7,3%	5,5%
% of Equity	82,3%	85,3%	83,5%
Cost of Debt	3,7%	3,2%	3,5%
% of debt	17,7%	14,7%	16,5%
Tax rate	19%	25,0%	21%
Market Capitalization	105782,8	72574,2	178357,0
Debt	22818,4	12482,2	35300,6
Preferred equity	0,00%	0,00%	0,00%
WACC	**5,93%**	**6,58%**	**5,06%**
Cost of Equity			
Risk Free Rate	1,04%	2,7%	1,04%
Bêta	0,94	0,49	0,76
Market Premium	5,9%	9,3%	5,9%
Cost of Equity	**6,57%**	**7,30%**	**5,51%**

Source: Own elaboration

With the previous obtained information, it is now possible to obtain the enterprise value of the merged company. Table 3.24 represents the operating free cash flows of the company, as well as the value of its own resources.

Table 3.24. Operating Free Cash Flows of the merged entity

Discounted Cash Flow Valuation							
Free Cash Flows							
		2016	2017	2018	2019	2020	2021
Operating Profit (EBIT)		15160,1	12271,9	13313,7	14774,3	15300,1	15291,6
-Tax rate		-3183,6	-2577,1	-2795,9	-3102,6	-3213,0	-3211,2
+D&A		744,1	663,3	673,8	688,3	707,7	723,6
-CAPEX		-1443,6	-1197,3	-1236,5	-1251,5	-1493,1	-1528,7
- Variation of working capital		-1405,3	-882,6	-787,9	-741,7	-892,0	-1206,1
Operating Free Cash Flow		**9871,7**	**8278,2**	**9167,2**	**10366,8**	**10409,6**	**10069,2**
DCF Valuation							
			2017	2018	2019	2020	2021
Operating Free Cash Flows			8278,2	9167,2	10366,8	10409,6	10069,2
Terminal Value	1,9%						324700,9
Periods			1	2	3	4	5
Dicounted Factor (WACC)	5,06%		1,1	1,1	1,2	1,2	1,3
Discounted Free Cash Flows			**7879,5**	**8305,4**	**8939,9**	**8544,5**	**261553,0**

Source: Own elaboration

Having calculated the discounted free cash flows for the merged entity, it is now possible to estimate the enterprise value (without synergies) of the combined group. The picture below (Table 3.25) reflects the own resources value, which accounts for 264463.6 million euros, and the value per share which is equal to 80.4 euros per share.

Table 3.25. Enterprise value of the merged entity without synergies

(In Million Euros)	
Enterprise Value	**295222,3**
-Net Financial Debt	**-35300,6**
+Cash and cash equivalents	**4541,9**
=Own resources value	**264463,6**
Number of shares	**3290,8**
Value per share	**80,4**

Source: Own elaboration

On the contrary, when it is summed the value of the equity of both firms separately, it is obtained an amount of 178675,4 million euros. This can be explained as a consequence of the discount rate taken into consideration for the merged entity, which is more favorable for the combined business.

The following table reflects that there is an upward difference between the equity value in both cases.

Table 3.26. Equity value difference between the sum of the individual businesses and the merged entity.

(In Million Euros)	**Equity value**
Reynolds American	81374,3
British American Tobacco	97301,1
Sum of the two businesses	178675,4
Merged entity	264463,6
Difference	48%

Source: Own elaboration

3.3.2. Expected synergies

An acquisition agreement is often justified by the argument that synergies are created when the investment occurs. It is generally presumed that the acquired company controls a certain resource that will become more valuable when combined with the resources of the buyer organization.

The first chapter of the paperwork, the theoretical framework, introduced the concept of synergy. It can be defined as the value increase that the merged entity experiences above the value of the two separate firms combined. In M&A deals, synergies can result as a consequence of a more productive use of assets that lead to an upside in revenue, or as a result of operational efficiencies, such as cost savings.

It is important to take into account that synergies are not effective instantly after the agreement arises. In general, as the operational and financial efficiencies are slowly absorbed by the created new company, two or three years are needed for synergies to happen. [25]

There are different ways in order to estimate the value of the synergies of the deal. On the one hand, there is one approach that consists in looking internally at the two companies and analyze them as much as possible. A bottom-up analysis could be executed to see how the buyer company expects the assets and operations of the target company to line up, and what cost savings will take place. Although this way of measure is very accurate and detailed, it is very challenging for anyone outside the deal to perform themselves. On the other hand, there is another way for estimating synergies, which focuses in the comparison with similar transactions. Comparable acquisitions are viewed as a starting point for potential synergies. [26]

Considering the reasons previously explained that directed BAT to acquire Reynolds American, this part of the project is going to focus on the operating synergies that result from the merger agreement. A brief analysis of the revenues and costs, which are the two factors that affect the operating margin of the business, is going to be carried out.

[25] CFI Education, (2019). "Mergers and Acquisitions synergies". Corporate Finance Institute [online]. Available: https://corporatefinanceinstitute.com/resources/knowledge/valuation/mergers-acquisitions-ma-synergies/. [accessed: May 15, 2019].

[26] CFI Education, (2019). "Financial synergy valuation". Corporate Finance Institute [online]. Available: https://corporatefinanceinstitute.com/resources/templates/excel-modeling/financial-synergy-valuation/. [accessed: May 15, 2019].

Operating synergies

As it has been mentioned above, the most accurate and detailed way to estimate synergies is doing it by analyzing companies internally, rather than making expectations from the outside. For this reason, the main assumptions considered are taken from several announcements carried out by the parent company, and from some of the terms reflected in the merger contract at the time of the transaction.

-Revenue synergies

A study carried out by McKinsey & Company[27] states that only the 76% of consumer-packaged goods industry has captured the revenue synergy target. Revenue synergies usually take longer to be achieved than cost synergies, on the order of five years instead than two.

For the merged entity subject of study in this project, direct access to the opportunity in the US market supports the commitment of British American Tobacco. It is focused in the delivery of long-term profitable growth though consistent revenue growth and margin enhancement of 50-100 basis points on average, per annum. The acquirer company believes that the deal will give the group a lot of runway to keep delivering that pretty challenging increase in operating margin going forward.

Developed markets are the source for the current profit growth, while emerging markets are considered the source for future profit growth. In order to obtain the same amount of net revenue, it is necessary to sell 13 packs of cigarettes in developing markets, compared to 10 packs at a group level. In developed markets 6 packs are needed to be sold, while in the US only 2 packs are necessary. The US revenue per pack is increasingly growing at a faster rate than developed markets, so this fact makes the US so attractive in terms of revenue. After the merger, 60% of the group's volume will continue to be in emerging markets.

Table 3.27 shows the growth in sales for the projected five years of the merged entity. Taking into account that revenue synergies take time to appear, and that the firm predicts a margin improvement of 50-100 basis points on average, for the first two years an enhancement of 0,5% and a small increase for the next periods has been considered.

[27] MCKINSEY & COMPANY (2019). Seven rules to crack the code on revenue synergies in M&A [online]. Available: https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/seven-rules-to-crack-the-code-on-revenue-synergies-in-ma. [accessed: May 29, 2019].

Table 3.27. Revenue synergies of the merged entity.

MERGED ENTITY	FORECAST				
In Millions of EUR	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Revenue without synergies	30.445,4	31.569,8	32.735,9	33.945,1	35.199,3
Sales growth with synergies	0,5%	0,5%	0,6%	0,8%	0,9%
Revenue with synergies	**30.597,6**	**31.727,6**	**32.932,3**	**34.216,7**	**35.516,1**

Source: Own elaboration

-*Cost synergies*

Cost synergies are translated into savings in operating costs after the merger agreement. These savings can take different forms: decrease in employees needed, information technology from one of the companies involved that makes it more efficient than competitors, supply chain relationships that decrease input costs, research and development.

For the case of employees, as the two firms operate in different regions and they complement each other geographically, dismissals may not be necessary. But, for example, for the case of research and development, it is reflected in the income statement of Reynolds American that there is not such investment. For this reason, the company would benefit from the current investment of BAT in this field.

By the end of the third year, British American Tobacco anticipates realizing at least 400 million dollars in annualized cost synergies. These synergies are a consequence of the efficiency enhancement, the economies of scale of the combined business and the alignment to the acquirer's Target Operating Model. Moreover, these cost synergies exist in three main areas: product development, procurement and corporate costs of the combined group. This, combined with the beneficial growth in the US market, supports the commitment of the company for the margin enhancement previously mentioned.

The table below represents the cost savings just cited in the previous paragraph. As the whole project is considering the data in Euros, the 400 million dollars are equivalent to 355 euros. And that is why the third year shows a cost saving of 355 euros. Moreover, for the first two years a smaller cost saving has been considered, while for the following years an increase in the cost savings has been applied. The company declares very confident in many releases that cost synergies are highly expected and that have been accurately estimated.

Table 3.28. Cost savings of the merged entity.

MERGED ENTITY	FORECAST				
In Millions of EUR	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Operating Costs	8.474,9	8.316,9	7.718,1	8.085,6	8.891,8
-Cost savings	250,0	300,0	355,0	400,0	455,0
Operating costs with synergies	**8.224,9**	**8.016,9**	**7.363,1**	**7.685,6**	**8.436,8**

Source: Own elaboration

3.3.3. Integration costs

It is important to take into account the integration costs when accounting for the value with synergies of the merged entity. These costs are referred to all costs related to the integration of an acquisition, and they include labor costs, travel costs, consulting fees and any other expenses related to the process of incorporation.

In this case, the amount of the integration expenses is directly attributable to the integration of Reynolds American by British American Tobacco. Furthermore, these costs will not recur once the integration of such acquisition is completed. As the company hasn't carried out any similar acquisition in the last few years, it is not possible to consider previous acquisition costs of the company to get a clear idea of the amount the company incurs in in these cases.

However, in the webpage of the parent company, the firm made a release describing that these costs were expected to be high, and that the amount of the forecasted costs for acquiring the target company accounted for 500 million euros.

These integration costs shall be included in the income statement of the merged entity with synergies. The following table represents the final value of operating expenses considering the cost savings of the company and the integration costs.

Table 3.28. Integration costs of the merged entity with synergies

MERGED ENTITY	FORECAST				
In Millions of EUR	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Operating Costs	8.474,9	8.316,9	7.718,1	8.085,6	8.891,8
-Cost savings	250,0	300,0	355,0	400,0	455,0
Operating costs with synergies	**8.224,9**	**8.016,9**	**7.363,1**	**7.685,6**	**8.436,8**
+ Integration Costs	500,0				
Operating costs with synergies (Incl. Integr. Costs)	**8.724,9**	**8.016,9**	**7.363,1**	**7.685,6**	**8.436,8**

Source: Own elaboration

3.3.4. Valuation of the merged entity with synergies

Taking into account the revenue and cost synergies and the integration costs calculated, it is now possible to calculate the value of the merged entity taking into account the expected synergies (Table 3.29).

Table 3.29. Operating Free Cash Flows of the merged entity with synergies.

Discounted Cash Flow Valuation	WITH SYNERGIES					
Free Cash Flows						
	2016	2017	2018	2019	2020	2021
Operating Profit (EBIT)	15160,1	12174,2	13771,5	15325,8	15971,6	16063,4
-Tax rate	-3183,6	-2556,6	-2892,0	-3218,4	-3354,0	-3373,3
+D&A	744,1	663,3	673,8	688,3	707,7	723,6
-CAPEX	-1443,6	-1197,3	-1236,5	-1251,5	-1493,1	-1528,7
- Variation of working capital	-1405,3	-882,6	-787,9	-741,7	-892,0	-1206,1
Operating Free Cash Flow	**9871,7**	**8201,0**	**9528,9**	**10802,5**	**10940,1**	**10678,9**

DCF Valuation						
		2017	2018	2019	2020	2021
Operating Free Cash Flows		8201,0	9528,9	10802,5	10940,1	10678,9
Terminal Value	1,9%					344361,8
Periods		1	2	3	4	5
Dicounted Factor (WACC)	5,06%	1,0	1,0	1,0	1,0	1,0
Discounted Free Cash Flows		**8201,0**	**9528,9**	**10802,5**	**10940,1**	**355040,7**

Source: Own elaboration

Considering the operating free cash flows calculated, the value of the merged entity and the price per share have also been calculated in the table below.

Table 3.30. Enterprise value of the merged entity with synergies

(In Million Euros)	
Enterprise Value	**394513,2**
-Net Financial Debt	**-35300,6**
+Cash and cash equivalents	**4541,9**
=Own resources value	**363754,5**
Number of shares	**3290,8**
Value per share	**110,5**

Source: Own elaboration

3.3.3. Net value of synergies

Having accounted the discounted cash flows of the merged entity with and without synergies, now it is possible to estimate the total net value of synergies of the merger. It is calculated by doing the difference between the equity value of the merged entity with synergies and the equity value of the merged entity without synergies. As it is observed in the figure below, the net value of synergies accounts for 99290,9 million euros.

Table 3.31. Net value of synergies

(In million Euros)	Equity value
Merged entity with synergies	363754,5
Merged entity without synergies	264463,6
Net value of synergies	**99290,9**

Source: Own elaboration

4. THE ACQUISITION

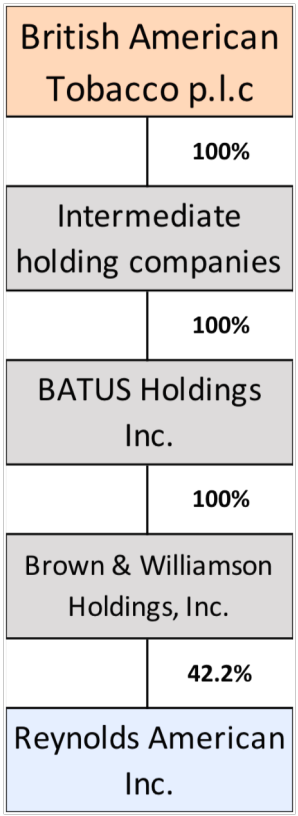
This last section of the dissertation is focused on explaining the organizational structure of the company, before and after the merger agreement, in order to understand better the way the deal was performed and the legal structure of the transaction. Moreover, the final acquisition price of Reynolds American is going to be provided, as well as a description of the different payment methods in merger and acquisition transactions.

Finally, the real transaction terms at the date of the acquisition are also going to be explained, so as to make the comparison between them and this project's results, and from where final conclusions will be extracted.

4.1. Organizational Structure of the BAT Group

4.1.1. Pre-merger corporate organigram

Figure 4.1. Corporate organigram before the merger



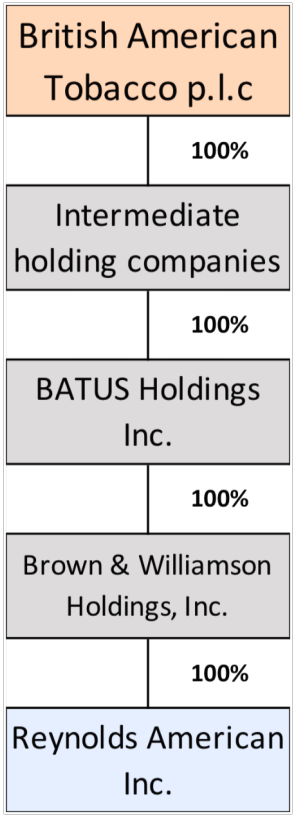
Source: Own elaboration

BAT p.l.c. is the parent company of the BAT group. As such, numerous wholly-owned subsidiaries hang from the organization, which at the same time own several other subsidiary companies. These last-mentioned firms are indirect subsidiaries of BAT p.l.c. Specifically, the parent company owns all the shares of BATUS holdings inc, an indirect company, which in turn owns 100% of Brown & Williamson Holdings, Inc. (B&W).

B& W owns the 42.2% of Reynolds., and therefore, through this company and the indirect subsidiaries that control it, BAT p.l.c. controls the aforementioned percentage of RAI.

4.1.2. Step 1. Aquisition.

Figure 4.2. Corporate organigram at the time of the acquisition



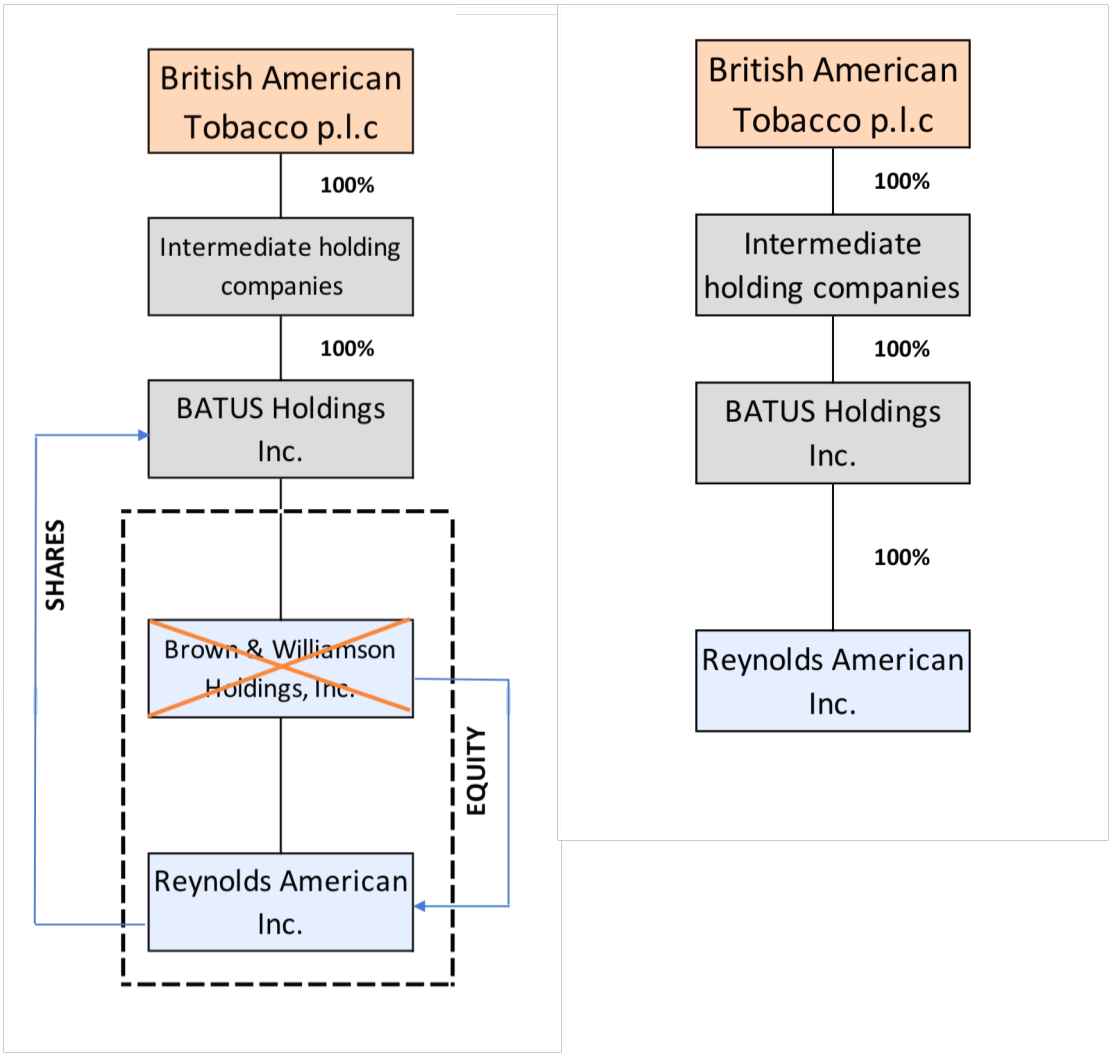
Source: Own elaboration

The Merger Plan[28] contemplates, in first place, the acquisition, through B&W, of the remaining 57.8% of RAI's shares. As a consequence of this, BAT p.l.c. would have the total control of the company (Figure 4.2).

[28] UNITED STATES SEC. (2017). Proposal of merger of British American Tobacco and Reynolds American[online].Available:https://www.sec.gov/Archives/edgar/data/1275283/000119312517203053/d366567ddefm14a.htm#rom366567_113. [accessed: June 2, 2019].

4.1.3. Step 2. Reverse merger.

Figure 4.3. Corporate organigram of the reverse merger.



Source: Own elaboration

In accordance with the merger proposal presented for vote to the shareholders of the companies involved, and which was object of approval, the next step after the acquisition of the 57.8% of RAI's shares by B&W, which entailed the takeover of all RAI by BAT p.l.c, was the merger of RAI and B & W, an indirect subsidiary of BAT.

The transaction presented to the shareholders' meeting was a reverse merger. In mergers by absorption, the absorbing company, RAI in this case, acquires by universal succession the entire equity of the absorbed company, B&W, which is extinguished, increasing, where appropriate, the share capital of the absorbing company by the appropriate amount. The particularity of reverse absorption mergers lies in the fact that, contrary to what

usually happens, the absorbed company (B&W) is the direct or indirect holder of 100% of the absorbing company's share capital (RAI).

Focusing on the studied case, RAI, which after the acquisition of the remaining 57.8% would be wholly owned by B&W, would absorb the latter, making it disappear and, in exchange, would acquire its assets by universal succession. It should be pointed out that, when B&W disappears, the shares of RAI which it owned will pass to BATUS Holding Inc., which will take full control of RAI.

In short, and in the words of the merger agreement of 14 June 2017 presented by RAI to its shareholders "under which an indirect, wholly owned subsidiary of BAT will be merged with and into RAI, and RAI will continue as the surviving corporation in the merger and an indirect, wholly owned subsidiary of BAT' ('an indirect subsidiary of BAT wholly owned by RAI will be merged with RAI and RAI will continue as a surviving company of the merger and as an indirect wholly owned subsidiary of the company wholly owned by BAT').

4.2. How much should British American Tobacco pay?

Having completed the valuation of both businesses together and the merged entity, this section is dedicated to estimate the amount BAT should pay for the acquired 57.8% of Reynolds American.

The first thing that has to be highlighted is the fact that BAT is only acquiring a percentage of the company, which is 57.8%, as it already owns the resting 42.2%. Assuming this fact and considering that the accounted equity value using the DCF valuation amounts to 81374 million euros, the value of the 57.8% of the Reynolds American is equal to 47034 million euros. This, translated into the US currency, is equal to 92047 and 53203 million dollars, respectively.

Table 4.1. Acquisition price of Reynolds American

(In million)	**Buying price of Reynolds American**	
	EQUITY VALUE (In Euros)	**EQUITY VALUE (In Dollars)**
100% of the company	81374	92047
57.8% of the company	**47034**	**53203**

Source: Own elaboration

Premium

In a merger and acquisition transaction, the difference between the offer price and the market price of the target before the merger was announced, is defined as the premium.

In order to estimate the premium that BAT is going to pay in the transaction, it is going to be considered the average market price of the last six months of 2016, that is before the merger agreement was announced, as it took place in January 2017. This figure is equal 47.9 euros per share, while the value per share estimated along the project with the DCF valuation was 57.1 euros per share. The difference between these prices result in a total premium of 19.2%.

4.3. Payment methods

It is an important decision the choice of the payment method in a merger and acquisition agreement. The seller is always going to desire the highest price, while the buyer would always prefer to pay the least as possible. Because of this reason, the structure of payment is highly significant so as to satisfy both parties.

According to Depamphilis (2010), there exist two types of payment methods in M&A deals: cash, non-cash, or a mix of both.

- Cash payment method. It is the simplest method, in which the ownership of shareholders and earnings per share are not diluted in the company (Sherman, 2011). It takes less time to accomplish the deal than stock payment method. However, this method in M&As deals does not have a positive impact on the profit of the company.
- Stock payment method. In Equity Share financing method, the buyer company gives shares to the acquired firm, whose shareholders become the shareholders of the parent company. Generally, it is a method used by overvalued companies and which has a higher cost than the cash payment method.
- Mixed Payment Method. It is the combination of cash and non-cash methods. Abnormal return is significantly higher for the buyer organization in this kind of method rather in a single payment technique. On the contrary, abnormal returns of the target company are lower in mixed offers than in pure cash offers.

For the success of the transaction, the payment structure plays an important role. “This decision is influenced by several factors, which include: liquidity position, risk, leverage, ownership structure, cost of capital, capital structure, tax implication, dividend policy,

premium value, market price of share, government rules and regulations, profit, free cash flow, equity flow, return on equity, market to book value, debt flow, transaction cost and target company willingness" (Boateng & Bi, 2013; Kalinowska & Mielcarz, 2014; Barbopoulos & Sudarsanam, 2012).[29]

4.4. The real transaction

British American Tobacco acquired Reynolds American in July 2017 at an agreed price of 49.4 billion dollars, creating the largest listed tobacco company in the world. By that date, BAT acquired the remaining 57.8% of Reynolds American it didn't already own. Although the approach of BAT for the combination was rejected at first, both companies' shareholders agreed at the end with the merge, leading this to a friendly operation.

The combined group has now a stable presence in profitable developed markets as well as in growing emerging markets. Moreover, the company has now direct access to the attractive market of the US. The merged entity is now a Next Generation Product business, with the commitment of delivering long-term shareholders return and profit growth.

Regarding the acquisition deal, some financial points are going to be explained in order to understand the payment method and the structure of the final offer. [30]

- For each Reynolds share, RAI shareholders will receive 29.44 dollars in cash without interest, and 0.5260 BAT ordinary shares which are represented by BAT American Depositary Shares ("BAT ADSs").
- It means a 26% premium over the stock price on the day before BAT's first offer was made public.
- BAT ADSs will be listed on the New York Stock Exchange (NYSE) under the symbol "BTI", while Reynolds shares will no longer trade on the NYSE.
- New BAT ordinary shares underlying the BAT ADSs account for 429,030,727.
- The total number of voting rights in the organization is 2,293,505,906.

[29] BIJAY SANKAR, B.P. (2018). "Payment methods in Mergers and Acquisitions: A theoretical framework". *International Journal of Accounting and Financial Reporting,* Vol.8, No.1, pp.170-187.

[30]British American Tobacco (2019). News Release [online]. Available: https://www.bat.com/group/sites/UK__9D9KCY.nsf/vwPagesWebLive/DOAPKCXS [accessed: June 1, 2019].

5. CONCLUSION

The fundamental objectives of the present postgraduate dissertation can be summarized in three different points. In first place, understanding the rationale behind the merger agreement of the two companies, at a strategic and financial level.

On the one side, regarding the strategic logic, it is expected to create a stronger, truly global tobacco and Next Generation Products (NGP) company. As a result of the combination with Reynolds, BAT will have direct access to the US market, which will support the commitment of the parent company to have a portfolio of strong growing brands and long-term balance growth. Moreover, another of the purposes of the transaction is to achieve a balance presence in high growth emerging markets and high profitability developed markets.

On the other side, considering the financial goals of the agreement, it is predicted to achieve both revenue and cost synergies. Cost synergies are expected to amount to 400 million dollars per year by the end of the third year. The combination of both businesses will also enhance generation of cash, support the commitment to maintain a minimum dividend yield of 65%, a solid investment grade, and to beat the WACC for the US by year 5.

The second objective of the project was the estimation of the existing gap between the buying price of the acquired company obtained in this study, with the real agreement price at the time of the acquisition. For achieving this purpose, both companies were individually analyzed, with the help of the Discounted Cash Flows and relative valuation methods, as well as the industry they operate in, so as to understand their environment and the main risks and opportunities of the sector. As a result of the standalone analysis of the participating companies, their book value was accounted, as well as their potential compared to the market value, which has resulted to be upwards in both cases.

Considering the value obtained of Reynolds American in this paperwork, it was calculated a total acquisition price of 53 billion dollars, representing a premium of 19.2%. On the contrary, the real price at the time of the merger was 49 billion dollars, reflecting a premium of 26%. As a consequence, it can be concluded that although the gap between the price estimated along this project and the real one differs in a very small quantity, the accounted value of Reynolds American during this research is higher than the price paid by BAT, so the buyer company did pay less than the book value of the target company.

The third and last objective of the project was to account the enterprise value of the merged entity, applying the Discounted Cash Flows method, in order to estimate the net synergies derived from the transaction agreement. These synergies, which have resulted to be highly positive, were calculated as the difference between the value of the combination of both businesses and the sum of the value of the organizations individually.

Synergies are the main reason behind merger and acquisition transactions, as they have an immediate effect over revenues and costs. Only operating synergies were considered during this project, as they are based on the company's operations and have higher probabilities to occur and sustain in the long term than financial synergies.

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7. APPENDIX

Appendix 1: Balance Sheet of Reynolds American, Inc.

REYNOLDS AMERICAN	HISTORICAL				FORECAST				
In Million EUR	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Total Current Assets	**2.650,7**	**2.746,3**	**4.744,2**	**4.018,2**	**3.836,2**	**4.199,5**	**4.018,0**	**4.017,9**	**4.078,5**
+ Cash, Cash Equivalents & STI	1.087,8	798,3	2.499,5	1.944,6	2.222,1	2.083,4	2.152,7	2.118,0	2.135,4
+ Accounts & Notes Receiv	103,7	95,9	62,6	62,6	63,6	62,3	56,8	55,5	53,9
+ Inventories	817,3	1.058,7	1.595,8	1.559,7	1.965,2	2.453,1	2.850,2	3.486,8	4.223,1
+ Other ST assets	641,8	793,4	586,2	451,3	412,9	333,6	277,2	236,0	195,9
Total Non Current Assets	**8.519,1**	**9.812,4**	**43.203,6**	**44.426,9**	**35.128,3**	**42.390,0**	**45.609,0**	**47.872,9**	**51.252,7**
+Property, Plant and Equipment, Net	778,9	994,2	1.155,0	1.278,1	1.343,2	1.515,1	1.691,6	1.918,0	2.154,8
+Property, Plant and Equipment	1.924,0	2.338,8	2.667,0	2.853,9	3.259,1	3.642,0	4.042,0	4.539,6	5.069,8
- Accumulated Depreciation	1.145,1	1.344,6	1.512,1	1.575,8	1.915,9	2.126,9	2.350,4	2.621,6	2.915,0
+Long term investments and receivables	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
+Other Long Term Assets	7.740,2	8.818,2	42.048,6	43.148,8	33.785,1	40.874,9	43.917,4	45.955,0	49.097,9
Total Assets	**11.169,8**	**12.558,7**	**47.947,7**	**48.445,1**	**38.964,5**	**46.589,5**	**49.627,0**	**51.890,8**	**55.331,2**
Total Current Liabilities	**2.230,8**	**2.928,9**	**4.869,3**	**4.726,5**	**4.365,2**	**4.851,3**	**4.874,4**	**4.936,1**	**5.149,2**
+ Payables & Accruals	1.386,6	1.620,7	3.229,3	3.200,0	2.683,3	3.037,5	2.973,6	2.898,2	2.969,8
+ ST Debt	30,0	371,9	465,7	475,0	539,7	581,8	644,1	703,8	774,0
+ Other ST Liabilities	814,2	936,4	1.174,3	1.051,5	1.142,2	1.231,9	1.256,7	1.334,2	1.405,4
Total Non Current Liabilities	**5.191,8**	**5.892,6**	**26.281,1**	**23.133,6**	**19.845,3**	**23.520,8**	**27.331,4**	**29.953,5**	**32.729,6**
+ LT Debt	3.697,9	3.828,9	15.506,2	12.007,2	13.480,6	15.938,4	18.369,3	21.444,6	24.875,1
+ Other LT Liabilities	1.493,9	2.063,6	10.774,9	11.126,4	6.364,7	7.582,4	8.962,1	8.508,9	7.854,5
Total Liabilities	**7.422,6**	**8.821,5**	**31.150,4**	**27.860,1**	**24.210,5**	**28.372,1**	**32.205,8**	**34.889,6**	**37.878,9**
Total Equity	**3.747,2**	**3.737,2**	**16.797,3**	**20.585,0**	**14.754,0**	**18.217,4**	**17.421,2**	**17.001,2**	**17.452,3**
+ Preferred Equity and Hybrid Capital	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
+ Share Capital & APIC	4.765,4	5.124,0	16.935,4	17.336,7	13.132,0	15.801,4	15.423,4	14.785,6	15.336,8
- Treasury Stock	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
+ Retained Earnings	-977,6	-1.086,0	173,0	3.546,0	1.859,5	2.702,8	2.281,2	2.492,0	2.386,6
+ Other Equity	-40,6	-300,8	-311,1	-297,7	-237,6	-286,8	-283,3	-276,3	-271,0
Total Equity & Liabilities	**11.169,8**	**12.558,7**	**47.947,7**	**48.445,1**	**38.964,5**	**46.589,5**	**49.627,0**	**51.890,8**	**55.331,2**

Source: Bloomberg

Appendix 2: Income Statement of Reynolds American, Inc.

REYNOLDS AMERICAN	HISTORICAL				FORECAST				
In Million EUR	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Revenue	**6.202,8**	**6.387,1**	**9.623,6**	**11.302,2**	**11.754,3**	**12.224,5**	**12.713,5**	**13.222,0**	**13.750,9**
+ Sales & Services Revenue	6.202,8	6.387,1	9.623,6	11.302,2	11.754,3	12.224,5	12.713,5	13.222,0	13.750,9
% Sales growth		3,0%	50,7%	17,4%	4,0%	4,0%	4,0%	4,0%	4,0%
- Cost of Revenue	**2.770,0**	**3.059,7**	**4.226,3**	**4.376,1**	**5.585,6**	**5.710,9**	**5.838,5**	**5.956,6**	**6.202,6**
+ Cost of Goods & Services	2.770,0	3.059,7	4.226,3	4.376,1	5.585,6	5.710,9	5.838,5	5.956,6	6.202,6
% COGS/Sales	45%	48%	44%	39%	48%	47%	46%	45%	45%
Gross Profit	**3.432,8**	**3.327,4**	**5.397,4**	**6.926,1**	**6.168,7**	**6.513,6**	**6.874,9**	**7.265,4**	**7.548,2**
+ Other Operating Income	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
- Operating Expenses	1.147,8	1.490,6	-777,1	-2.537,4	212,5	-252,9	-1.034,9	-1.046,2	-560,8
+Selling, general and Administrative	1.046,1	1.410,7	1.891,4	1.745,5	1.398,7	1.439,4	1.488,6	1.562,4	1.587,7
% Selling, general and admin		34,9%	34,1%	-7,7%	-19,9%	2,9%	3,4%	5,0%	1,6%
+ Depreciation & Amortization	73,8	71,6	93,8	90,4	97,7	109,3	115,2	125,0	135,7
% D&A		-3,0%	30,9%	-3,6%	8,1%	11,8%	5,4%	8,5%	8,6%
+ Other Operating Expense	27,9	8,3	-2.762,2	-4.373,4	-1.284,0	-1.801,6	-2.638,8	-2.733,6	-2.284,2
% Operating expenses	43,8%	46,6%	42,3%	44,0%	44,2%	44,3%	43,7%	44,1%	44,1%
Operating Income (Loss)	**2.285,0**	**1.836,7**	**6.174,5**	**9.463,6**	**5.956,2**	**6.766,5**	**7.909,8**	**8.311,6**	**8.109,1**
- Non-Operating (Income) Loss	294,5	202,8	513,0	793,7	479,7	523,8	577,3	626,8	651,7
% Financial debt	4,9%	2,8%	1,8%	3,2%	3,1%	3,1%	3,1%	3,1%	2,9%
Pretax Income	**1.990,5**	**1.633,9**	**5.661,5**	**8.669,9**	**5.476,5**	**6.242,7**	**7.332,5**	**7.684,8**	**7.457,4**
- Income Tax Expense (Benefit)	742,9	590,1	2.776,7	3.236,8	2.135,8	1.560,7	1.833,1	1.921,2	1.864,3
% Income Tax	37,3%	36,1%	49,0%	37,3%	39%	25%	25%	25%	25%
Income (Loss) from Cont Ops	**1.247,6**	**1.043,8**	**2.884,8**	**5.433,1**	**3.340,7**	**4.682,0**	**5.499,4**	**5.763,6**	**5.593,0**
- Net Extraordinary Losses (Gains)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Income (Loss) Incl. MI	**1.247,6**	**1.043,8**	**2.884,8**	**5.433,1**	**3.340,7**	**4.682,0**	**5.499,4**	**5.763,6**	**5.593,0**
- Minority Interest	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Net Income, GAAP	**1.247,6**	**1.043,8**	**2.884,8**	**5.433,1**	**3.340,7**	**4.682,0**	**5.499,4**	**5.763,6**	**5.593,0**

Source: Bloomberg

Appendix 3: Balance Sheet of British American Tobacco p.l.c.

BRITISH AMERICAN TOBACCO	HISTORICAL				FORECAST				
In Million EUR	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Total Current Assets	**11.434,9**	**11.759,1**	**13.307,5**	**14.465,9**	**14.620,9**	**14.837,7**	**15.069,0**	**15.107,0**	**15.323,1**
+ Cash, Cash Equivalents & STI	2.595,0	2.405,4	2.709,2	2.597,3	2.576,7	2.572,2	2.613,9	2.590,0	2.588,2
+ Accounts & Notes Receiv	2.652,7	2.666,8	3.193,3	3.155,6	3.196,6	3.198,5	3.220,3	3.232,2	3.249,1
+ Inventories	4.856,0	5.322,0	5.758,8	6.780,6	6.855,1	6.951,1	7.020,6	6.950,4	7.033,8
+ Other ST assets	1.331,1	1.364,9	1.646,2	1.932,5	1.992,4	2.115,9	2.214,3	2.334,4	2.452,0
Total Non Current Assets	**20.859,8**	**21.935,7**	**29.426,0**	**32.087,4**	**30.964,1**	**31.719,2**	**34.825,9**	**37.777,6**	**40.088,9**
+Property, Plant and Equipment, Net	3.791,6	3.868,2	4.096,4	4.285,1	4.399,4	4.535,6	4.642,4	4.800,3	4.974,1
+Property, Plant and Equipment	7.299,7	7.645,0	7.855,2	8.367,7	8.496,5	8.676,3	8.839,5	9.127,4	9.402,3
- Accumulated Depreciation	3.508,1	3.776,8	3.758,8	4.082,6	4.097,1	4.140,8	4.197,2	4.327,1	4.428,2
+Long term investments and receivables	43,3	46,4	50,2	50,3	49,0	49,8	49,7	49,5	49,7
+Other Long Term Assets	17.024,9	18.021,2	25.279,4	27.752,0	26.515,7	27.133,8	30.133,8	32.927,8	35.065,1
Total Assets	**32.294,6**	**33.694,9**	**42.733,5**	**46.553,3**	**45.584,9**	**46.556,9**	**49.894,9**	**52.884,6**	**55.412,0**
Total Current Liabilities	**10.134,9**	**11.291,7**	**12.211,9**	**13.877,2**	**14.105,6**	**14.525,9**	**15.370,5**	**16.012,6**	**16.706,7**
+ Payables & Accruals	7.482,3	7.666,9	7.306,0	8.111,4	7.694,8	7.704,0	7.836,7	7.745,2	7.762,0
+ ST Debt	2.378,8	3.192,2	2.976,4	3.519,6	4.030,0	4.524,3	5.207,5	5.967,3	6.643,2
+ Other ST Liabilities	273,9	432,7	1.929,5	2.246,1	2.380,9	2.297,6	2.326,3	2.300,1	2.301,6
Total Non Current Liabilities	**13.828,0**	**14.916,6**	**23.698,3**	**22.837,1**	**24.890,2**	**28.436,5**	**32.354,1**	**32.301,3**	**34.099,4**
+ LT Debt	11.672,7	12.592,3	20.076,5	19.298,8	21.728,7	24.996,0	28.973,9	28.973,9	30.716,8
+ Other LT Liabilities	2.155,3	2.324,3	3.621,8	3.538,3	3.161,5	3.440,5	3.380,1	3.327,4	3.382,7
Total Liabilities	**23.963,0**	**26.208,3**	**35.910,2**	**36.714,3**	**38.995,8**	**42.962,5**	**47.724,5**	**48.314,0**	**50.806,1**
Total Equity Before Minority Interest	**7.970,0**	**7.095,1**	**6.636,1**	**9.576,8**	**6.288,4**	**3.309,0**	**1.911,6**	**4.293,9**	**4.325,5**
+ Preferred Equity and Hybrid Capital	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
+ Share Capital & APIC	693,2	748,1	793,2	689,4	731,0	740,5	738,5	724,8	733,7
- Treasury Stock	5.196,0	6.532,4	6.846,3	5.914,4	6.431,0	6.397,3	6.414,2	6.405,7	6.009,9
+ Retained Earnings	8.077,0	8.564,4	9.224,7	9.813,3	9.200,8	6.184,0	6.424,3	6.400,6	6.312,5
+ Other Equity	4.395,9	4.315,0	3.464,5	4.988,6	2.787,7	2.781,8	1.162,9	3.574,1	3.289,2
Total Equity	**8.331,7**	**7.486,6**	**6.823,3**	**9.839,0**	**6.589,0**	**3.594,4**	**2.170,4**	**4.570,6**	**4.605,9**
+ Minority Interest/Non controlling interest	361,6	391,5	187,1	262,2	300,6	285,3	258,8	276,7	280,4
Total Equity & Liabilities	**32.294,6**	**33.694,9**	**42.733,5**	**46.553,3**	**45.584,9**	**46.556,9**	**49.894,9**	**52.884,6**	**55.412,0**

Source: Bloomberg

Appendix 4: Income Statement of British American Tobacco p.l.c.

BRITISH AMERICAN TOBACCO	HISTORICAL				FORECAST				
In Million EUR	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Revenue	**17.975,2**	**17.336,3**	**18.051,3**	**18.059,0**	**18.691,1**	**19.345,3**	**20.022,4**	**20.723,1**	**21.448,4**
+ Sales & Services Revenue	17.975,2	17.336,3	18.051,3	18.059,0	18.691,1	19.345,3	20.022,4	20.723,1	21.448,4
% Sales growth	-4,0%	-3,6%	4,1%	0,0%	3,5%	3,5%	3,5%	3,5%	3,5%
- Cost of Revenue	**3.943,7**	**3.831,8**	**4.431,6**	**4.624,0**	**4.391,8**	**4.508,8**	**4.681,8**	**4.866,5**	**5.084,1**
+ Cost of Goods & Services	3.943,7	3.831,8	4.431,6	4.624,0	4.391,8	4.508,8	4.681,8	4.866,5	5.084,1
% COGS/Sales	22%	22%	25%	26%	23%	23%	23%	23%	24%
Gross Profit	**14.031,5**	**13.504,5**	**13.619,8**	**13.435,0**	**14.299,3**	**14.836,5**	**15.340,6**	**15.856,6**	**16.364,3**
+ Other Operating Income	355,7	220,9	309,9	215,5	278,8	280,5	276,9	263,7	270,9
- Operating Expenses	7.878,0	8.084,3	7.638,5	7.954,0	8.262,4	8.569,8	8.753,0	9.131,9	9.452,6
+Research and Development	107,2	91,8	82,7	64,9	92,2	87,8	83,9	82,3	82,2
% R&D	-0,1	-14,3%	-10,0%	-21,5%	42,2%	-4,9%	-4,4%	-1,9%	-0,1%
+ Depreciation & Amortization	521,8	524,9	556,5	653,8	565,6	564,5	573,1	582,7	587,9
% D&A	-8,6%	0,6%	6,0%	17,5%	-13,5%	-0,2%	1,5%	1,7%	0,9%
+ Other Operating Expense	7.249,0	7.467,6	6.999,3	7.235,4	7.604,5	7.917,5	8.096,0	8.466,9	8.782,5
% Operating expenses	43,8%	46,6%	42,3%	44,0%	44,2%	44,3%	43,7%	44,1%	44,1%
Operating Income (Loss)	**6.509,2**	**5.641,1**	**6.291,2**	**5.696,5**	**6.315,7**	**6.547,2**	**6.864,5**	**6.988,5**	**7.182,6**
- Non-Operating (Income) Loss	-321,6	-374,7	-1.774,3	-1.949,0	-716,4	-807,0	-887,8	-975,8	-1.069,3
% Financial debt	2,0%	2,0%	6,2%	3,2%	2,4%	2,7%	2,9%	3,1%	3,2%
Pretax Income	**6.830,8**	**6.015,8**	**8.065,5**	**7.645,5**	**7.032,1**	**7.354,2**	**7.752,3**	**7.964,3**	**8.251,9**
- Income Tax Expense (Benefit)	1.885,3	1.804,7	1.838,9	1.720,2	1.336,1	1.397,3	1.472,9	1.513,2	1.567,9
% Income Tax	27,6%	30,0%	22,8%	22,5%	19%	19%	19%	19%	19%
Income (Loss) from Cont Ops	**4.945,5**	**4.211,1**	**6.226,6**	**5.925,3**	**5.696,0**	**5.956,9**	**6.279,4**	**6.451,1**	**6.684,0**
- Net Extraordinary Losses (Gains)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Income (Loss) Incl. MI	**4.945,5**	**4.211,1**	**6.226,6**	**5.925,3**	**5.696,0**	**5.956,9**	**6.279,4**	**6.451,1**	**6.684,0**
- Minority Interest	347,5	345,0	319,6	233,8	318,8	318,1	313,8	308,2	302,0
Net Income, GAAP	**4.598,0**	**3.866,1**	**5.907,0**	**5.691,5**	**5.377,2**	**5.638,8**	**5.965,6**	**6.142,9**	**6.382,0**

Source: Bloomberg

Appendix 5: Income statement of the merged entity without synergies.

MERGED ENTITY	FORECAST				
In Million EUR	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Revenue	**30.445,4**	**31.569,8**	**32.735,9**	**33.945,1**	**35.199,3**
+ Sales & Services Revenue	30.445,4	31.569,8	32.735,9	33.945,1	35.199,3
- Cost of Revenue	**9.977,4**	**10.219,7**	**10.520,3**	**10.823,1**	**11.286,7**
+ Cost of Goods & Services	9.977,4	10.219,7	10.520,3	10.823,1	11.286,7
Gross Profit	**20.468,0**	**21.350,1**	**22.215,5**	**23.122,0**	**23.912,5**
+ Other Operating Income	278,8	280,5	276,9	263,7	270,9
- Operating Expenses	8.474,9	8.316,9	7.718,1	8.085,6	8.891,8
+Research and Development	92,2	87,8	83,9	82,3	82,2
+Selling, general and Administrative	1.398,7	1.439,4	1.488,6	1.562,4	1.587,7
+ Depreciation & Amortization	663,3	673,8	688,3	707,7	723,6
+ Other Operating Expense	6.320,5	6.116,0	5.457,3	5.733,3	6.498,3
Operating Income (Loss)	**12.271,9**	**13.313,7**	**14.774,3**	**15.300,1**	**15.291,6**
- Non-Operating (Income) Loss	-236,7	-283,2	-310,5	-349,0	-417,6
Pretax Income	**12.508,6**	**13.596,9**	**15.084,9**	**15.649,1**	**15.709,2**
- Income Tax Expense (Benefit)	2.626,8	2.855,3	3.167,8	3.286,3	3.298,9
% Income Tax	21%	21%	21%	21%	21%
Income (Loss) from Cont Ops	**9.881,8**	**10.741,5**	**11.917,0**	**12.362,8**	**12.410,3**
- Net Extraordinary Losses (Gains)	0,0	0,0	0,0	0,0	0,0
Income (Loss) Incl. MI	**9.881,8**	**10.741,5**	**11.917,0**	**12.362,8**	**12.410,3**
- Minority Interest	318,8	318,1	313,8	308,2	302,0
Net Income, GAAP	**9.563,0**	**10.423,4**	**11.603,2**	**12.054,6**	**12.108,2**

Source: Own elaboration

Appendix 6: Income statement of the merged entity with synergies.

BRITISH AMERICAN TOBACCO	FORECAST				
In Million EUR	FY 2017 Est 12/31/2017	FY 2018 Est 12/31/2018	FY 2019 Est 12/31/2019	FY 2020 Est 12/31/2020	FY 2021 Est 12/31/2021
Revenue	**30.597,6**	**31.727,6**	**32.932,3**	**34.216,7**	**35.516,1**
+ Sales & Services Revenue	30.597,6	31.727,6	32.932,3	34.216,7	35.516,1
- Cost of Revenue	**9.977,4**	**10.219,7**	**10.520,3**	**10.823,1**	**11.286,7**
+ Cost of Goods & Services	9.977,4	10.219,7	10.520,3	10.823,1	11.286,7
Gross Profit	**20.620,2**	**21.508,0**	**22.411,9**	**23.393,5**	**24.229,3**
+ Other Operating Income	278,8	280,5	276,9	263,7	270,9
- Operating Expenses	8.724,9	8.016,9	7.363,1	7.685,6	8.436,8
Operating Income (Loss)	**12.174,2**	**13.771,5**	**15.325,8**	**15.971,6**	**16.063,4**
- Non-Operating (Income) Loss	-236,7	-283,2	-310,5	-349,0	-417,6
Pretax Income	**12.410,9**	**14.054,7**	**15.636,3**	**16.320,6**	**16.481,0**
- Income Tax Expense (Benefit)	2.606,3	2.951,5	3.283,6	3.427,3	3.461,0
% Income Tax	21%	21%	21%	21%	21%
Income (Loss) from Cont Ops	**9.804,6**	**11.103,2**	**12.352,6**	**12.893,3**	**13.020,0**
- Net Extraordinary Losses (Gains)	0,0	0,0	0,0	0,0	0,0
Income (Loss) Incl. MI	**9.804,6**	**11.103,2**	**12.352,6**	**12.893,3**	**13.020,0**
- Minority Interest	318,8	318,1	313,8	308,2	302,0
Net Income, GAAP	**9.485,8**	**10.785,1**	**12.038,8**	**12.585,1**	**12.718,0**

Source: Own elaboration