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Equity Valuation of **ALMIRALL SA**

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Abstract

This dissertation aims at determining the fair value of Almirall SA equity. The pharmaceutical industries, as well as Almirall SA were researched in detail. Different theoretical approaches were discussed in a literature review that represents the "state of the art" in equity valuation. Based on the literature review, Almirall SA was valued with a sum of the part valuation, including a discounted cash flow valuation for the mature business, a discounted multiple valuation for the company research and development activity and a net present value valuation for income incurring from the recent transaction with AztraZeneca in 2014. The fair value of 16.2 Euros per share determined the target price of this valuation, based on comparing said price with the current share price of 18.4 Euros, I made a recommendation for investors to sell the stock. Finally, this dissertation's recommendation and valuation was compared with another from an equity research report from Credit Suisse and I proceeded to explain the differences in the recommendation and valuation, which might arise from different assumptions, valuation methods and recommendation method used.

Esta dissertação tem como objectivo determinar o valor justo da acção da Almirall SA. A indústria farmacêutica, bem como a Almirall SA foram analisados em detalhe. Abordagens teóricas diferentes foram discutidas numa revisão de literatura que discute os métodos mais sofisticados e actualizados de avaliação de empresas. Com base na revisão da literatura, a Almirall SA foi avaliada como uma soma das partes, incluindo uma avaliação fluxos de caixa descontados para o negócio maduro da empresa, uma avaliação de múltiplos descontada para a actividade da empresa em investigação e desenvolvimento e uma avaliação do valor presente líquido para a renda proveniente da transacção recente com a AztraZeneca em 2014. O valor justo de 16.2 Euros por acção determinou o preço-alvo desta avaliação, com base na comparação do referido preço com a preço actual de 18.4 Euros, fiz uma recomendação aos investidores para vender a acção. Finalmente, a recomendação e avaliação desta dissertação foram comparadas com outras de um relatório de análise do Credit Suisse e as diferenças que surgiram na recomendação e avaliação foram discutidas, tendo em conta os pressupostos, os métodos de avaliação utilizados e a o método de recomendação.

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On a more personal note, this dissertation is the last step in my master's degree and education, therefore I want to thank all that have been with me so far, my family and friends, whom have helped me to overcome yet another challenge.

CONTENT LIST

LIST OF FIGURES

LIST OF FORMULAS

GLOSSARY

ALM	ALMIRALL
APV	Adjusted Present Value
AZN	AZTRAZENECA
B	Beta
B_d	Debt Beta
B_{im}	Raw Beta
B_l	Levered Beta
B_u	Unlevered Beta
CAPEX	Capital Expenditures
CDS	Country Default Spread
CF	Cash Flow
COGS	Cost of Goods Sold
COPD	Chronic Obstructive Pulmonary Disease
Cov	Covariance
D	Debt
DCF	Discounted Cash Flow
DDM	Dividend Discount Model
Dep & Amort	Depreciation and Amortization
Derma	Dermatology
Div	Dividend
DPS	Dividend Per Share
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Depreciation and Amortization
EPS	Earnings Per Share
EV	Enterprise Value
EVA	Economic Value Added
FCFF	Free Cash Flow to the Firm
FCFE	Free Cash Flow to Equity
FV	Fair Value

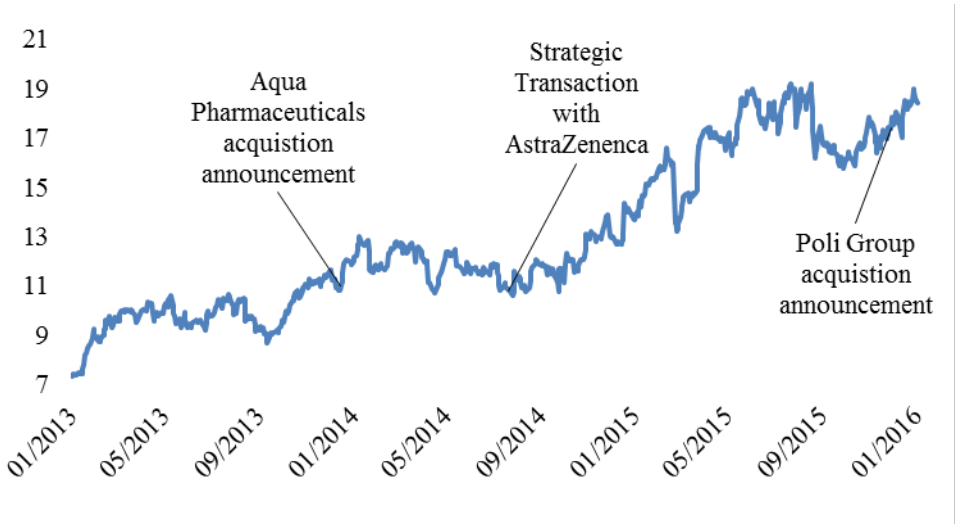
g	Growth Rate
GDP	Gross Domestic Product
Gen & Admin Costs	General and Administrative Costs
GSK	GlaxoSmithKline
I	Invested Capital
IBEX	Spanish Exchange Index
K	Cost of Capital
K_d	Cost of Debt
K_e	Cost of Equity
K_u	Cost of Equity Unlevered
Mk	Market
Mk Cap	Market Capitalization
M&A	Mergers and Acquisitions
n	Asset life
NOPLAT	Net Operating Profit Less Adjusted Taxes
NPV	Net Present Value
NWC	Net Working Capital
P/E	Price to Earnings
PBV	Price to Book Value
PPE	Property, Plant and Equipment
PV	Present Value
R&D	Research and Development
R_i	Firm Stock Return
R_f	Risk Free Rate
R_m	Market Return
ROA	Return on Assets
ROE	Return on Equity
S&P	Standard & Poor's
T	Tax Rate
TV	Terminal Value
t	Number of Time Periods
USD	United States dollars
V_u	Present Value of Unlevered Firm

V_{TS}	Present Value of Interest Tax Shield
WACC	Weighted Average Cost of Capital
σ	Standard Deviation

1 - INTRODUCTION

This dissertation intends to determine a realistic approximation to the fair value of ALM SA and compare it with the current market price of 4 of January and make a recommendation to either buy sell or hold the stock.

FIGURE 1: SHARE PRICE EVOLUTION



ALM Stock price has increased substantially over the last years, due to the company strategy's redirection and M&A activity. The purpose of this dissertation is to analyse if ALM's current price of 18.4 correctly accesses its' fair value. I based my analysis on fundamental research and perspectives for the short and long run for the pharmaceutical sector and the company. Furthermore, this dissertation establishes a market value to the R&D activity that ALM is undergoing.

The key question this dissertation aims to answer is the following:

Is the current market price correctly valuing ALM's current business, R&D activities and the potential of the recent transactions?

To answer this question, I started by reviewing the relevant academic literature.

2 - REVIEW OF RELEVANT LITERATURE

This section purpose is to present an overview of the state-of-the-art methods, which are usually used when performing a company firm valuation.

Firm valuation is widely used in the finance realm, it is used to test market efficiency, to determine corporate strategy decisions and as a tool in investment and capital budgeting decisions. (Damodaran, 2002)

In this literature review, I explained in detail different methods and the advantages and disadvantages associated with each of them, I focused on methods which may be used for ALM's Valuation.

As stated in All Roads Lead to Rome "we are fast approaching the point of valuation overload" (Holt, et al., 1999), in line with this citation, there is a need to clarify and explain the methodologies that are considered the most up to date and correct approaches of valuation available. The key theoretical assumption of firm valuation is that even though different methods are complex and use different data, the valuation result should be equivalent (Holt, et al., 1999).

Damodaran argues there are four broad approaches to valuation (Damodaran, 2006). The first and most commonly accepted is the discounted cash-flow approach, it determines the fair value of an asset by considering the cash that it will generate throughout its life-time discounted to the present. A second method, the liquidation or accounting valuation, assesses the value of firms taken into account the book value of its assets. A third approach, relative valuation, which is a fairly popular method, relies on multiples and uses benchmarking based on an adequate group of peers. The fourth approach, contingent claim valuation, is performed when assets display option like characteristics and therefore are valued with option pricing (Damodaran, 2006).

While Damodaran considers there are four broad approaches to valuation (Fernández, 2015), Fernández argues there are six. The two additional methods purposed by Fernández are the goodwill base method and value creation method. Goodwill accounts for the company's intangible assets which usually are not reflected in the book value but can be an essential advantage in many industries, those hard to measure intangibles assets can be brands, strategic alliances, costumer portfolio, etc.

2.1 - COST OF CAPITAL

2.1.1 - WEIGHTED AVERAGE COST OF CAPITAL

The WACC method is suitable to value simple and stable capital structures and it is used to discount cash-flows that an asset will generate. The method consists in calculating a discount rate that accounts for the value created, or not, by the financing structure of the company. Due to this fact, the WACC commonly needs to be adjusted to include tax shields, subsidies, hedges, different types of debt securities, issue costs and changing capital structures (Luehrman, 1997).

FORMULA I:

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

The WACC is expected to reflect the business risk adjusted to the capital structure, normally it is calculated by multiplying the after tax cost of debt and cost of equity by the respective weights in the capital structure. Other inputs may be included if applicable and different adjustments should be applied in case we are dealing with complex capital structures (Luehrman, 1997). To determine debt weight in the capital structure, generally it is assumed the company has a target capital structure (Damodaran, 2002). On other occasions when the debt level is expected to change, readjustments to the WACC are needed (Fernandéz, 1997).

2.1.2 - COST OF EQUITY

The cost of equity is the expected return on equity demanded by investors and it is calculated by adding a premium, which is the market risk premium adjusted for the company sensitiveness to the market risk, to the riskless rate (Damodaran, 2002).

FORMULA II:

$$K_e = R_f + \beta \times Mk_{premium}$$

The Beta is a measure of company risk, it includes systematic risk and risk deriving from the firm's capital structure (Damodaran, 2002).

The cost of equity can be levered or unlevered, representing the overall risk of the firm or just the assets risk without the effect of leverage, respectively (Damodaran, 2002).

2.1.3 - COST OF DEBT

The cost of debt is the return expected by the firm's debtholders and it is calculated by adding a spread on the risk-free rate based on the default risk (Damodaran, 2002).

Rating agencies often rate public companies and determine a spread based on that rating that rating. Alternatively, the cost of debt can be calculated by the available yield to maturity if the company has publicly traded bonds or by a synthetic rating based on the interest coverage ratio of the company (Damodaran, 2002).

FORMULA III:

$$K_d = R_f + spread$$

After we determine the pre-tax cost of debt we adjust for the tax benefits of debt.

FORMULA IV:

$$After - tax\ cost\ of\ debt = K_d \times (1 - T)$$

The underlying assumption on the after-tax cost of debt is that interest is tax deductible, Thus increasing leverage will lower the amount paid in taxes and maximize the firm's value up until a certain point, when bankruptcy costs and other adverse effects start to outweigh debt's benefits (Damodaran, 2002).

2.1.4 - TAX RATE

When determining which tax rate to use in valuation, there are arguments in favour of using either the effective or the corporate marginal tax rate (Damodaran, 2002). Both figures usually show some discrepancies, mainly due to deferring taxes, use of different accounting standards for reporting and tax purposes and tax credits (Damodaran, 2002). Damodaran argues that because none of the reasons that explain the difference between effective and marginal tax rates are usually sustainable in the long run, effective tax rate should converge to corporate

marginal tax rate, and in the long run, marginal tax rate is the most robust assumption. Still, Damodaran suggests that when estimating cash flows, one can use the effective tax rate in the first years and use the marginal tax rate in subsequent years and terminal value (Damodaran, 2002).

2.1.5 - RISK FREE RATE

To be considered risk free, an instrument has to be default free and its expected return has to equal to the actual return. Therefore the instrument used should be a zero coupon treasure bond with long term maturity that pays in the same currency as the investment (Damodaran, 2002).

The underlying reasons for the aforementioned choice of instrument are the fact that the central bank can issue currency and act as lender of last resort, assuring the default free nature of the security, the fact that the bond is zero coupon, which implies there is no reinvestment risk on which the coupon will be invested at different rates that result in actual return being different from the expected (Fernández, 2004; Damodaran, 2002), it complies with the consistency principle that states the instrument used as the risk-free rate has to return in the same currency as the project estimated cash flows, to assure there are no currency exchange discrepancies (Damodaran, 2002) and the long term maturity which mimics the life-time of the investment, a long term maturity is more accurate for a firm that is a going concern. (Damodaran, 2002).

2.1.6 - MARKET RISK PREMIUM

The market risk premium is the excess return of the market to the risk free rate. Traditionally, analysts use the historical average market risk premium when performing valuations, but there are divergent views regarding the time period that should be used when calculating the market risk premium.

The historical risk premium boldly assumes that investor risk premiums and the average risk of investments have remained stable over time. Some academics argue that this assumption is incorrect and shorter more recent time periods should be used to calculate the average risk

premium. Although recent time periods seem more appropriate to measure market risk, academics argue that shorter periods of time exhibit higher errors (Damodaran, 2002; Damodaran, 2011; Fernández, 2004). Concluding, there is no consensus on which risk premium to use, the historical average or the average of a recent period.

2.1.7 - COUNTRY SPECIFIC RISK

When considering valuation of non-US companies, one has to take into account the country specific risk. Some consider country risk as diversifiable, that developed and emerging markets share similar risks (Goedhart & Haden, 2003) and historical Beta already includes country risk premium.

Fernández lists those aforementioned arguments in the list of 80 common errors in company valuation (Fernández, 2004) and argues along with other academics that country risk is non-diversifiable (Damodaran, 2002), implying that investors tend to be biased against different markets, therefore there is a country specific risk.

A simply way to measure this country risk premium is to use the rating provided by agencies such as Moody's and S&P and their respective default spread (James & Koller, 2000), this spread is added to the cost of equity (Damodaran, 2002; Damodaran, 2011).

FORMULA V:

$$Ke = R_f + \beta \times Mk_{Risk\ premium} + CDS$$

2.1.8 - BETA

According to the CAPM, to determine the Beta of the company one must regress its stock return against the market return. The Beta will be the slope of the regression and it will represent the sensitiveness of the stock price to market variations (Fama & French, 2004).

FORMULA VI:

$$E(R_i) = E\left(R_f\right) + [E(R_M) - E\left(R_f\right)] \times \beta_{iM}$$

FORMULA VII:

$$\beta_{im} = \frac{cov(R_i, R_m)}{\sigma^2(R_m)}$$

Formula VI regression allows us to obtain the raw βeta of a company.

The Raw Beta tends to be an accurate risk measure when valuing a widely traded firm, but for private firms, public firms that have low trading volume, companies that have undergone leverage changes or acquired new business recently using the bottom-up Beta is a better approach (Damodaran, 2002).

To determine the bottom-up Beta to use in valuation, we should gather an adequate peer group, composed of similar companies in terms of market capitalization, industry, size and geography (Damodaran, 2002).

We should calculate for each of those peers, the unlevered Beta.

FORMULA VIII:

$$\beta_l = \beta_u + (\beta_u - \beta_d) \times (1 - T) \times \frac{D}{E}$$

Generally there is the assumption that $\beta_d = 0$ and the formula is simplified as in formula IX.

FORMULA IX:

$$\beta_l = \beta_u \times (1 + (1 - T) \times \frac{D}{E})$$

Fernández list the use of the formula IX in every cases as one of 80 common mistakes in valuation, suggesting the framework in formula if leverage is expected to increase.

FORMULA X:

$$\beta_l = \beta_u + (\beta_u - \beta_d) \times \frac{(D - V_{ts})}{E}$$

The Beta of the company tends to approximate the market average of 1 in the long run. Damodaran suggest adjusting the Beta as in formula XI (Damodaran, 2002).

FORMULA XI:

$$Adjusted\ Beta = Raw\ Beta \times (0.67) + 1.00 \times (0.33)$$

The unlevered Beta measures the business risk of the company. The unlevered Beta differs from the levered Beta due to only taking into account the systematic risk relative to the market, excluding the risk of financial leverage (Damodaran, 2002). Once the unlevered Beta of each peer is obtained, a simple or Mk Cap weighted average is calculated and that average will correspond to the unlevered beta of the company we aim to value (Damodaran, 2002). The unlevered Beta is then levered considering the capital structure of the company (Damodaran, 2002).

2.2 - ECONOMIC VALUE ADDED

EVA is the surplus value generated by an investment, in essence the excess return to the cost of capital deployed on an investment.

FORMULA XII:

$$EVA = (ROIC - K) \times I$$

To calculate the EVA, there are three basic inputs, the capital invested, the return on invested capital and the cost of capital.

The best estimate for invested capital should be the assets book value (Damodaran, 2002).

While to estimate the ROIC we use the net operating profit less adjusted taxes (NOPLAT) over the invested capital, the cost of capital should be the average cost of capital according to the capital structure, the WACC.

FORMULA XIII:

$$ROIC = \frac{NOPLAT}{I}$$

According to Damodaran, to estimate the NOPLAT, tax adjustments should be subtracted to the operating profit or EBIT (Damodaran, 2002), additionally, the operating profit should be adjusted for operating leases, R&D expenses and non-recurrent events.

To determine the EV using the EVA approach one has to sum the value added each year during the life-time of the project.

FORMULA XIV:

$$EV = \sum_{t=1}^{t=n} \frac{EVA}{(1+k)^t}$$

2.3 - DISCOUNTED CASH FLOW

The DCF approaches are widely used and considered the most theoretically sound. The underlying logic behind DCF is that the fair value of a firm is the cash that the firm is able to generate throughout its life-time discounted to the present at an adequate rate that reflects the risk of the firm's cash-flows. (Damodaran, 2006).

The DCF approach uses the financial statements as its base and forecasts the income and cash-flow statement in order to calculate the future cash-flows of the firm (Luehrman, 1997).

When performing valuation in some R&D intensive industries, like the pharmaceutical industry, immediately expensing R&D might have a distortionary effect on earnings and cash-flows, which can be adjusted by capitalizing R&D expenses. The amortizable life of the R&D investment is the number of years it takes for the research subject to become a product (Damodaran, 2002; Keegan, 2008). If the EBIT is adjusted in this fashion, the distortion that heavy R&D effects create on operating income in a given year is mitigated between the years of the investment amortizable life.

2.3.1 - FREE CASH FLOW TO THE FIRM

The free-cash-flow to the firm or FCFF values the EV as whole. FCFF excludes cash-flow deriving from financing activities of the company such as interest or dividends (Damodaran, 2002) and focus only on cash generated by operations. The capital structure is then reflected in the discount rate, the WACC.

FORMULA XV:

$$FCFF = NOPLAT\ - \Delta NWC - CAPEX + Dep\ \&\ Amort$$

To obtain the FCF, one should adjust the operating income for taxes obtaining the NOPLAT, additionally, depreciation and amortization is added because it is non-cash expense, net working capital increases which account for cash tied up in working capital are subtracted along with capital expenses (Damodaran, 2002).

The EV is the sum of free cash-flows generated from the operating and investing activities for the firm's lifespan discounted at the WACC.

FORMULA XVI:

$$EV = \sum_{t=1}^{N} \frac{FCFF_t}{(1 + WACC)^t}$$

After determining the EV, one should make further adjustments to obtain the market value of equity. Minority interest and net debt should be subtracted to the EV (Damodaran, 2002).

FORMULA XVII:

$$Enterprise\ Value = Mk\ Cap + Debt - Ex\ cash + Min\ \ Interest + Pref\ Shares$$

Once the market value of equity is calculated, it should be divided by the number of shares outstanding to obtain the fair value per share, the theoretical share price.

2.4.2 - ADJUSTED PRESENT VALUE

Although the FCFF method is a theoretical sound approach, some academics consider the APV a better method (Luehrman, 1997). Luehrman argues that analysts should use APV instead of the FCFF due to the fact that APV is always applicable when the FCFF is, it requires less strict assumptions, it is subject to less errors and is more complete as a valuation tool as it shows where the value of the company is created, either from the firms operations or from financial engineering.

Unlike the FCFF method that forecasts cash-flows and discounts them at the WACC, APV values the financial structure advantages or disadvantages separately and then adds them to the value that results from operations (Luehrman, 1997; Fernández, 2004).

FORMULA XVIII:

$$APV = V_u + V_{TS} - Bunkrupcy\ costs + hedges + subsidies - issue\ costs - other\ costs$$

The APV uses the unlevered cost of equity as the discount rate and it is especially useful when the firm´s financial leverage is expected to change over time because the discount rate doesn't need readjustments, changing instead the value of the tax shields (Damodaran, 2002).

FORMULA XIX:

$$EV = \sum_{t=1}^{N} \frac{FCFF_t}{(1+K_u)^t} + \sum_{t=1}^{N} \frac{ITS}{(1+K_u)^t}$$

According to Fernández, to determine the terminal value for companies that maintain a constant book value leverage ratio, the terminal value of tax Shields should be calculated using formula XX (Fernández, 2007)

FORMULA XX:

$$V_{TS} = \frac{D \times K_u \times T}{K_u - g}$$

For alternative financing strategies such as keeping a constant market value of debt ratio, on which the company's debt grows with the market value of equity, one should use the Miles-Ezzel formulation present in formula XXI, which assumes that the appropriate discount rate for the increase in debt is the risk free rate (Fernández, 2007)

FORMULA XXI:

$$V_{TS} = \frac{D \times R_f \times T}{K_u - g} \times \frac{(1+K_u)}{(1+R_f)}$$

2.4.3 - TERMINAL VALUE

When the firm is a going concern, one has to determine the terminal value of the company after an explicit period of cash-flow estimation. There are three ways of calculating the TV,

assuming that the TV is the book value of the company's assets if liquidated at the end of the explicit period, applying a multiple in the terminal year or assuming that cash flows grow at a constant rate from the terminal year onwards (Damodaran, 2002).

FORMULA XXII:

$$TV_t = \frac{CF_{t+1}}{K - g_{stable}}$$

In the terminal year at a stable growth rate, capital expenditures should offset depreciations, essentially the company reinvests to replace existing assets. Furthermore, the estimated terminal growth rate has to be a reasonable figure relative to the nominal growth rate of the economy where the firm operates, as a rule of thumb, it shouldn't exceed the GDP growth rate by more than 2% (Damodaran, 2002). Additionally firms with excess returns can´t maintain them forever, therefore in the long run excess returns should equal the cost of capital.

2.5 - EQUITY CASH-FLOW METHODS

2.5.1 - DIVIDEND DISCOUNT MODEL

The DDM is an equity valuation model that is based on valuing the firm's equity as the dividend per share paid to shareholders during the firm's lifespan (Farrell, Jr., 2010). Farrell Jr. argues that analogous to the price of a bond, the price of a stock should be the stream of dividend payments entitled to the shareholders during the life-time of the company. The DDM model assumes the company is a going concern and dividends are discounted at a cost of equity, the required rate of return for equity investors (Damodaran, 2002), additionally there is a dividend growth rate, which is expected to keep constant and grow at the same rate as the other key performance metrics. Formula XIII is generally referred to as Gordon's growth model.

FORMULA XXIII:

$$Equity\ Value = \frac{DPS}{Ke - g}$$

There are two basic inputs in the model, the expected dividend per share and the ke. To obtain the expected dividend per share, one must make projections and assumptions on the company

earnings and pay-out-ratio (Damodaran, 2002). The cost of equity is the required rate of return required by shareholders, which is essentially the compensation that investors require for forgoing saving or consuming, it is composed by the risk free rate and a market risk premium that includes interest rate risk, purchasing power risk, business risk and financial risk (Farrell, Jr., 2010).

2.5.2 - FREE CASH-FLOW TO EQUITY

The FCFE is an equity valuation model and a derivation of the DDM, it assumes the cash-flow left after the firm faces its financial obligations is paid as dividends and the expected growth rate includes only the increase in income from operating assets and not income streaming from marketable securities and other financial results (Damodaran, 2006).

Compared to FCFF, FCFE uses the net income as its base instead of NOPLAT. Interest related expenses are relevant because debt holders have seniority claims compared to shareholders (Damodaran, 2002). FCFE accounts for the cash-flows that are left after investing into net working capital needs, CAPEX, facing all financial obligations and borrowing and re-paying principal payments on debt. (Damodaran, 2002).

FORMULA XXIV:

$$FCFE = Net\ Income - Capex + Dep\ \&\ Amort - \Delta NWC + Net\ Borrowing$$

FCFE models value the equity stake of the business as the perpetual cash flows entitled to the shareholders discounted at the levered cost of equity (Damodaran, 2006).

2.6 - VALUATION OF PHARMACEUTICAL COMPANIES

Due to the nature of pharmaceutical companies' business models, which imply an initial cash burn for a promise of future revenue streams from successfully developed drugs, performing firm valuation can prove a challenging task where traditional DCF approaches might not be the best approach (Keegan, 2008).

2.6.1 - THE NPV OF R&D PIPELINE

To value a portfolio of R&D projects currently under development and that are subject to approval by legal entities, analysts and experts tend to adjust the NPV by attributing cumulative probabilities of success according to the phase of R&D development that the drug is in (Keegan, 2008).

Keegan argues that in order to estimate probabilities of a developing drug making it successfully to market, one has to know the R&D process in drug development, (Keegan, 2008). A process that encompasses two broader phases, drug discover and research and the regulatory process.

Drug discovery and research starts with the pre-clinical stage where the drug is tested in animals. The pre-clinical stage is considerably cheaper than latter stages and the chances of a developing drug reaching the market at this stage is less than 10% (Keegan, 2008). After the pre-clinical phase, there are four stages of clinical trials. Stage I accesses drug safety, the probability of successfully progressing to the next stage is 70%, it may last several months and it accounts for approximately 10% of R&D spending (Keegan, 2008). Stage II tests the dose range and efficiency of the drug and it is considered the proof of concept stage, it may last up two years, around 50% of drug candidates in this phase pass to stage III and it averages 25% of total R&D spending. Stage III is the last stage before the drug is launched to market and therefore tests the efficacy relative to other treatments or placebos in large scale trials, it accounts for 35% of R&D expenses, the probability of successfully passing stage III is 60% and it may last from 2 to 5 years. Phase IV occurs after the product is already in the market and it acts as a surveillance test (Keegan, 2008).

After the first three research trials are complete, the drug is subjected to regulatory approval, the regulators will weigh the benefits and risks of the drug candidate. Around 90% of proposed drugs are approved by regulators.

As mentioned previously, conventional valuation methods are not the most reliable when dealing with pharmaceutical companies, especially in what concerns the value of its intangible assets, the drugs under development which are generally called the R&D pipeline.

The best estimation possible to compute the NPV of a pipeline is to do a sum of the parts valuation by adding the different projects NPV's to obtain the R&D pipeline value (Keegan, 2008).

To calculate the probability weighted NPV of an R&D project, aside from a probability, Keegan suggests we must estimate peak sales some years after the drug is launched in the market and an associated profitability rate to estimate peak earnings, revenue increments could either be by direct sales or royalty payments (Keegan, 2008). Once peak earnings are estimated, a multiple should be applied to the success probability weighted estimated peak earnings and that value should be discounted to the current year. Adding the NPVs of the different development assets results in the probability weighted NPV of the total R&D portfolio.

FORMULA XXV:

$$NPV = -I_0 + \sum_{t}^{n} \frac{CF_t}{(1+i)^t} \times Sucess\ Probability$$

The success probability is a cumulative success probability, based on the probability of successfully passing the successive stages. If we can successfully identify the cost in each stage, it is possible to build a decision tree a decision tree based model with the NPV at each decision node (Keegan, 2008).

In order to estimate the market size for a potential drug, we should build a market model based on the incidence of the disease treated, treatable population, market penetration and annual cost per patient (Keegan, 2008).

FORMULA XXVI:

$$Adress\ Mk\ Size = Treat\ Pop \times Estim\ Mk\ Penetration \times Cost\ per\ Patient$$

There are some aspects to have in mind when valuing a product pipeline, for instance, when calculating the incidence or prevalence of a disease one should rely on scientific epidemiological data, additionally to accurately estimate the cost of drug per patient one should compare with similar drug prices on the market.

Official entities provide estimate for US and European drug prices, drugs in Europe tend to sell at a discount compared to the US. Once a price is established, one must know the

theoretical number of doses per treatment or treatment period, thereafter it is possible to estimate the annual cost per patient.

Once we obtain a Market size figure we should analyse global sales forecasts by research entities to reality check our own estimates (Keegan, 2008).

2.6.2 - OPTION VALUATION

In investment analysis, the decision to undertake a project depends on the project having a positive NPV. This traditional approach to finance is somewhat limited when its valuing projects that have an option like nature, mainly the option to delay the project (Damodaran, 2002).

The underlying reason for delaying a project is the CF's volatility, an investment with a current negative NPV might have a positive NPV in the future. Real option valuation assumes a time premium that can exceed the value of cash-flows of the following periods even after the NPV is positive, thus making it viable to delay the project to obtain higher valuations (Damodaran, 2002). Existence of exclusive rights to the project is a key assumption real option valuation.

According to Damodaran, there are three general cases where a real option valuation method is applicable, which are natural resources firms that have undeveloped reserves and can chose to explore them at any time, normally when the natural resource price is higher, real estate firms that own undeveloped land and may choose to develop it when appropriate and companies that own patented products with exclusivity legal rights (Damodaran, 2002).

A call option on an underlying asset is the possibility of buying a certain asset at a strike price for a certain period of time. To value a call option, the methods used are the binomial model and Black-Scholes model. The binomial model values American options which feature an early exercise possibility, at each node of the binomial tree the option can be exercised.

The Black-Scholes model has stricter assumptions regarding options exercise, it considers all options are European and can only be exercised at maturity (Hull, 2012). Real Options are mostly American options as the projects can be initiated at any given time until the exclusive rights expires.

The Inputs used while performing an option valuation are the underlying asset, the strike price, the maturity, the variance and the riskless rate.

The underlying asset in a security call option is the security itself, while in real option, it is the PV of the CFs streaming from the project (Hull, 2012; Damodaran, 2002).

The strike price in the case of a call option is the pre-agreed contractual price on which we can buy the security (Hull, 2012), in the case of real option valuation, it will be the initial investment to start the project (Damodaran, 2002).

The variance on a call option represents the expected movements in the price of the security (Hull, 2012), in real options the variance in the value of the project relates to the uncertainty involved in present value of the cash-flows that the project generates, it generally can be computed in one of three ways: one may use the variance of past similar projects that the company invested in, estimate probability for various market scenarios and compute the present value under each of the scenarios calculating the variance across those present values or use the variance in the value of firms in the sector as the estimate of variance in value of the project (Damodaran, 2002). The variance is the input, which has the most influence in the option's value (Hull, 2012).

The lifetime of call option is the time until the option expires, in real options that is the number of years the company has until the exclusive rights expire (Damodaran, 2002).

The R_f should be the zero-coupon Treasury bond rate with a maturity corresponding to the expiration date of the option (Damodaran, 2002).

Although real option valuation is a theoretical sound approach, it is hard to apply in most practical cases. Among some of the limitations, keegan mentions that corporate investments are complex, lognormal distributed project values are hard to apply, hard to understand option valuation models and the difficulty of measuring the volatility of the market (Keegan, 2008).

3 - RELATIVE VALUATION

Relative valuation is usually achieved by benchmarking through the use of multiples, which are widely used and relied upon by analysts and financial institutions alike (Henschke &

Homburg, 2009). Multiples can be of various sorts, earnings, revenue, book value and even industry-specific multiples.

According to Damodaran, there are three basic steps in relative valuation (Damodaran, 2002). The first is to find comparable assets priced by the market, analysts tend to choose companies in the same sector as comparable. The second step is to scale the market prices to a common variable to standardize prices and make them comparable, in firm valuation this is done by calculating the market value of equity or EV by multiples of earnings, book value or revenue. The last step is to adjust for the differences across the assets, their intrinsic characteristics, this requires understanding of how fundamentals influence the multiples values (Damodaran, 2006). The standardization of the values of similar firms is done by making them relative to a common variable, such variables are earnings, EBITDA or sales, thus common multiples used in valuation are P/E or EV/EBITDA.

Academic literature focus on the importance of using forward looking multiples instead of trailing multiples, using forecasts rather than historical data is a more accurate estimate and value predictor (Damodaran, 2006; Goedhart & Haden, 2003; Henschke & Homburg, 2009).

Some multiples can be more adequate than others, for instance, while book value multiples such as PBV differ greatly across industries, EV/EBITDA multiples are more widely applicable. The EV/EBITDA multiple has a critical advantage; it excludes the distorting effect of financing structure in the analyses (Damodaran, 2002; Goedhart & Haden, 2003). Sector-specific multiples are useful for sectors that are hard to value by conventional multiples but they carry some disadvantages, those multiples tend to undervalue or overvalue companies and are harder to relate to fundamental analysis. (Damodaran, 2006). In some sectors such as biotechnology and pharmaceuticals, heavy R&D expenditure only generate increments in revenues and earnings in future years, thus a company can incur losses early on, on these cases, appropriate metrics to use as multiples inputs are the amount spent in R&D and number of employees working for the company (Keegan, 2008)

When performing relative valuation on a company, the multiple used is an average of a group of adequate peers, operating in the same industries, with similar size, similar ROIC and growth rates (Goedhart, Koller and wessels, 2005). High growth and higher ROIC companies tend to have higher earning and price to book value multiples (Damodaran, 2006; Schreiner & Spremann, 2007).

Relative Valuation alongside DCF are the mainstream approaches to valuation nowadays (Henschke & Homburg, 2009; Damodaran, 2006), although both have significant different implications. DCF establish the fair value as the cash the assets will generate throughout its' lifetime, while when using multiples one free-rides on market information assuming that the value of the company is what the market is willing to pay at the time, which can over or undervalue a company according to market momentum, figure 2 presents advantages and disadvantages of relative valuation.

FIGURE 2: ADVANTAGES AND DISADVANTAGES OF RELATIVE VALUATION

Advantadges	Disadvantadges
• Simple to use. • Useful when there are large numbers of comparable firms. • Easy to understand. • Useful to reality check other valuation methods. • Widely used	• Comparability is subjective. • Mirrors market errors such as under or overvaluation. • Lack of fundamental analyisis. • Lack of firm specific factors. • Hard to find suitable peers. • Susceptibility to analyst bias.

An important aspect of relative valuation is the existence of outliers, firms that trade at exceptional high or low values due to many possible reasons. Outliers in a group of peers can distort the value of the multiple if calculated by an average, In these cases, the peer group median is a more appropriate measure of the multiple to use in valuation (Damodaran, 2002).

4 - COMPANY AND INDUSTRY OVERVIEW

4.1 - ALMIRALL'S HISTORY

ALM is a specialty pharmaceutical company located in Barcelona, Spain. The company was founded in 1943 and has been a pioneer in Spain's pharmaceutical industry ever since, ALM has started its own research and development process in the 60's and by 1987 it reached the status of market leader in Spain. The company has expanded its physical presence to other countries gradually, through acquisitions or creation of affiliates. Throughout its history ALM

has made substantial investment in chemical plants and research and development centers. In 2007, ALM becomes listed in the IBEX and the company has launched blockbuster products such as Eklira®, an inhaler for COPD.

Since 2013, the firm has become an active player in acquisitions mainly dermatology related and has disposed the respiratory franchise in a transaction with AZN.

Currently ALM's products are available in more than 70 countries and the company has a physical presence in 14. Most of its sales are in European markets mainly in Spain, its domestic market, even tough, recently ALM has focused its efforts in establishing a stronger presence in the US.

4.2 - SWOT ANALYSIS OPERATING METRICS, BUSINESS AND GEOGRAPHIC PRESENCE

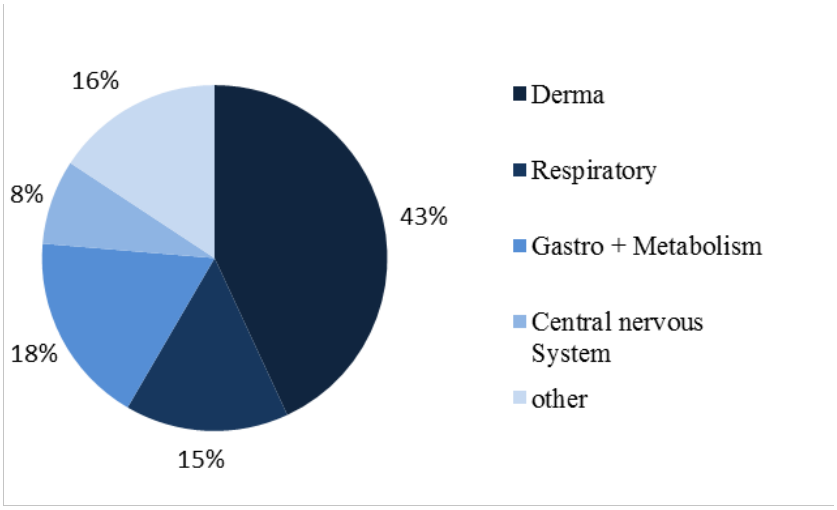
Figure 3 presents a SWOT analysis, identifying the main strengths, weakness, opportunities and threats ALM is facing. The SWOT is mainly related with the focus on dermatology, the acquisition based strategy, the transaction with AZN and the strong financial position of the company.

FIGURE 3: SWOT ANALYSIS

Strengths	***Weakness***
Focus on Dermatology	Mature products declining
Financial situation	Limited opportunities in R&D pipeline
Strong R&D track record	Recent Acquistions risk
Opportunities	***Threats***
Upcoming M&A activity	Price pressure in the US
Synergies from concluded deals	Dependence of AstraZeneca in common projects
Geographical expansion	Patent Cliff and regulation changes

As seen in figure 5, Europe and Spain account for roughly than 67% of total revenues, while North America represents roughly 25%, a figure that has increased recently driven by ALM's strategic goal of becoming a key dermatology player in the US. For values table see Appendix XIX.

FIGURE 4:SALES BY THERAPEUTIC AREA IN 2015



ALM's product Portfolio is focused on dermatology, which accounts for 43% of Sales in 2015, in line with the company overall strategy of becoming a dermatology player. Respiratory agents once the main therapeutic area, now accounts for only 15% of the company sales, declining 50% from previous years due to recent divestment. Gastro and metabolism accounts for around 16% of sales in 2015, although its weight has been declining steadily it is still an important therapeutic area for the company strategy. For values table see Appendix XIII.

FIGURE 5: SALES BY GEOGRAPHY IN 2015

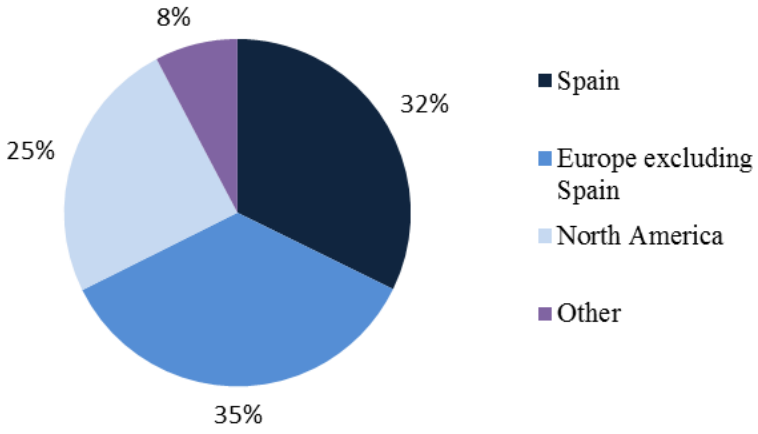


Figure 6 displays some key rations and metrics. The years 2013 and 2014 have been affected by the recent transactions.

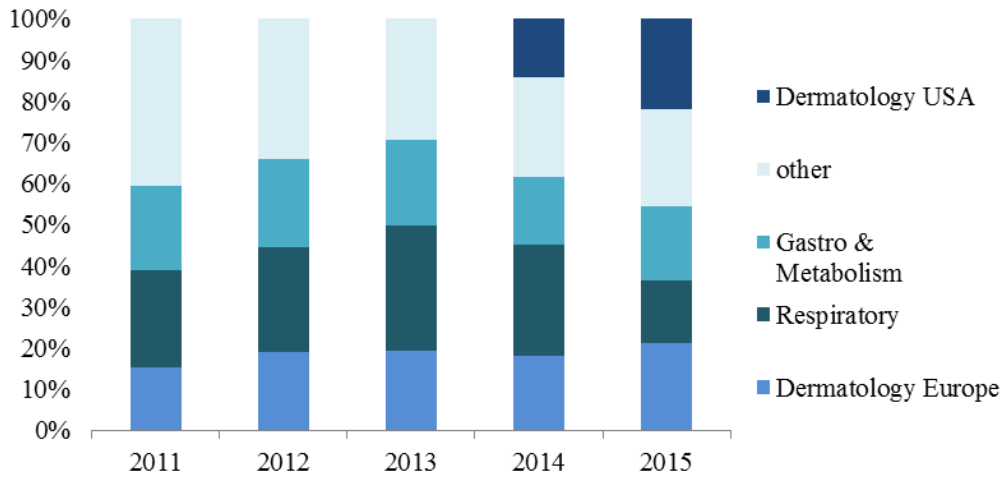
FIGURE 6: RATIOS AND KEY METRICS

Year	2011	2012	2013	2014	2015
Gross margin	62%	62%	66%	70%	69%
EBITDA margin	21%	18%	12%	87%	30%
EBIT margin	13%	8%	2%	77%	19%
Pre-tax margin	9%	7%	-13%	61%	25%
Net margin	11%	11%	-5%	57%	19%
Gen. & admin cost/Sales	36%	52%	55%	48%	41%
R&D/Sales	19%	23%	18%	13%	10%
Capex/(PPE+Intangibles)	8%	16%	41%	16%	13%
Net Debt/EBITDA	40%	28%	287%	-54%	-235%
Net Debt/Total Assets	4%	3%	14%	-14%	-19%
ROIC	11%	8%	0%	26%	4%
ROE		9%	-4%	40%	9%

The EBIT margin and net margin were exceptionally high due to other income relative to the transaction with AZN. Alternatively, net margins were negative in 2013 due to the acquisition of Aqua pharmaceuticals, which resulted in high restructuring costs.

Gross margin is calculated over sales, while operating and net margin over total revenue which includes other income from royalties, joint development and marketing agreements and from previous transactions.

FIGURE 7: REVENUE BREAKDOWN BY THERAPEUTIC AREA

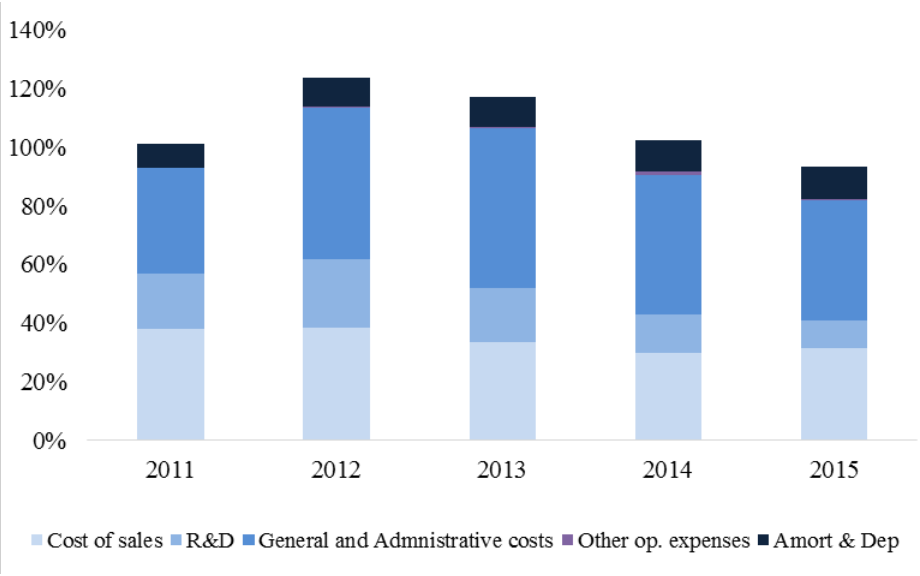


The change in focus to dermatology is visible in figure 7, ALM has increased its dermatology sales gaining a foothold in the US market, the US dermatology accounted for 22% of the company sales in 2015, and alternatively Europe Dermatology has experienced a slower growth and represents 21% of total sales. Gastro and Metabolism and respiratory sales have similar weights in the company sales in 2015 and both have been decreasing its weight in total sales in the previous years, respiratory products decreased more abruptly in 2015, roughly

50%, due to the transaction with AZN, which involved the sale of ALM's once top seller Eklira® franchise.

Other less important therapeutic areas include cardiology, which in 2011 accounted for more than 100 million Euros in sales, central nervous system including Sativex® franchise, musculoskeletal and urology. The weight of these other sales has been declining at an average of 15% per year and the trend is expected to continue. For values table see Appendix XIII.

FIGURE 8: COST STRUCTURE (% SALES)



According to figure 8, the total cost structure over total sales, excluding other revenue from transactions and royalties, has been decreasing in the latter years, which implies the company has improved its operating efficiency. R&D, general and administrative costs and COGS have been decreasing steadily since 2012, thus margins have improved. This trend is expected to continue supported by the growth in dermatology, mainly in the US, which has better margins that the rest of the business.

R&D and SGA's over sales were 10% and 41%, respectively, in 2015. COGS have decreased as well from 38% in 2012 to 31% in 2015. For values table see Appendix XIV.

4.3 - STRATEGIC GOALS

ALM is recently turning around its focus within the pharmaceutical realm. Once, respiratory products accounted for most of firm's sales, but recently the company strategy changed

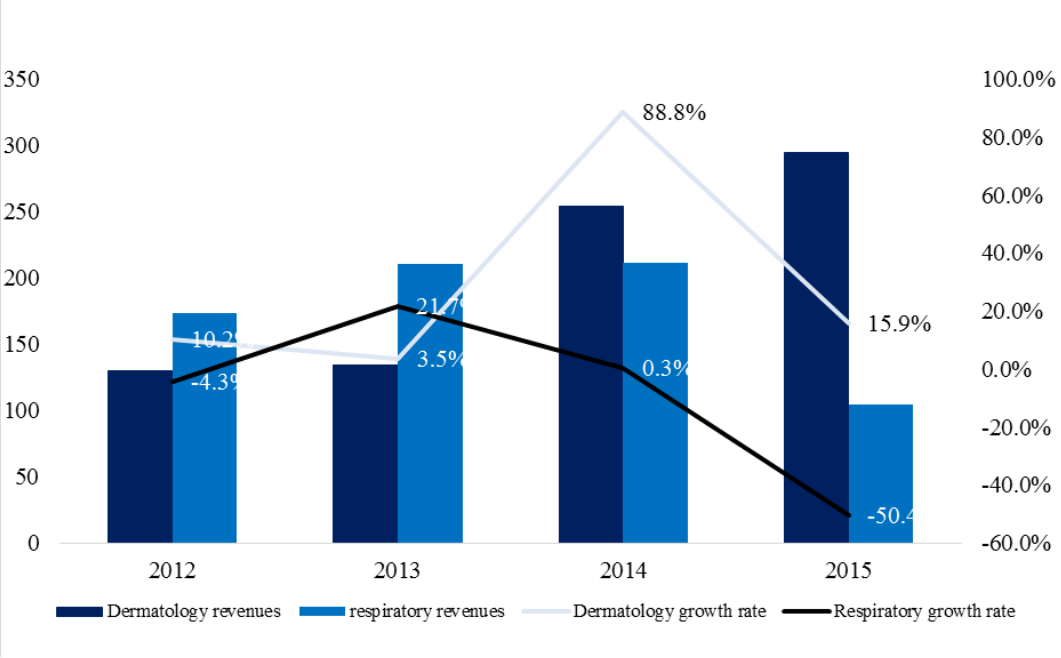
completely with the acquisition of Aqua Pharmaceutical, a dermatology company in the US. With this deal ALM is on track to become a major player in dermatology in the US and aims at reinforcing its' position on the European market as well. Additionaly, the company has made recent investments in aesthetics and management believes it will represent a significant part of the company sales in the near future. In Short ALM is optimizing its' portfolio while making selective divestments.

ALM's key objetives include business and organization realignment through focus on dermatology and aesthetics fuelled by inovation and geographic expansion, acquisitions and R&D pipeline expansion are expected to be the catalyst for the near future,

The company's strategic goals started to be designed in 2014, when ALM announced the sale of part of its respiratory portfolio to AZN including the Eklira® franchise, the company top seller. The deal can ascend to roughly 2.1 Billion USD, 875 on completion of the deal and 1.22 billion on milestones to be achieved.

With the income generated from the sale ALM is determined to focus on dermatology acquisitions in order expand its product and R&D pipeline. Further disposals of non-core business units are expected as well and the company intends to spend anywhere between 500 and 700 million Euros in acquisitions in the near future and the divestment in constella one of ALM's former franchises proves the firm's commitement to realigned its product portfolio.

FIGURE 9: DERMATOLOGY AND RESPIRATORY REVENUES, 2012-2015



In line with figure 9, In 2015, ALM increased its sales in dermatology, fueled by its' US subsidiary.

Recent catalysts for dermatology growth are the acquisition of Poli Group in November 2015, the product Swap in GSK and the acquisition of ThermiGen in February 2016.

Poli Group is a Italian niche pharmaceutical company that generated 85 million in revenue in 2015, 60% of the group sales are on dermatology, 20% are respiratory and 20% on gynecology, Poli Group was purchased for 400 Million Euros, 365 up front and 35 related to milestones.

The GSK deal involved the acquisition of two products, Altabax® and Veltin®, in exchange for the rights for Toctino® and an undisclosed cash payment. Altabax® and Veltin® target impetigo and acne, further reinforcing Almiral's Dermatology portfolio.

ThermiGen LLC is an US based company, that develops temperature controlled radio frequency products that allows physicians to treat a variety of nerve and soft tissue conditions, the company generated 30 million in revenue in 2015.

FIGURE 10: TOP PRODUCTS BY REVENUE IN 2015

Product/ Franchise	Sales (Million Euros)	% of Total	Growth 12-15 (%)	Proprietary	Therapeutic Area	Patent Expiration Date
Monodox®/Acticlate® (doxycycline hyclate)	97	14%	43%	yes	Dermatology	>2030
Ebastel® and other (ebastine)	62	9%	-12%	yes	Respiratory	Expired or Expiring
Tesavel® & Efficib® (sitagliptine)	44	6%	0%	no	Endocrinology	Exclusive Rights in Spain
Solaraze® (diclofenac sodium)	40	6%	6%	no	Dermatology	>2020, licensed to Almirall
Airtal® and other (aceclofenac)	28	4%	-1%	yes	Musculoskeletal	Expired
Cordran® (flurandrenolide)	28	4%	17%	yes	Dermatology	Undisclosed
Almax® (almagate)	24	3%	12%	yes	Gastroenterology	Undisclosed
Decoderm® and others (flupredniden)	23	3%	6%	yes	Dermatology	Undisclosed
Almogran® and other (Almotriptan)	18	3%	-30%	yes	Neurology	Expired or Expiring
Balneum® (urea oil)	17	3%	-1%	yes	Dermatology	Undisclosed
Other Products	322	47%				
TOP10	**363**	**53%**				

Figure 10 presents an overview of ALM's top 10 sellers and their growth rates in 2015.

Aqua pharmaceuticals, ALM US subsidiary, is at the core of company strategy, its top 2 sellers, the oral acne franchise Acticlate® and the Anti-inflammatory for dermatosis Cordran® are among the companies top 10 sellers, Showing ALM's commitment to its' redefined strategy. Furthermore, US dermatology portfolio will be reinforced by Altabax® and Veltin®.

The mature business of ALM in other therapeutic areas is expected to decline further in the future, products like Almogran® and Ebastel®, whose patents have expired are expected to see further decreases in sales.

Additionally, ALM's is solely focused on developing dermatology related R&D projects in its pipeline, keeping respiratory projects aside with AZN, which are a part of the deal involving the 2 companies. R&D investment has been restructured and the company aims at keeping R&D at 10% of sales.

FIGURE 11: R&D PIPELINE

Project	Goal	Pre-clinical Phase	I	II	III	Expected Launch
Actikerall	Actinic keratosis					2018
LAS41008	Plaque Psoriasis					2017
ADP31415	Pemphigus vulgaris					>2021
LAS41006	Nail psoriasis					2021
AQ401	Acne					>2021
LAS41010	Atopic Dermatitis					2017
Abediterol ICS	Asthma & COPD					2021
LAS190792	COPD					>2021
ADP31417	Asthma & COPD					>2021
ADP71296	Asthma & COPD					>2021
P-3058	Nail psoriasis					2020
P-3073	Onychomycosis					2020
P-3074	Male androgenic alopecia					2020
Projects directed by AstraZeneca						
Projects with AstraZeneca						
Acquired from Poli Group						

4.4 - INDUSTRY OVERVIEW

The pharmaceutical industry is one of major industry in the world, it is worth approximately a trillion USD and it is on verge of major changes.

Technology progress will make way for the development of better treatments and new therapies for diseases previously untreated, population ageing and increase in age related disease incidence in advanced economies will be a major catalyst as well on the other side there are challenges facing pharmaceutical companies, the control of drug prices and the patent cliffs which a lot of firms are facing.

The pharmaceutical industry, as whole, is expected to be driven by the economic recovery underway in developed markets along with the high growth in emerging markets, "pharmerging markets". The higher innovation combined with the ageing of the population will foster the development of new therapies and treatments that improve the prognostics of numerous health condition. Diseases with once poor prognosis are turning chronic and specialty pharmaceutical are expected to be a driver behind future growth in the sector.

In developed markets the trend of price cuts is expected to continue and especially in the US, where price restrictions on drugs may be applied after the outcome of the current 2016 elections which might result in diminishing earnings for pharmaceuticals in the future.

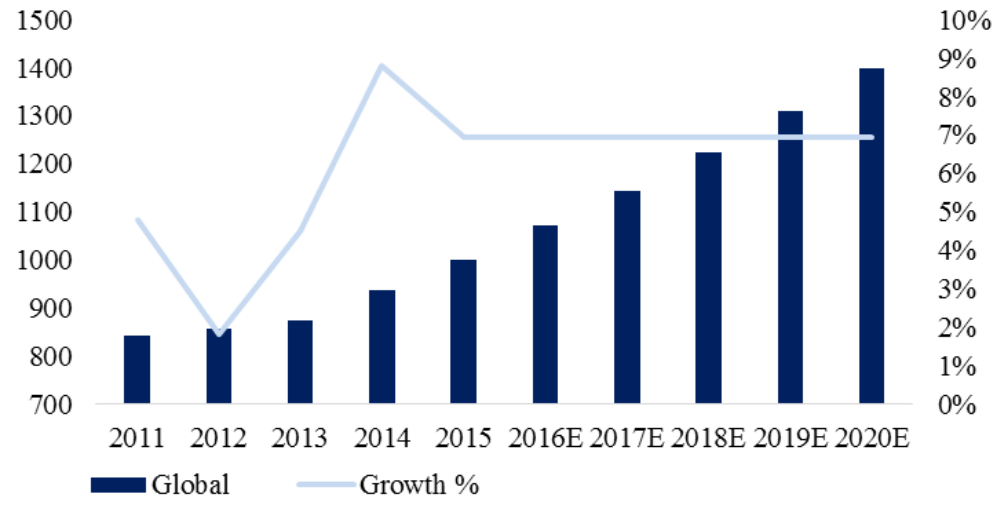
While the US market is expect to recoup and be the driver behind the pharmaceutical growth in the future, some European countries are undergoing budgetary constraints like Spain, Portugal or Greece, in those countries healthcare spending is expected to decrease in the near future.

Additionally, the pharmaceutical industry was recently affected the by a large patent cliff, peaking in 2012, pharmaceutical companies saw their revenues plunge as their blockbuster compounds lose their exclusive rights and similar generic drugs flood the market at low prices, this trend seems to have waned in the latter years.

The increase in generics and specialty pharma has contributed to a less consolidated market. The major companies have seen their combined market share decrease steadily making room for smaller companies focused on more specific target markets.

In 2015, pharmaceutical turnover accounted for over a trillion in sales and is expected to keep growing at a steady pace.

FIGURE 12: PHARMACEUTICAL INDUSTRY ANNUAL TURNOVER

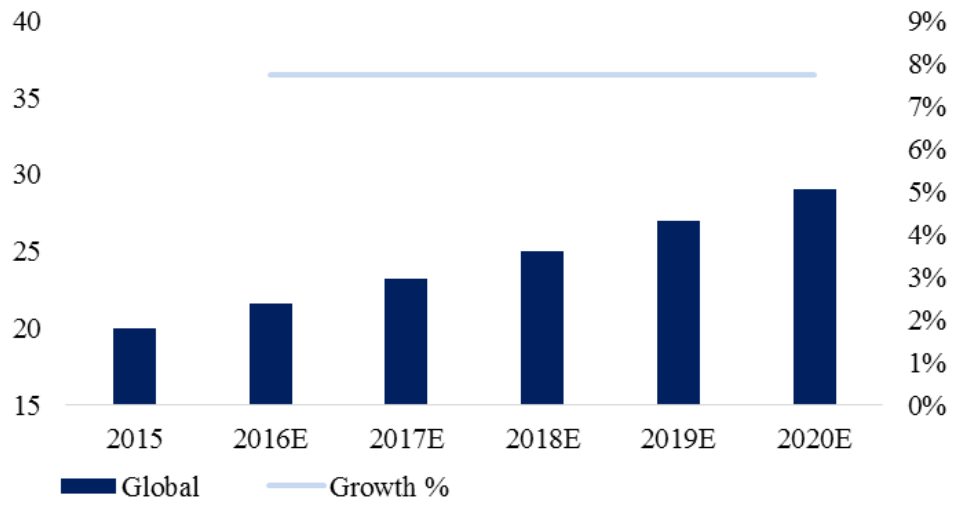


According to *Statista*, the Pharmaceutical Industry is expect to reach 1,4 Trillion USD by 2020, growing at approximately 7% per year.

Since intangibles are a company's greatest asset, firms create patents on developing compounds to assure the future of its' product pipeline and revenue stream in an ever-changing competing environment. The industry is marked by recent M&A activity and heavy

R&D expenses as companies either acquire new business to avoid expending in drug development by acquiring new R&D pipeline or spend large amounts on R&D development.

FIGURE 13: DERMATOLOGY INDUSTRY ANNUAL TURNOVER



According to *GBI Research*, The global dermatology market was worth around 20 Billion USD in 2015.

Global sales are expected to reach $33.7 billion in 2022, revealing an extraordinary potential in entering this therapeutic area with an implied estimated CAGR of 8%.

Traditionally a therapeutic area with slow growth within the pharmaceutical realm, dermatology faces renewed growth fueled by innovative treatments for skin diseases, greater aesthetic awareness and increasing incidence of skin conditions. At the core of this growth is the dermatology devices market growing at 11% CAGR (Markets and Markets).

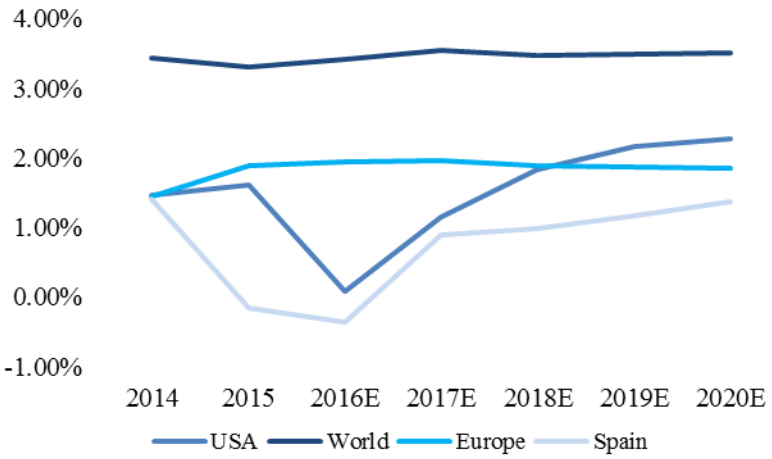
The dermatology industry seems to be changing, as companies are extending indications of existing products in other therapeutic areas into dermatology. According to *Skin Disease Treatment Technologies and Global Markets*, the dermatology market divides into dermatitis (allergies and contact diseases), cancers (melanomas and other), immune disorders (psoriasis) and infections (bacterial, fungal and viral). The dermatology landscape has been marked by acquisitions, small and medium sized companies are being acquired by larger ones. According to *Markets and Markets* medical aesthetic market will be worth $12,5 billion in 2020, growing at 10,8% CAGR.

With the current shift in focus on dermatology and entering in the aesthetics market, ALM is facing stiff competition by the likes of Allergan, Valeant Pharmaceuticals, Zeltiq and Cynosure. valeant's brand Solodyn® his expected to cause a flattening of Acticlate®, ALM's top seller, sales in 2016. Furthermore, Valeant is also competing with ALM as an acquirer of dermatology focused businesses.

4.5 - MACROECONOMIC OVERVIEW

Inflation distorts the time value of money, implies costs and CAPEX increases and affects cash flow.

FIGURE 14: ANNUAL INFLATION RATE

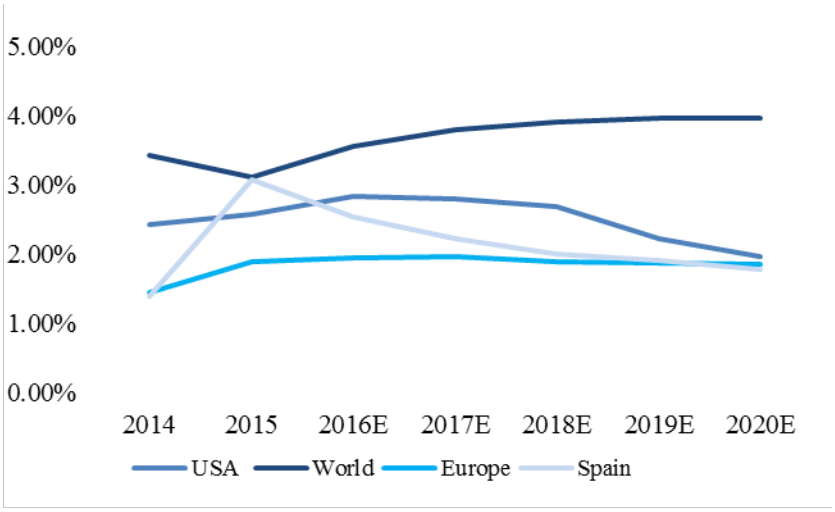


Inflation has been stagnant in Europe and US, European Union. Some European countries such as Spain are facing deflation.

Inflation is expected to recoup and keep below 2% for Europe and the US in the near future, in line with the European Central bank policy of keeping inflation under control.

The GDP growth is generally used as performance and overall aggregated spending metric.

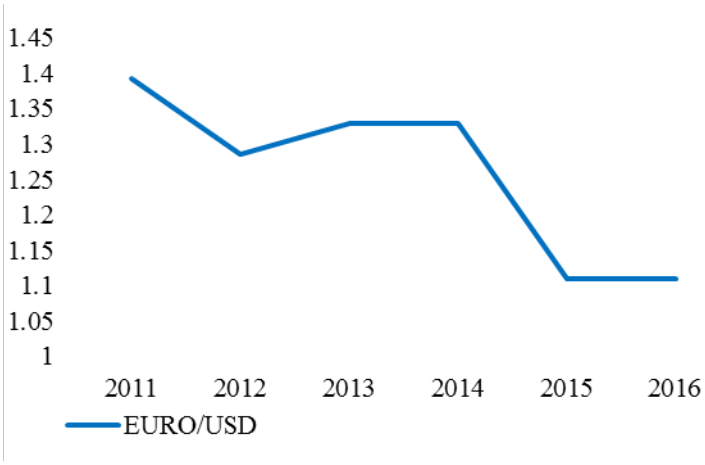
FIGURE 15: REAL GDP ANNUAL GROWTH RATE



The real GDP growth, adjusted for inflation, was low in 2014 and 2015 for Europe between 1% and 2%, and estimates to 2020, predict this trend will continue. Emerging markets are expected to keep growing at high rates and the US GDP growth is expected to reach 3% in 2016 and slow down afterwards.

Regarding exchange rates, it is important to highlight the effect that it can have on Multinational company's revenue which are present in geographies with different currencies.

FIGURE 16: AVERAGE EURO/USD EXCHANGE RATE



Appreciation and depreciation of exchange rates can result in translation losses and artificially increase or decrease sales depending on which currency the company reports in. Aditionally for companies that export heavily, appreciations or depreciations of its country's currency can hurt or increase sales volumes.

The USD has been appreciating against the euro, the average Euro/USD exchange rate for 2015 1,1. The movement of the Euro/USD is especially important to ALM as the US

represents a considerable part of the firm's revenue, if the firm doesn't hedge exchange risk, exchange rate movements might greatly affect ALM's income statement.

5 - ALMIRALL'S VALUATION

5.1 - VALUATION METHOD

The valuation method I used to determine the fair value of ALM was a sum of the parts valuation. I valued, separately, Almirall's mature business with a DCF valuation, the R&D development pipeline with a multiple valuation suggested by keegan in the literature review and the AZN deal income with an NPV valuation, using a discount rate reflecting the milestones risk. I complemented my sum of the parts valuation with a relative valuation with the purpose of stress testing the FV obtained.

The price target was 16.20 Euros, well within the ranges of the relative valuation.

I valued the company as if I were on the 1st of January of 2016, even though some data and information was collected after that date, mainly on 29th of February of 2016.

5.2 - MATURE BUSINESS DCF VALUATION

To determine the value of the mature business by a FCFF valuation, I have forecasted an income statement, a balance sheet and a cash flow statement to determine the FCF the business will generate as a going concern. I estimated an explicit period until the company reaches a steady state and a terminal value may be calculated.

The explicit value of the FCFF valuation is around 141 million Euros and the TV amounts to roughly 1517 million Euros, therefore ALM's mature business value is 1647 million Euros.

The explicit period considered was 10 years, it ends in 2025. This large explicit period is due to the deferred tax liabilities and the income incurring from the AZN deal which will last until 2025. Thus, after that year the income statement of ALM is normalized in terms of effective tax rate and other income, the revenue growth rate and cost margins were considered stable by 2020.

5.2.1 - RISK-FREE RATE AND MARKET RISK PREMIUM

As mentioned in the literature review, the risk-free rate should be the zero coupon treasure bond rate with a long term maturity that pays in the same currency as the investment, therefore I consider the plain vanilla fixed coupon German government bond with maturity in 4th of January of 2031 as the most appropriate instrument of the available fixed income instruments. The Yield to maturity at 29th of February was 0.434%, and thus this is the risk free rate considered on this dissertation valuation.

FIGURE 17: COUNTRY DEFAULT SPREAD

Historic Mk risk premium	Moddys Rating Baa2 CDS	Weigh Avg. CDS
6.25%	2.94%	1.37%

For the risk premium I used the historic US market risk premium and added a country specific risk premium, the country default spread.

The historical US market risk premium according to Damodaran in January 2016 is 6.25%, to account for the country specific risk I could use the spread derived from the moody's country rating of baa2 for Spain given and its spread of 2.94% but alternatively I considered using a market risk premium that reflects the risk by ALM's geographic presence.

FIGURE 18: WEIGHTED AVERAGE COUNTRY DEFAULT SPREAD

Region	CDS	Weight in revenues	Weighed Avg. CDS
North America	0.00%	25%	0.00%
Spain	2.94%	32%	0.95%
Western Europe	1.20%	35%	0.42%
Weigh Avg. Spread			**1.37%**

For this purpose I computed a weighted average market risk premium based on the geographic distribution of the company's revenues, using the average risk premium for North America, Western Europe and Spain. Applying this method resulted in a CDS spread of 1.37%, which will be applied in this dissertation valuation.

5.2.2 - EQUITY BETA AND RETURN ON EQUITY

In line with the literature review, I applied the CAPM regression to compute the raw Beta of ALM. The raw beta of the regression of the daily return of ALM against the daily return of IBEX over a 5 year period until 29 of February of 2016 was 0,51, once adjusted for the market average, the Beta was 0,67.

The value for the raw Beta is fairly low, due to ALM's low free-float and trading volume, which results in lower volatility compared to the index, therefore I decided that the bottom-up beta approach based on peer average would be a better estimate for the sensibility to market risk.

The peer group chosen is composed of mainly European specialty pharmaceuticals and firms active in dermatology or aesthetics. All of the aforementioned companies have a free-float greater than 60%.

FIGURE 19: BOTTOM UP BETA PEER GROUP

Company	Free-Float	MK Debt/Equity	Levered Beta	Tax rate	Unlevered Beta
Anacor	94.00%	0.00%	0.73	40.00%	0.73
Cynosure	99.60%	0.00%	0.58	40.00%	0.58
Lonza	100.00%	20.57%	1.17	17.92%	1.01
Shire	98.60%	4.63%	0.89	12.50%	0.86
UCB	63.60%	5.84%	0.74	33.99%	0.71
Valeant Pharmaceuticals	94.00%	63.11%	1.26	26.50%	0.86
Faes Farma	98.00%	0.00%	0.73	28.00%	0.73
Grifols	69.00%	29.99%	0.53	28.00%	0.44
Weighted Average					**0.85**

For each of the peer companies I computed the raw Beta and unlevered it. Once I calculated the unlevered beta for each peer I computed the weighted average by market Capitalization and adjusted it to the market Beta.

FIGURE 20: LEVERED BETA

Unlevered Beta	T	MK Debt/Equity	**Levered Beta**
0.85	21%	0%	**0.85**

The unlevered Beta of 0.85 reflects the risk of ALM's business activities. In line with the literature review, I leveraged on the Beta according to ALM's debt structure to calculate ALM's levered beta.

Because the company has negative net debt, the levered Beta should be, in theory, lower than the unlevered Beta, but since the company announced it will use the excess cash in future acquisitions, I considered that in the long-run the net debt will increase. Thus, I considered the levered beta is equal to the unlevered beta.

FIGURE 21: DIFFERENT APPROACHES AND RESPECTIVE COST OF EQUITY

Beta Approach	Beta	Ke
Raw Beta	0.51	**5.02%**
Peer average	0.79	**6.75%**
Peer average Adjusted Beta	0.85	**7.14%**
Reuters Beta	0.76	**6.45%**

Figure 21 summarizes different Beta methodologies and respective cost of equity. Still I considered the most accurate method that reflects ALM's risk is the bottom-up approach.

FIGURE 22: COST OF EQUITY

Rf	Levered Beta	Mk Risk Premium	Weigh Avg CDS	Ke
0.43%	0.85	6.25%	1.37%	**7.14%**

In line with the literature review, I calculated the cost of equity by adding the market risk premium for US multiplied by the bottom-up Beta to the risk free rate, then I added the weighted average CDS as well. The K_e obtained was 7.14%.

5.2.3 - COST OF DEBT

Since I assumed that the weight of debt in the capital structure is nonexistent, this implies that the cost of debt is irrelevant for valuation proposes. Still using S&P's rating for the company BB- and the respective 3.99% spread and applying it to the already assumed risk free rate of 0.434%, I reached a value of 4.42%

Alternatively the company's debt amounts to 325 million Euros of bonds outstanding traded on the EuroBond and US markets, on 29th of February the yield of those bonds was 3.52%. The cost of debt could be the yield to maturity on those traded bonds, but for a consistency purpose, I calculated the K_d by adding the S&P spread to the risk free rate, thus the K_d is 4.42%.

5.2.4 - WACC

Since the market value of net debt value is negative and the company intends to spend the net cash on acquisitions and might even increase its' leverage in the future, for this reason I will assume an unlevered capital structure, I assumed that the WACC equals K_e, therefore the WACC is 7.16%.

The reason I didn't include debt increase for the forecasting period is the fact that the company didn't announce the targets it plans to acquire in the future and the revenue increments and synergies that said targets could generate.

5.2.5 - NET WORKING CAPITAL

FIGURE 23: WORKING CAPITAL RATIOS

Average Payble Period (days)	Average Collection Period (days)	Inventory to Sales (%)
383	64	13%

The current 2015 average payable and collection periods and the inventory to sales ratio were used as the drivers of payables, receivables and inventory for the explicit period.

FIGURE 24: CHANGES IN WORKING CAPITAL

Year	2015	2016E	2017E	2018E	2019E	2020E
Changes in working capital	**-59**	**13**	**5**	**5**	**3**	**3**
Changes in inventory	7	6	5	6	5	4
Changes in receivables	-107	8	7	8	7	6
Changes in payables	-8	-5	-8	-9	-10	-7
Changes in other current assets	-4	0	0	0	0	0
Changes in other current liabilities	54	4	0	0	0	0

Other current assets accounts for unimportant liquid items, therefore I assumed, for valuation purposes, these items remain stable. Other current liabilities accounts mostly for wages and salary payable and research related loans, thus I have forecasted other current liabilities using salaries payable as a driver by using the average of wages and salaries payable in one year over total wages and salaries.

5.2.6 - CAPEX AND AMORTIZATION & DEPRECIATION

The CAPEX of pharmaceutical companies include substantial investment in intangibles assets. I forecasted the CAPEX to equal amortization and depreciation from 2018 onwards.

FIGURE 25: AMORTIZATION & DEPRECIATION PROJECTIONS

Year	2015	2016E	2017E	2018E	2019E	2020E
Amortization & Depreciation	74	70	120	124	124	124

FIGURE 26: CAPEX PROJECTIONS

Year	2015	2016E	2017E	2018E	2019E	2020E
Capex	**70**	**509**	**155**	**124**	**124**	**124**
intangible assets	14	52	89	92	92	92
PPE	13	18	31	32	32	32
Financial Assets	30	0	0	0	0	0
Business acquisitions	14	439	35	0	0	0
Disposals	**-62**	**-46**	**-4**	**0**	**0**	**0**
Intangible assets and PPE	-64	-46	-4	0	0	0
Financial Assets	0	0	0	0	0	0
Exclusion from consolidation	2	0	0	0	0	0

The higher CAPEX for 2016 is due to the acquisition of ThermiGen in February 2016 and Poli Group in November 2015, which will be paid for in 2016, both were recognized in business acquisitions. The sale of ALM Mexico subsidiary for 50 Million Euros to Grünenthal Group was recognized on disposals on 2016 and 2017.

The company plans to spend between 500 and 700 million Euros in acquisitions in the near future, but because no deal information was made public so far, the forecast figures imply that the company invests to replace existing capacity, thus CAPEX offsets Depreciation after 2017.

Depreciation is set as fixed percentage of depreciable and amortizable Assets (PPE and intangibles) at around 12.9%.

5.2.7 - DIVIDENDS, RESERVES AND RETAINED EARNINGS

FIGURE 27: EQUITY RATIOS PROJECTIONS

Year	2015	2016E	2017E	2018E	2019E	2020E
Legal reserve	20%	20%	20%	20%	20%	20%
Retained earnings	73%	80%	77%	77%	77%	77%
Div Payout ratio	27%	20%	23%	23%	23%	23%

The company announced a dividend payment of 33 million, which accounts for payout ratio of 23%, a ratio that I assumed will keep stable in future years. The legal reserve corresponds to 20% of issued capital.

FIGURE 28: DIVIDEND PAYMENT ESTIMATES

Year	2015	2016E	2017E	2018E	2019E	2020E
Div Paid	35	33	33	34	36	38

5.2.8 - REVENUE FORECAST

In order to forecast revenues, I used both market research information and company information for the main products, therapeutic areas and acquired firms products' revenue potential. Figure 29 displays revenue projection for the whole business and for some therapeutic areas and acquired businesses.

FIGURE 29: REVENUE PROJECTIONS

Year	2015	2016E	2017E	2018E	2019E	2020E
Total Revenues	**769**	**859**	**897**	**940**	**978**	**1007**
Total Sales	685	744	786	832	875	909
YoY	**-13%**	**9%**	**6%**	**6%**	**5%**	**4%**
Derma Europe	145	152	159	168	176	186
YoY	**1%**	**5%**	**5%**	**5%**	**5%**	**5%**
Derma US	150	162	182	203	216	231
YoY	**35%**	**8%**	**12%**	**11%**	**7%**	**7%**
ThermiGen		30	53	77	100	111
YoY		**100%**	**78%**	**44%**	**30%**	**11%**
Poli Group		85	93	100	108	116
YoY		**100%**	**9%**	**8%**	**8%**	**8%**
Respiratory	105	67	62	57	53	49
YoY	**-50%**	**-36%**	**-7%**	**-7%**	**-7%**	**-7%**
GastroIntestinal	123	103	100	98	96	95
YoY	**-6%**	**-16%**	**-3%**	**-2%**	**-2%**	**-2%**
Other Sales	162	145	137	130	125	121
YoY	**-15%**	**-10%**	**-6%**	**-5%**	**-4%**	**-3%**
Other income	**84**	**115**	**111**	**107**	**103**	**98**

The main therapeutic areas are dermatology, gastrointestinal and respiratory. For dermatology and aesthetics I forecasted growth based on the products expected growth, and therapeutic market growth projections, for therapeutic areas where the company plans to divest and anticipates a further decline in sales, I estimate that sales decrease in line with the average of the last 5 years.

For the acquisition of ThermiGen and Poli Group, I used the estimates that the company provides, which states that both acquired portfolios can s more than 100 million in sales in 2020.

I expect Poli Group and ThermiGen to account for around 25% of total sales by 2020.

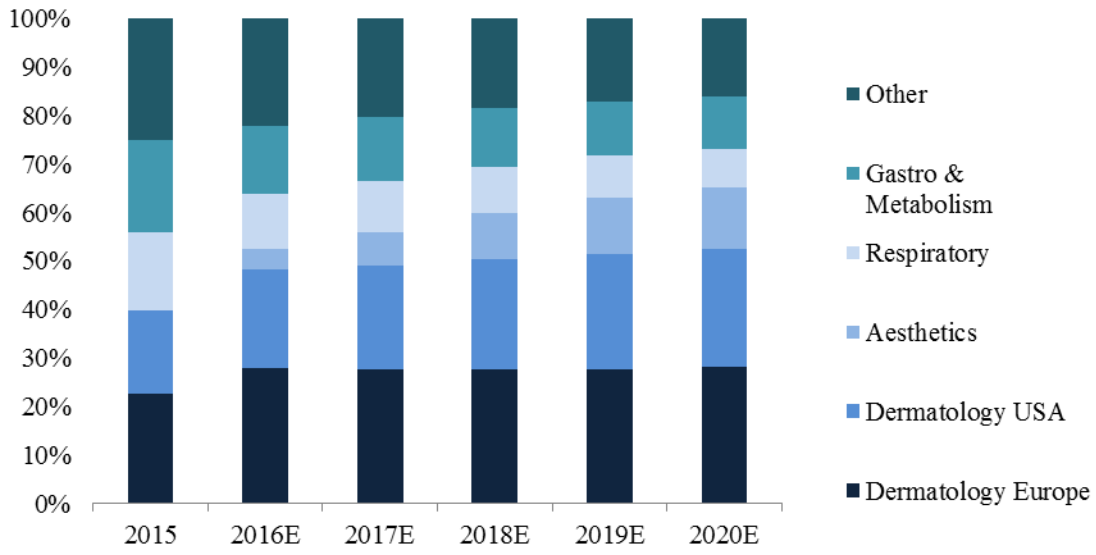
FIGURE 30: TOP SELLERS' PROJECTIONS

Year	2015	2016E	2017E	2018E	2019E	2020E
Monodox®/Acticlate®	97	97	104	112	121	130
YoY	**43%**	**0%**	**8%**	**8%**	**8%**	**8%**
Ebastel® and other	62	57	52	48	44	40
YoY	**-8%**	**-8%**	**-8%**	**-8%**	**-8%**	**-8%**
Almogran® and other	18	16	15	14	13	12
YoY	**-59%**	**-8%**	**-8%**	**-8%**	**-8%**	**-8%**
Airtal® and other	28	26	24	22	20	18
YoY	**-8%**	**-8%**	**-8%**	**-8%**	**-8%**	**-8%**
Decoderm® and others	23	25	27	29	31	34
YoY	**-4%**	**8%**	**8%**	**8%**	**8%**	**8%**
Cordran®	28	30	32	35	37	40
YoY	**17%**	**8%**	**8%**	**8%**	**8%**	**8%**
Almax®	24	26	27	29	31	33
YoY	**10%**	**7%**	**7%**	**7%**	**7%**	**7%**
Balneum®	17	18	19	20	21	22
YoY	**5%**	**5%**	**5%**	**5%**	**5%**	**5%**
Tesavel® & Efficib®	44	42	40	38	36	35
YoY	**-5%**	**-5%**	**-5%**	**-5%**	**-5%**	**-5%**
Solaraze®	40	39	38	37	37	36
YoY	**3%**	**-2%**	**-2%**	**-2%**	**-2%**	**-2%**
Parapres®	6	0	0	0	0	0
YoY	**-66%**	**-100%**				
Sativex®	13	14	15	16	17	18
YoY	**-12%**	**7%**	**7%**	**7%**	**7%**	**7%**
Ciclopoli®	0	34	37	40	43	46
YoY			**9%**	**8%**	**8%**	**8%**

Figure 30 presents the company top products, for each of them I forecasted sales figures using the respective therapeutic market growth as a driver and information on product patent cliff when disclosed by the company, when patent expiration has occurred or is imminent I forecast that sales decline in line with estimates given by the company or based on last years decline in sales.

For the company main product Acticlate® which accounted for 14% of the company sales, I forecasted a flat performance for 2016, in line with company guidance, justified by increasing competition from Valeant's brand Solodyn® and generics.

FIGURE 31: REVENUE BREAKDOWN PROJECTIONS



High growth in dermatology sales is due to the company's strategic direction, particularly in the US. The US and European dermatology business is expected to increase its share to 26% and 28% of total sales, respectively, in 2020, including the increments in dermatology sales Poli Group will generate, 60% of the group's revenue is on dermatology.

The abrupt sales breakdown in the respiratory portfolio in 2016 is due to the disposal of Plusvent®.

Aesthetics, a therapeutic that ALM entered recently with the acquisition of ThermiGen will account for 12% of sales in 2020. Respiratory and gastro and metabolism will keep decreasing their weight in the company's portfolio, by 2020 they will represent 8% and 10%, respectively. For values table see Appendix XIII.

5.2.9 - OTHER INCOME

Other income includes deferred income recognition from AZN transaction and milestone related payments. I recognized the deferred income in equal amounts for 10 years up until 2025 of the 201.721 million Euros to be recognized. The amounts equal 20 million Euros each year. The AZN linked milestones payments are recognized as equal amounts, as well, for 10 years until 2025, the amount recognized is the expected value linked to the probability of

reaching the milestones, 95 million Euros multiplied by the probability of receiving the full amount, the probability decreases as the years advance.

5.2.10 - FINANCIAL RESULTS AND TAXES

Financial results are set as a fixed percentage of net Debt for 2015. This percentage is applied to the net debt of the previous year to determine the current years' financial results.

I estimated the tax rate for the forecasted period by taking into account the deferred tax liabilities and assets, ALM has tax credits resulting from R&D activities and has considerable tax liabilities as well, according to the notes in the balance sheet, the company expects to offset them in 10 years, thus I will calculate the effective tax rate by deducing to the estimated corporate tax rate the recognized tax credits per year and the deferred tax liability recognized per year.

FIGURE 32: TAX CREDITS AND DEFERRED TAXES PROJECTIONS

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Deferred Tax Assets	317	312	307	302	297	292	287	282	277	272	266	261
Tax Credit Recognized	34	32	32	32	32	32	32	32	32	32	32	32
Tax Credit (R&D)	12	27	27	27	27	27	27	27	27	27	27	27
Deferred Tax Liabilities	125	113	100	88	75	63	50	38	25	13	0	0
Deffered Tax Liabilities R	1	13	13	13	13	13	13	13	13	13	13	0
Net Effect on Tax	**33**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**32**

Tax credits are a recurrent event in ALM's activity and I estimated that the tax credit per year will be the average of the last 5 years, 27 million Euros.

FIGURE 33: WEIGHTED AVERAGE CORPORATE TAX RATE

Geography	T	Weight % Net Income	Weigh Avg T
Corporate Tax US	40%	31%	12.59%
Corporate Tax EU	22.50%	34%	7.71%
Corporate Tax Spain	28%	34%	9.59%
Average Tax rate			**29.89%**

To the 29.89% estimated corporate tax rate applied on taxable income, I subtracted the net effect from offsetting tax assets and liabilities, to the income tax due. The corporate tax rate was calculated by doing the weighted average of ALM's taxable income by geography,

considering the US corporate tax rate for Aqua pharmaceuticals profit, Spain and EU corporate tax for the rest of the consolidated group.

FIGURE 34: EFFECTIVE TAX RATE

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Effective T	23.64%	20.91%	18.82%	19.42%	20.01%	20.40%	20.57%	20.67%	20.85%	21.04%	21.23%	12.45%

I extended the effective tax estimation period until 2025, by that year the deferred tax liabilities will be completely recognized. From that year onwards, I consider that the effective tax rate is the corporate tax rate minus the average tax credit, which results in an effective tax rate of 12.5%, which is the effective tax rate assumed for the terminal value calculation.

5.2.11 - GENERAL AND ADMINISTRATIVE COST AND R&D

In my forecasts, general and administrative expenses are expected to decrease slightly, due to the increasing weight of the US dermatology in the company business portfolio, the US dermatology business unit as lower operating costs.

FIGURE 35: COST BY BUSINESS UNITS

	Gen & Admin Costs	R&D	COGS
Poli Group	40%	10%	20%
Rest of Business	43%	10%	38%
Thermigen	40%	10%	40%
Derma USA	27%	10%	9%

Not only has the US dermatology business had higher operating margin than the rest of ALM's business but in fact without the other income from royalties and agreements with other firms, mainly AZN, the EBITDA margin of the rest of ALM's business would be fairly low, around 5%, revealing the lack of competitiveness of ALM's more mature products.

The recent Acquisitions also affected the forecasted general and administrative costs and R&D costs.

FIGURE 36: GENERAL & ADMINISTRATIVE COSTS, R&D AND COGS

Year	2015	2016E	2017E	2018E	2019E	2020E
Gen. & Admin. costs	41%	39%	39%	38%	38%	38%
R&D	10%	10%	10%	10%	10%	10%
COGS	31%	29%	28%	28%	28%	27%

COGS and General and admnistritive costs are expected to improve slightly in 2016 and in the following years, supported by the growth of dermatology. I estimated R&D to be kept constant at 10% according to the company guidance.

ALM's margins have an important contribution of other income from the recent AZN deal, if this is excluded the margins are substantially lower.

FIGURE 37: EBIT AND EBITDA MARGINS (NORMAL AND ADJUSTED)

Year	2015	2016E	2017E	2018E	2019E	2020E
EBITDA margin	30%	37%	37%	37%	36%	35%
EBITDA margin (Ex. other income from deals)	19%	22%	23%	24%	24%	25%
EBIT margin	19%	28%	22%	22%	22%	22%
EBIT margin (Ex. other income from deals)	8%	13%	8%	9%	10%	11%

5.2.12 - ADJUSTMENT TO EBIT

Due to the effect of the AZN transaction, I have adjusted the EBIT by excluding both the income streaming from reaching the milestones of the AZN deal and the differed income recognized from the transaction in 2014. The adjusted EBIT will be used to calculate the NOPLAT.

FIGURE 38: ADJUSTED EBIT

Year	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E
EBIT	131	208	171	181	191	198	201	202	205	208	212	143
EBIT (Excluding Transaction effects)	52	94	60	73	87	100	107	113	120	128	135	143

5.2.13 - EXPLICIT PERIOD VALUE AND TERMINAL VALUE

The explicit period value reached was around 140 Million Euros. The FCFF in the first year is low due to the CAPEX in acquisitions of Poli Group and ThermiGen in 2016.

FIGURE 39: EXPLICIT PERIOD VALUATION

Year	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Total Revenues	**769**	**859**	**897**	**940**	**978**	**1007**	**1030**	**1052**	**1077**	**1103**	**1130**
Total Sales	**685**	**744**	**786**	**832**	**875**	**909**	**936**	**964**	**993**	**1022**	**1053**
YoY	**-13%**	**9%**	**6%**	**6%**	**5%**	**4%**	**3%**	**3%**	**3%**	**3%**	**3%**
Other income	84	115	111	107	103	98	94	88	85	81	77
Cost of Sales	-215	-217	-224	-233	-242	-248	-256	-263	-271	-279	-288
R&D	-66	-72	-76	-81	-85	-88	-91	-93	-96	-99	-102
General and Administrative costs	-280	-290	-304	-320	-335	-347	-357	-368	-379	-390	-402
Other op. expenses	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
EBITDA	**206**	**278**	**291**	**304**	**314**	**321**	**324**	**325**	**329**	**332**	**336**
Amort & Dep	-74	-70	-120	-124	-124	-124	-124	-124	-124	-124	-124
EBIT	**131**	**208**	**171**	**181**	**191**	**198**	**201**	**202**	**205**	**208**	**212**
EBIT (Excluding Transaction effects)	**52**	**94**	**60**	**73**	**87**	**100**	**107**	**113**	**120**	**128**	**135**
YoY	0	1	0	0	0	0	0	0	0	0	0
Taxes	-16	-20	-11	-14	-17	-20	-22	-23	-25	-27	-29
NOPLAT	**37**	**74**	**49**	**59**	**70**	**80**	**85**	**90**	**95**	**101**	**107**
Amortization&Depreciation	74	70	120	124	124	124	126	129	131	134	137
Changes in NWC	59	-13	-5	-5	-3	-3	-3	-3	-3	-4	-4
Net CAPEX	-8	-458	-149	-121	-121	-120	-122	-125	-127	-130	-132
FCFF	**162**	**-327**	**15**	**57**	**70**	**80**	**85**	**91**	**96**	**102**	**107**
Discount factor		93%	87%	81%	76%	71%	66%	62%	58%	54%	50%
Wacc	7.14%										
DCF Explicit	**141**										

The explicit period ends in 2025, the period where I concluded the company will enter in steady state, the effects from the acquisitions and ALM's strategy revamping will be complete. From 2025 onwards I used a perpetuity valuation of the company.

FIGURE 40: NOMINAL AND REAL GROWTH RATES IN 2020

Nominal GDP Growth rate 2020	g	Weight
Europe	3.64%	35%
USA	4.24%	25%
Spain	3.16%	32%
RoW	7.48%	8%
Total	**3.93%**	

Real GDP Growth rate 2020	g	Weight
Europe	1.88%	35%
USA	1.96%	25%
Spain	1.78%	32%
RoW	3.97%	8%
Total	**2.03%**	

To calculate the terminal value, I used a terminal growth of 2.98%, the median between the weighted averages of nominal and real GDP growth projections of Europe, USA and Spain in 2020 according to each geography weight in revenues, the nominal and real GDP g are 3.93% and 2.93%, respectively. The pharmaceutical sector is predicted to grow at around 7% to 2020, and has regularly outperformed GDP growth globally on average but in the long run I expect it to converge to the GDP growth.

Some analysts argue that the pharmaceutical sector in the future will suffer with price limits and unfavorable regulation, but the ageing of the population will increase volume sales, and

the innovation in the sector will provide substantially growth opportunities that might offset the control on prices.

Inflation may only partially affect ALM's future sales, implying that the terminal growth rate should be between the nominal and real GDP growth rates, therefore I concluded the median between the real and nominal growth rate for 2020 to be the most accurate.

FIGURE 41: TERMINAL GROWTH RATE IN 2020

	Nominal	**Median**	Real
GDP g (2020)	3.93%	**2.98%**	2.03%

I considered that from 2020 onwards, the company will be in a steady state of growth, but due to the increments of AZN deal and the deferred tax liabilities ending in 2025, I computed the TV on 2025. The FCFF for the terminal year is higher due to the effective tax rate being lower on the long term due to tax credits.

FIGURE 42: TERMINAL VALUE

Year	2025E	TV
EBIT (Excluding Transaction effects)	**135**	**143**
YoY	**0**	**0**
Taxes	-29	-18
NOPLAT	107	125
Amortization&Depreciation	137	139
Changes in NWC	-4	-4
Net CAPEX	-132	-135
FCFF	**107**	**126**
Discount factor	50%	
Wacc	7.14%	
TV	1517	

The terminal value calculated was around 1517 million Euros, accounting for most of ALM mature business' value.

5.3 - R&D PIPELINE VALUATION

To value the products under development, I have focused on the projects, on which I have visibility on peak sales and are expected to launch before 2021.

FIGURE 43: R&D VALUATION

R&D Project	Indication	Status	Launch	Prob	Peak sales (Usd)	Profitabilty	NPV(Eur)
LAS41008	Plaque Psoriasis	III	2017	64%	50	8%	53
P-3058	Onychomycosis	III	2020	64%	68	8%	59
P-3073	Nail psoriasis	III	2020	64%	54	8%	47
P-3074	Male andro alop	II	2020	41%	38	8%	21
Pharma PE multiple	35.91						
Discount rate	7.14%						
Current year	2015						
Total							**181**

For establishing peak sales, the traditional method proposed in the literature review was not applicable. Although I managed to find suitable studies on disease incidences, in most cases I lacked information to establish a cost per patient and a market share that the company would have on the addressable market.

Instead of estimating a market model I used figures that ALM's investor relations provided me based on competitors and the range of peak sales they believed were achievable for their key R&D catalysts. My visibility is thus restricted to 4 medical compounds under development, LAS 41008, P-3058, P-3073, P-3074, which are according to the company, the most promising.

To perform the valuation, in line with my Literature review, I used the P/E method proposed by Keegan. I estimate a launching date based on the stage of each compound, considering that 5 years after launching the products would reach peak sales. I considered the average profitability rate of the industry based on estimates provided by Damodaran to estimate peak earnings.

To determine the NPV of each compound, I applied a P/E multiple taken from the company peers and also used in the relative valuation and discounted the value to the present, using the estimated ALM's WACC.

Peak sales were estimated by using information provided by the company and comparing the products to main competitors. The company guidance estimates that LAS41008 might generate peak sales of 35 to 50 million, in line with existing competitor Fumaderm®. For P-3058 whose main competitor Jublia® from Valeant generated 500 million in sales in Europe alone, I estimated that sales could peak at 70 Million once the product is launched in line with the company guidance.

P-3058, alongside the other pipeline projects acquired from Poli Group benefits from the HPCH formulation, which gives it significant advantage against existing products, are also expected to perform well in the market.

I considered using real option valuation but with the information I had available, an option valuation was not applicable. I lacked visibility on R&D costs attributable to each project, thus I couldn't estimate a strike price. Furthermore, although I had peak sales estimation, I lacked information to realistically estimate an NPV of the cash-flow the patent will generate in the future, the underlying asset in real option valuation.

Concluding, the value that I attributed to ALM's R&D through the model is 181 million Euros.

5.4 - NET CASH

On 29th of February the net cash position was around 87 million Euros. I subtracted the value of cash and cash equivalents to the value of debt, additionally I included the cash outflows of Poli Group and ThermiGen acquisitions and the cash inflows from the sale of the Mexico unit to Grünenthal, thus the initial Net cash position at the end of 2015 of 484 million Euros decreased to 87 million Euros.

For valuation purposes, considering the 1st of January as the present date, ALM has a net cash position of 484.5 million Euros.

5.5 - AZTRAZENECA DEAL VALUATION

Of the 1.22 Billion USD related to milestones of the AZN deal, 170 million were already received. The remaining 1050 Million USD are expected to be paid in the next 10 years. The payment is dependent on certain development, sales and launch milestones being met. In line with the company guidance, LAS190792 progress is the critical factor in the milestones. The amounts of sales related to milestones were not disclosed by the company.

According with ALM's Investor relations, the probability of receiving the 1.05 Billion USD outstanding is between 80% and 85%.

To value the AZN deal milestone payment I assumed, in line with company estimates, that the amount outstanding would be paid in equal amounts of 105 million USD or 95 million Euros at the average exchange rate for 2016, until 2025. Furthermore I adjusted the value for the effective tax rate, which resulted in an average payment after tax of 75 million Euros per year. I assumed that 80% of the total 1050 million USD would be paid as base scenario but the probability would decrease further as the years progressed.

FIGURE 44: AZTRAZENECA COST OF CAPITAL

Rf	D/EV	Spread	Kd	Beta	Mk risk premium	CDS	Ke	**Wacc**
0.6%	14.4%	1.3%	1.9%	0.67	6.3%	0.6%	5.4%	**4.9%**

To discount the development milestone-related payments, I used AZN's WACC, implying that the risk of these cash flows is tied to AZN ability to fulfil the sales and R&D development milestones in the joint projects.

FIGURE 45: AZTRAZENECA DEAL INCOME VALUATION

AstraZeneca Milestones payments	yearly Aumounts USD	yearly Amounts (Euros) Pre-Tax	Amounts After Tax	Probability	Prob Weigh Income (Euros)	Discount Factor	**Value (Eur)**
2016	105	95	75	100%	75	95%	**71**
2017	105	95	77	96%	74	91%	**67**
2018	105	95	76	92%	70	87%	**61**
2019	105	95	76	88%	67	83%	**55**
2020	105	95	75	82%	62	79%	**49**
2021	105	95	75	78%	59	75%	**44**
2022	105	95	75	72%	54	72%	**39**
2023	105	95	75	68%	51	68%	**35**
2024	105	95	75	64%	48	65%	**31**
2025	105	95	75	60%	45	62%	**28**
Total	**1050**	**946**	**753**	**80%**	**603**		**480**

Once discounted the total after tax payments and adjusted for the probability, amounted to 603 Million Euros, which I assumed was the fair value for this part of the valuation.

The Euro/USD exchange rate fluctuations may affect the value of the Astra Zeneca deal, this issue was addressed in the sensitivity analysis.

5.6 - TARGET PRICE AND RECOMMENDATION

The target price is the fair value that results from the sum of the parts valuation.

The criteria that I used to make the recommendation is based on the coefficient of variation of the daily closing prices of the last year 2 years 2015 and 2014, which reflects the dispersion of share prices in relation to the average of the last two years, the interval was chosen due to the fact that those years incorporate the beginning of the change in the company strategy, thus a similar period to the near future, in how the market values the company. The coefficient of variation for the last 2 years was 18.5% and target price is 16.20 Euros, the current price is 18.4, above the range the of the coefficient of variation, 14.70 to 17.70 , thus the recommendation is to SELL if the current price was within or below that range, the recommendation would be to HOLD or BUY, respectively.

5.7 - SENSITIVITY ANALYSIS

I performed the sensitivity analysis based on growth of sales, terminal growth rate, expenses as percentage of sales such as cost of sales, R&D and general and administrative costs, probability of receiving the milestone payments related to the AZN deal, on future peak sales of company's current R&D projects and the Euro/USD exchange rate variations and its impact on US dermatology subsidiary sales.

Even though the company states in its annual accounts that it hedges currency risk, it doesn't explain how it does it in detail, as a matter of prudence, I decided to include a sensitivity analysis on the impact of movements of the Euro/USD on the US dermatology business unit revenues. I projected two alternative scenarios where the USD appreciates 3% and depreciates 3% per year until 2020.

Additionally the Sensitivity analysis includes movements of the risk free rate, which is currently historically low, of +1% and +2%.

The general and administrative costs, R&D and cost of sales were also considered, with changes of 1% relative to base scenario in the range from -2% to 2% of sales from the base assumed percentage of sales.

Assumptions on current R&D projects future peak sales were also tested in a range of -25% to +25% of base assumed peak sales.

Terminal value growth variations to the nominal and real GDP g were projected, as well as explicit period growth variation of +1% and -1% in relation to the base assumed rate.

The sensitivity analysis included variations of the probability of receiving the AZN payment to 75% and 84% compared to the initially assumed 80%,

In appendix XII there are tables showing combined assumptions changes and respective fair value variations. The price is mostly sensible to growth rate variations, mainly the explicit period growth rate due to the cost structure aside from COGS remaining equal and thus low variations in growth rate have a large impact on share price. The R_f, exchange rate variations and cost variation also cause significant changes in fair value. Due to the many assumptions tested, the sensitivity analysis contemplates a wide range of FV, from the absolute worst 6.64 Euros to the absolute best 28.92 Euros.

5.8 - RELATIVE VALUATION

To perform relative valuation of ALM, I used the P/E, EV/EBITDA and EV/SALES multiples.

FIGURE 46: PEER GROUP MULTIPLES

Company	EV/EBITDA	Historic P/E	EV/SALES	EV/EBITDA	Forward P/E	EV/SALES
Lonza	13.27	31.03	2.68	11.32	19.20	2.45
Shire	15.20	30.70	6.71	9.14	11.89	4.44
UCB	20.56	60.56	4.24	14.99	24.94	3.47
Faes Farma	14.02	22.87	3.24	11.93	**0.00**	2.98
Grifols	15.76	54.93	4.65	12.94	19.66	3.93
ROVI	22.69	35.91	2.93	16.34	24.68	2.38
Dermira	**0.00**	**0.00**	**112.69**	0.00	0.00	**76.50**
pharma Mar	34.13	83.11	3.09	**0.00**	**0.00**	**0.00**
Aclaris	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Anacor	**0.00**	**0.00**	**60.44**	**111.56**	**194.39**	**16.16**
Valleant	13.53	**0.00**	6.18	7.86	2.98	3.58
Cynosure	18.04	63.81	2.62	13.17	28.51	2.10
Zeltiq	**175.01**	27.84	4.19	23.87	**101.56**	2.64
Average	**18.58**	**45.64**	**4.05**	**13.51**	**29.18**	**3.11**
Median	**17.08**	**35.91**	**4.22**	**13.06**	**24.68**	**3.47**

To have an adequate benchmark, I have gathered a peer group composed of medium sized, specialty pharmaceutical companies and firms focused on dermatology and aesthetics. Figure 46 presents the multiples for each of those companies taken from Thomson Reuters. For each multiple I computed the average excluding outliers (in bold) and the Median.

As discussed in the literature review, I used both forward and trailing multiples. The results were adjusted in order to don't reflect the other income from the AZN deal, as such income is non-recurrent and it will end in 2025, still I added the AZN income value already obtained separately to reach the fair value. I adjusted the net income by subtracting the AZN income from EBIT and apply the effective tax rate to that adjusted EBIT.

In line with the literature review, I used the median instead of the simple average of the company's peer as the multiple to better exclude the effect of the outliers.

FIGURE 47: FORWARD AND TRAILING MULTIPLES VALUATION

Trailing	Almirall	EV/EBITDA	EV/Sales	P/E	EV	Equity	FV per share
EBITDA	122	17.08	0	0	2558	3043	**17.59**
Revenue	685	0	4.215	0	3367	3851	**22.27**
Earnings	68	0	0	35.91	3124	3568	**20.63**
AstraZeneca Value	480						
Forward	**Almirall**	**EV/EBITDA**	**EV/Sales**	**P/E**	**EV**	**Equity**	**FV per share**
EBITDA	163	13.06	0	0	2611	3095	**17.89**
Revenue	744	0	3.47	0	3063	3547	**20.51**
Earnings	78	0	0	24.68	1917	2402	**13.89**
AstraZeneca Value	480						

Using the forward multiple approach, the fair value should be between 13.89 and 20.51. The fair value obtained through the sum of the parts valuation is well within this range but higher than the Forward P/E, which is explained by the growth potential that the company has in the long run, with the acquisitions made, not being fully reflected in 2016 earnings.

6 - INVESTMENT BANK REPORT COMPARISON

I choose to compare my report with Credit Suisse equity research report published on the 23th of February, 2016.

The target price on Credit Suisse report is 14 Euros considering a 12 month period, it implies a downside of 16.5%, still Credit Suisse maintains a NEUTRAL rating stating: "Our Neutral

rating reflects the lack of visibility on bolt-on and M&A deals to achieve its strategy and clarify the mid-term outlook". Credit Suisse uses an NPV based Methodology called PharmaValue NPV methodology, based on sales probability, on which it states that the company is traded on 30% premium to equity NPV. The 9.6 NPV per share implies that Credit Suisse ALM NPV is 1661 million Euros afterwards the cash was added to obtain the equity NPV per share to which a premium of 30% is applied.

Credit Suisse stock rating are to OUTPERFORM (BUY), NEUTRAL (HOLD) and UNDERPERFORM (SELL) and are based on comparison with the relevant benchmark, which are generally companies of the same sector.

Additionally, Credit Suisse recommends to Overweight, Market Weight or Underweight, which are related to the analyst's expectations for the sector's fundamentals, if it is favorable, neutral or cautious over the next 12 months, respectively.

The differences between this dissertation and Credit Suisse equity research report includes the revenues forecast. In this dissertation, revenue growth is higher compared with Credit Suisse estimated, the CAGR for 2015-2020 is around 6% compared with 4% from the Credit Suisse report.

Credit Suisse EBIT margin forecast are lower than what I considered, mainly due to higher increments in other income that I am considering from the AZN deal. SG&A/SALES are similar for 2016, but from that point onwards this dissertation forecast higher SG&A/SALES, this is due to an increase in depreciation & amortization resulting from the inclusion of ThermiGen and Poli Group assets in intangibles and PPE.

Credit Suisse does not disclose the discount rate used on its NPV valuation, thus I can't compare with the WACC used in this dissertation.

This dissertation valuation includes R&D components valued at 181 million Euros, which are not contemplated by the Credit Suisse valuation.

Other income is also a key differentiator of both analyses, in this dissertation, I assumed that both the differed income and the income received from milestones is going to be recognized and received in probability weighted equal amounts until 2025, while Credit Suisse reports makes different assumptions on other income with higher values in 2017 and 2018.

Another noticeable difference refers to the fact that credit Suisse Report doesn't include retirement benefit obligations in net debt.

Concluding, Credit Suisse values the company as a whole based on a peer based premium on the equity NPV. It does not value the proceedings of AZN transaction and R&D components separately. The recommendation method is also different, which results in Credit Suisse making a neutral recommendation, with a lower target price and higher downside than this dissertation considered.

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APPENDIX

I: Peer List for Multiples and Beta calculations

- **LONZA GROUP AG** - Swiss biopharmaceutical and chemical multinational company, leader in supplying biopharmaceuticals to the pharmaceutical industry.
- **SHIRE PHARMACEUTICALS PLC** - Irish-headquartered specialty Biopharmaceutical Company, it focus on behavioral health, rare conditions, gastrointestinal and regenerative medicine.
- **UCB SA** - Belgian multinational bio pharmaceutical, it focus on R&D mainly on specialty pharmaceuticals, neurology and oncology are the company's main concerns.
- **FAES FARMA SA** - Spanish pharmaceutical and chemical company, it commercializes pharmaceutical products and raw materials, it exports to more than 60 countries.
- **GRIFOLS SA** – Spanish specialty pharmaceutical company, specialized in blood plasma based products, on which it is the world leader, it also markets diagnostic products.
- **LABORATORIOS FARMACEUTICOS ROVI SA**- Spanish pharmaceutical company, which markets both proprietary and licensed products.
- **DERMIRA Inc.** - US based dermatology focused pharmaceutical company.
- **PHARMA MAR SA** - Spanish pharmaceutical company focused on oncology.
- **ACLARIS THERAPEUTICS Inc**. - US based dermatology focused pharmaceutical company.
- **VALEANT PHARMACEUTICAL INTERNATIONAL INC.** - Canadian based multinational company, specialized in dermatology among other therapeutic areas.
- **ANACOR Pharmaceutical Inc.** - US based aesthetic company.
- **CYNOSURE INC.** - US based aesthetic company.
- **ZELTIQ AESTHTICS INC.** - US based aesthetic company.

II: Amirall's Consolidated Income Statement

Consolidated Income Statement	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E
Total Revenues	**873**	**900**	**825**	**1407**	**769**	**859**	**897**	**940**	**978**	**1007**	**1030**	**1052**	**1077**	**1103**	**1130**	**1084**
Total Sales	**768**	**683**	**693**	**786**	**685**	**744**	**786**	**832**	**875**	**909**	**936**	**964**	**993**	**1022**	**1053**	**1084**
Cost of Sales	-291	-262	-233	-235	-215	-217	-224	-233	-242	-248	-256	-263	-271	-279	-288	-296
Gross Profit	**477**	**421**	**460**	**551**	**471**	**528**	**562**	**600**	**633**	**661**	**680**	**701**	**722**	**743**	**765**	**788**
Other Income	**105**	**217**	**133**	**621**	**84**	**115**	**111**	**107**	**103**	**98**	**94**	**88**	**85**	**81**	**77**	**0**
R&D	-145	-160	-127	-101	-66	-72	-76	-81	-85	-88	-91	-93	-96	-99	-102	-105
General and Administrative Costs	-277	-353	-379	-375	-280	-290	-304	-320	-335	-347	-357	-368	-379	-390	-402	-414
Other Operating Expenses	0	-2	-2	-10	-3	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-3
EBITDA	**160**	**124**	**85**	**686**	**206**	**278**	**291**	**304**	**314**	**321**	**324**	**325**	**329**	**332**	**336**	**267**
Amort & Dep	-63	-68	-69	-85	-74	-70	-120	-124	-124	-124	-124	-124	-124	-124	-124	-124
EBIT	**97**	**56**	**16**	**602**	**131.42**	**208**	**171**	**181**	**191**	**198**	**201**	**202**	**205**	**208**	**212**	**143**
Finan. Results	-5	-5	-5	-28	4	5	2	2	3	4	5	6	7	8	9	10
Impairment Reversals/(Losses)	-7	-2	-5	-69	0	0	0	0	0	0	0	0	0	0	0	0
Restructuring Costs	-10	0	-80	0	-8	0	0	0	0	0	0	0	0	0	0	0
Other Costs	0	0	-9	-37	1	0	0	0	0	0	0	0	0	0	0	0
Gains on Sale of Assets	-3	-1	-6	14	44	0	0	0	0	0	0	0	0	0	0	0
EBT	**72**	**49**	**-90**	**482**	**173**	**213**	**173**	**183**	**194**	**202**	**205**	**208**	**212**	**216**	**221**	**153**
Taxes	12	28	56	-34	-41	-45	-33	-36	-39	-41	-42	-43	-44	-46	-47	-19
Net Income	**84**	**76**	**-34**	**448**	**132**	**169**	**140**	**147**	**155**	**160**	**163**	**165**	**168**	**171**	**174**	**134**

III: ALM's Consolidated Balance Sheet

Consolidated Balance Sheet	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Total Non-Current Assets	**998**	**1046**	**1438**	**1433**	**1385**	**1768**	**1794**	**1789**	**1784**	**1779**	**1774**	**1769**	**1764**	**1759**	**1754**
Goodwill	271	270	336	339	347	347	347	347	347	347	347	347	347	347	347
Intangible Assets	353	358	595	444	413	701	724	724	724	724	724	724	724	724	724
PPE	152	157	161	132	128	228	236	236	236	236	236	236	236	236	236
Financial Assets	9	9	23	179	181	181	181	181	181	181	181	181	181	181	181
Deferred Tax Assets	213	251	322	339	317	312	307	302	297	292	287	282	277	272	266
Total Current Assets	**459**	**310**	**335**	**1107**	**1147**	**871**	**924**	**1019**	**1121**	**1223**	**1013**	**1120**	**1229**	**1341**	**1456**
Inventories	93	92	98	81	87	93	99	104	110	114	118	121	125	128	132
Accounts Receivable	106	99	99	207	121	128	136	144	151	157	162	166	171	176	182
Current Tax Assets	23	58	38	58	68	73	78	82	86	90	92	95	98	101	104
Current Investments	190	17	8	457	270	270	270	270	270	270	270	270	270	270	270
Other Current Assets	7	8	10	6	3	3	3	3	3	3	3	3	3	3	3
Cash and Cash Equivalents	39	36	81	298	598	302	339	415	500	589	368	464	562	662	765
Total Assets	**1457**	**1356**	**1773**	**2540**	**2532**	**2639**	**2718**	**2808**	**2905**	**3003**	**2787**	**2889**	**2994**	**3101**	**3211**
Shareholders Equity	**855**	**924**	**888**	**1340**	**1463**	**1598**	**1706**	**1819**	**1938**	**2061**	**2186**	**2312**	**2440**	**2571**	**2704**
Issued Capital	20	20	21	21	21	21	21	21	21	21	21	21	21	21	21
Share Premium	167	194	220	220	220	220	220	220	220	220	220	220	220	220	220
Legal Reserve	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Other Reserves	584	639	688	655	1068	1167	1303	1409	1520	1637	1760	1884	2010	2138	2268
Valuation Adjustments	0	-7	-6	-15	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14
Translation Differences	-4	-3	-5	7	32	32	32	32	32	32	32	32	32	32	32
Profit(Loss) for Year	84	76	-34	448	132	169	140	147	155	160	163	165	168	171	174
Non-Current Liabilities	**188**	**183**	**486**	**840**	**768**	**735**	**703**	**670**	**637**	**289**	**256**	**223**	**191**	**158**	**125**
Deferred Income	36.4	25.0	1.0	235	202	182	161	141	121	101	81	61	40	20	0
Financial Liabilities	76.0	71.8	253.9	316	316	316	316	316	316	0	0	0	0	0	0
Deferred Tax Liabilities	41.3	52.2	135.2	127	125	113	100	88	75	63	50	38	25	13	0
Retirement Benefit Obligations	15.4	15.7	52.4	67	64	64	64	64	64	64	64	64	64	64	64
Provisions	19.2	18.3	14.8	26	19	19	19	19	19	19	19	19	19	19	19
Other Non-Current Liabilities			29.0	69	43	43	43	43	43	43	43	43	43	43	43
Current Liabilities	**414**	**249**	**398**	**361**	**302**	**305**	**310**	**320**	**330**	**653**	**346**	**354**	**363**	**372**	**381**
Financial Liabilities	202	0	27	4	4	4	0	0	0	316	0	0	0	0	0
Trade Payables	149	184	198	218	225	231	238	248	257	264	272	280	289	297	306
Current Tax Liabilities	22	24	18	33	10	12	13	14	14	14	15	15	16	16	16
Other Current Liabilities	40	42	154	106	63	58	58	58	58	58	58	58	58	58	58
Total Liabilities	**602**	**432**	**884**	**1201**	**1070**	**1041**	**1013**	**990**	**967**	**942**	**602**	**577**	**553**	**530**	**506**
Total Equity and Liabilities	**1457**	**1356**	**1773**	**2540**	**2532**	**2639**	**2718**	**2808**	**2905**	**3003**	**2787**	**2889**	**2994**	**3101**	**3211**

IV: ALMIRALL's Cash Flow Statement

Cash Flow Statements	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Operating Income	208	171	181	191	198	201	202	205	208	212
Depreciation & Amortization	-70	-120	-124	-124	-124	-124	-124	-124	-124	-124
Changes in NWC	-13	-5	-5	-3	-3	0	0	0	0	0
Investment Other Operating Assets	75	178	181	179	178	179	180	179	179	178
Operating Cash Flow	**201**	**224**	**233**	**243**	**249**	**256**	**258**	**260**	**263**	**266**
CAPEX	-509	-155	-124	-124	-124	-124	-124	-124	-124	-124
Disposals	46	4	0	0	0	0	0	0	0	0
Cash Flows from Investing Activities	**-463**	**-151**	**-124**	**-124**	**-124**	**-124**	**-124**	**-124**	**-124**	**-124**
Equity Instruments	-35	-33	-33	-34	-36	-38	-38	-38	-39	-40
Liability Instruments	0	-4	0	0	0	-316	0	0	0	0
Net Cash Flows from Financing Activities	**-35**	**-37**	**-33**	**-34**	**-36**	**-353**	**-38**	**-38**	**-39**	**-40**
Cash Change	**-296**	**37**	**77**	**85**	**89**	**-221**	**96**	**98**	**100**	**103**

V: Main Medical Products Information

Products Name	Medical Condition	Therapeutic Area	Proprietary/Licensed
Eklira® and other (aclidinium bromide)	COPD	Pulmonary/Respiratory Diseases	Proprietary
Ebastel® and other (ebastine)	Allergy	Pulmonary/Respiratory Diseases	Proprietary
Oral Acne franchise (Monodox / Acticlate)	Acne	Dermatology	Proprietary
Tesavel® & Efficib® (sitagliptine)	Diabetis Type II	Endocrinology	Licensed
Almogran® and Other (Almotriptan)	Migraine	Neurology	Proprietary
Solaraze® (diclofenac sodium)	Actinic keratosis	Dermatology, Oncology	Licensed
Plusvent® (salmeterol & fluticasone)	COPD and Asthma	Pulmonary/Respiratory Diseases	Licensed
Airtal® and Other (aceclofenac)	Pain	Musculoskeletal	Proprietary
Decoderm® and others (flupredniden)	Mycotic Dermatitis	Dermatology	Proprietary
Cordran® (flurandrenolide)	Steroid responsive dermatoses	Dermatology	Proprietary
Almax® (almagate)	Heartburn	Gastroenterology	Proprietary
Parapres® (candesartan cilexetile)	Hearth Failure, Hypertension	Cardiology/Vascular	Licensed
Balneum® (urea oil)	Dry and Itchy skin	Dermatology	Proprietary
Sativex® (delta-9-tetrahy drocannabinol)	Multiple Sclerosis	Neurology, Musculoskeletal	Licensed
Ciclopoli®	Onychomycosis	Dermatology	Proprietary
Veltin®	Acne	Dermatology	Proprietary
Altabax®	Impetigo	Dermatology	Proprietary

VI: R&D Valuation with Different Scenarios

Base scenario

Project	Indication	Status	Estimated Launch Years to Launch	Years to Peak Sales	Prob of Success	Peak Sales (USD)	Prob w eigh peak sales	Royalty Rate	Profitabilty	Prob Weigh Peak Profit	Discount Factor	NPV(euros)
LAS41008	Plaque Psoriasis	III	2017 2	7	64%	50	32	100%	8%	2.68	1.6	53
P-3058	Onychomycosis	III	2020 5	10	64%	68	43	100%	8%	3.63	2.0	59
P-3073	Nail psoriasis	III	2020 5	10	64%	54	35	100%	8%	2.90	2.0	47
P-3074	Male andro abp	II	2020 5	10	41%	38	16	100%	8%	1.31	2.0	21
Total												**181**

-25% peak sales

Project	Indication	Status	Estimated Launch Years to Launch	Years to Peak Sales	Prob of Success	Peak Sales (USD)	Prob w eigh peak sales	Royalty Rate	Profitabilty	Prob Weigh Peak Profit	Discount Factor	NPV(euros)
LAS41008	Plaque Psoriasis	III	2017 2	7	64%	38	24	100%	8%	2.01	1.6	40
P-3058	Onychomycosis	III	2020 5	10	64%	51	32	100%	8%	2.72	2.0	44
P-3073	Nail psoriasis	III	2020 5	10	64%	41	26	100%	8%	2.18	2.0	35
P-3074	Male andro abp	II	2020 5	10	41%	29	12	100%	8%	0.98	2.0	16
Total												**135**

+25% peak sales

Project	Indication	Status	Estimated Launch Years to Launch	Years to Peak Sales	Prob of Success	Peak Sales (USD)	Prob w eigh peak sales	Royalty Rate	Profitabilty	Prob Weigh Peak Profit	Discount Factor	NPV(euros)
LAS41008	Plaque Psoriasis	III	2017 2	7	64%	63	40	100%	8%	3.35	1.6	67
P-3058	Onychomycosis	III	2020 5	10	64%	85	54	100%	8%	4.53	2.0	74
P-3073	Nail psoriasis	III	2020 5	10	64%	68	43	100%	8%	3.63	2.0	59
P-3074	Male andro abp	II	2020 5	10	41%	48	20	100%	8%	1.64	2.0	27
Total												**226**

VII: Exchange rate risk

Exchange rate is present in ALM's activity, mainly in cash inflows from US sales, the payments related to AZN deal, clinical trials paid for in different currency, raw material purchases, royalty payments in yens and payments made in local currency by the ALM's subsidiaries in Mexico, the UK, Poland, Canada, Denmark and the US.

Exchange risk affects 34.87% of revenues and 31.14% of cost of goods sold and other operating costs. The company foresees collections and payments in foreign currency on a quarterly basis. In 2015,

ALM reduced its exposure on foreign exchange risk on higher volume commercial transactions by arranging hedge contracts related to yen purchases of raw materials and cash inflows from US revenues, additionally any cash surplus in foreign currency are sold to avoid exchange rate volatility that might affect the income statement.

VIII: Market Capitalization

In 29 of February, the Market capitalization was 2931,15 million Euros. ALM has 172951120 shares outstanding, the free float is 33,10% and the price close in 4 of January of 2016 was 18.4 Euros.

66.64% of shares are owned by WALTON, S.L. a private real estate family based in Madrid.

IX: Financial Debt

In March 2014, ALM issued 325 million Euros in bonds with maturity in 2021.

The book value of non-current financial liabilities is 316 Million. The bonds are traded in the United States and in the Euro Bond Market.

In the beginning of 2016 the total book value of financial debt, current and non-current was 383,5 Million Euros.

X: Current Investments, Cash and Cash Equivalents

Liquid assets in the balance sheet include current investments, cash and cash equivalents. It mainly includes shares and debt securities in other companies, deposits with short maturities, investments in fixed income and equity funds, future payments related to the AZN deal and available for sale financial assets.

The total amount of current investments cash and cash equivalents was 868 million Euros.

XI: ALMIRALL's Management

Management includes CEO Eduardo Sanchiz, CFO Daniel Martinez and Global Business executive Alfonso Ugarte.

XII: Sensitivity Analysis

Cost of Sales (% of sales)	General and Administrative Costs (% of Sales)				
	-2%	-1%	Base	+1%	+2%
-2%	19.09	18.28	17.48	16.67	15.86
-1%	18.45	17.65	16.84	16.03	15.23
Base	17.82	17.01	16.20	15.40	14.59
+1%	17.18	16.37	15.57	14.76	13.95
+2%	16.54	15.74	14.93	14.12	13.31

R&D (% of sales)	R&D development Future Peak sales		
	+25% Peak Sales	Base	-25% Peak Sales
-2%	17.69	17.43	17.16
-1%	17.08	16.81	16.55
Base	16.46	16.20	15.94
+1%	15.85	15.59	15.33
+2%	15.24	14.98	14.72

Terminal g	Explicit Period g		
	+1%	Base	-1%
Nominal GD	23.11	19.85	16.69
Median	18.77	16.20	13.72
Real GDP g	16.04	13.91	11.85

Euro/USD Exchange Rate	Rf		
	Base Rf	+1%	+2%
-3% YoY	17.93	15.08	13.16
Base	16.20	13.66	11.94
+3% YoY	14.73	12.45	10.90

AZN Deal Probability		
High (84%)	Base (80%)	low (75%)
16.34	16.20	16.04

Absolute Worst	Base Case	Absolute Best
6.64	16.20	28.92

XIII: Therapeutic Area as Percentage of Sales.

Year	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Dermatology Europe	15%	19%	19%	18%	21%	27%	27%	27%	27%	28%
Dermatology USA	0%	0%	0%	14%	22%	22%	23%	24%	25%	26%
Aesthetics	0%	0%	0%	0%	0%	4%	7%	9%	11%	12%
Respiratory	24%	25%	30%	27%	15%	11%	10%	9%	9%	8%
Gastro & Metabolism	20%	22%	21%	17%	18%	14%	13%	12%	11%	10%
Other	41%	34%	29%	24%	24%	22%	20%	18%	17%	16%

XIV: Cost Structure as a Percentage of Sales

Year	2011	2012	2013	2014	2015 E	2016E	2017E	2018E	2019E	2020E
Cost of Sales	37.88%	38.40%	33.64%	29.93%	31.31%	29.09%	28.47%	27.94%	27.64%	27.31%
R&D	18.81%	23.36%	18.29%	12.79%	9.68%	9.68%	9.68%	9.68%	9.68%	9.68%
General and Admin Costs	36.07%	51.62%	54.65%	47.71%	40.88%	39.01%	38.71%	38.45%	38.32%	38.18%
Other op. Expenses	0.03%	0.29%	0.27%	1.26%	0.36%	0.29%	0.27%	0.25%	0.24%	0.23%
Amort & Dep	8.22%	9.96%	10.02%	10.77%	10.85%	9.36%	15.22%	14.86%	14.14%	13.61%

XV: ALMIRALL's US Dermatology Unit EBITDA Margin

Year	2015	2016E	2017E	2018E	2019E	2020E
Sales	150	162	182	203	216	231
YoY	**35%**	**8%**	**12%**	**11%**	**7%**	**7%**
Cost of Sales	-14	-15	-16	-18	-20	-21
Gross Profit	136	147	165	184	197	210
General and Admnistrative Costs	-47	-44	-50	-55	-59	-63
R&D	-15	-16	-18	-20	-21	-22
EBITDA	75	87	98	109	117	124
EBITDA Margin	**50%**	**54%**	**54%**	**54%**	**54%**	**54%**

XVI: ALMIRALL's EBITDA Margin, excluding US Dermatology

Year	2015	2016E	2017E	2018E	2019E	2020E
sales	535	467	459	453	451	451
YoY	**-21%**	**-13%**	**-2%**	**-1%**	**-1%**	**0%**
Other income	84	115	111	107	103	98
Cost of sales	-201	-175	-172	-170	-169	-169
Gross profit	334	292	286	283	281	282
General and Admnistrative costs	-234	-200	-196	-194	-193	-193
R&D	-50	-45	-44	-44	-44	-44
Other op exp	-3	-2	-2	-2	-2	-2
EBITDA	131	159	155	150	146	141
EBITDA margin	**24%**	**34%**	**34%**	**33%**	**32%**	**31%**

XVII: THERMIGEN EBITDA Margin

Year	2016E	2017E	2018E	2019E	2020E
Sales	30	53	77	100	111
YoY	**0%**	**78%**	**44%**	**30%**	**11%**
Cost of Sales	-9	-17	-24	-31	-35
Gross Profit	21	37	53	69	76
General and Admnistrative Costs	-12	-21	-31	-40	-44
R&D	-3	-5	-7	-10	-11
EBITDA	6	10	15	19	21
EBITDA Margin	**19%**	**19%**	**19%**	**19%**	**19%**

XVIII: POLI GROUP EBITDA Margin

Year	2016E	2017E	2018E	2019E	2020E
Sales	85	93	100	108	116
YoY		**9%**	**8%**	**8%**	**8%**
Cost of Sales	-17	-19	-20	-22	-23
Gross Profit	68	74	80	86	93
General and Admnistrative Costs	-34	-37	-40	-43	-46
R&D	-8	-9	-10	-10	-11
EBITDA	26	28	30	33	35
EBITDA Margin	**30%**	**30%**	**30%**	**30%**	**30%**

XIX: Revenue by Geographic area

Geographic area	2011	2012	2013	2014	2015
Spain	50%	41%	38%	30%	32%
Europe excluding Spain	37%	42%	44%	35%	35%
North America	10%	14%	16%	17%	25%
Other	2%	3%	3%	6%	8%